

KEY TO DATES AND PAGES

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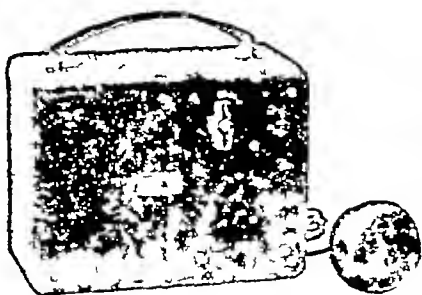
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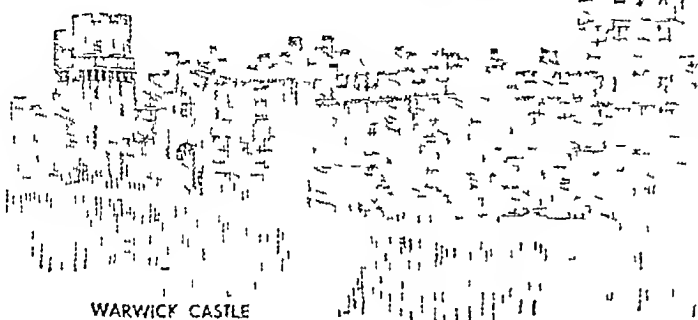
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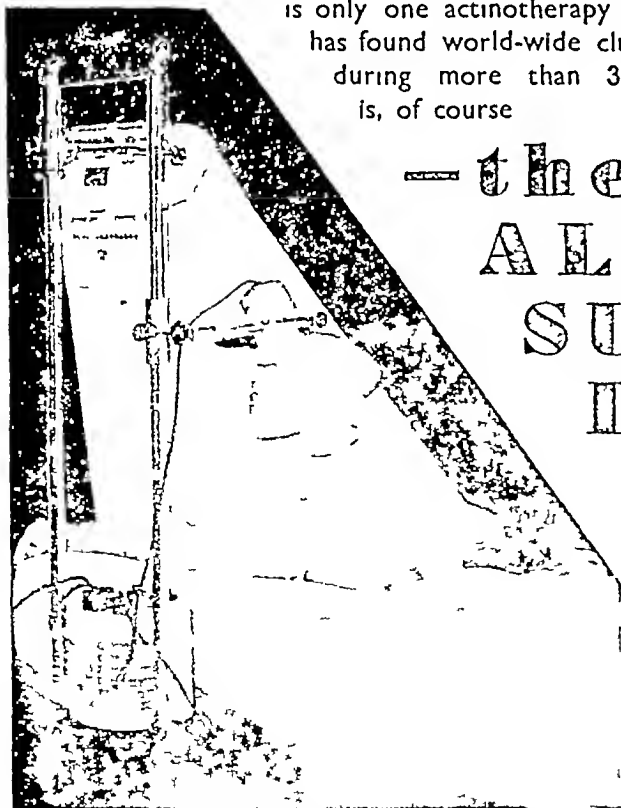
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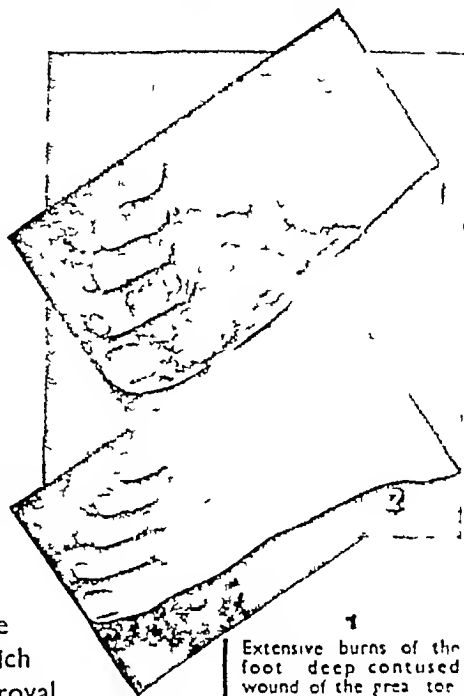
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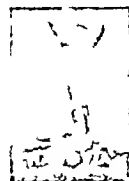
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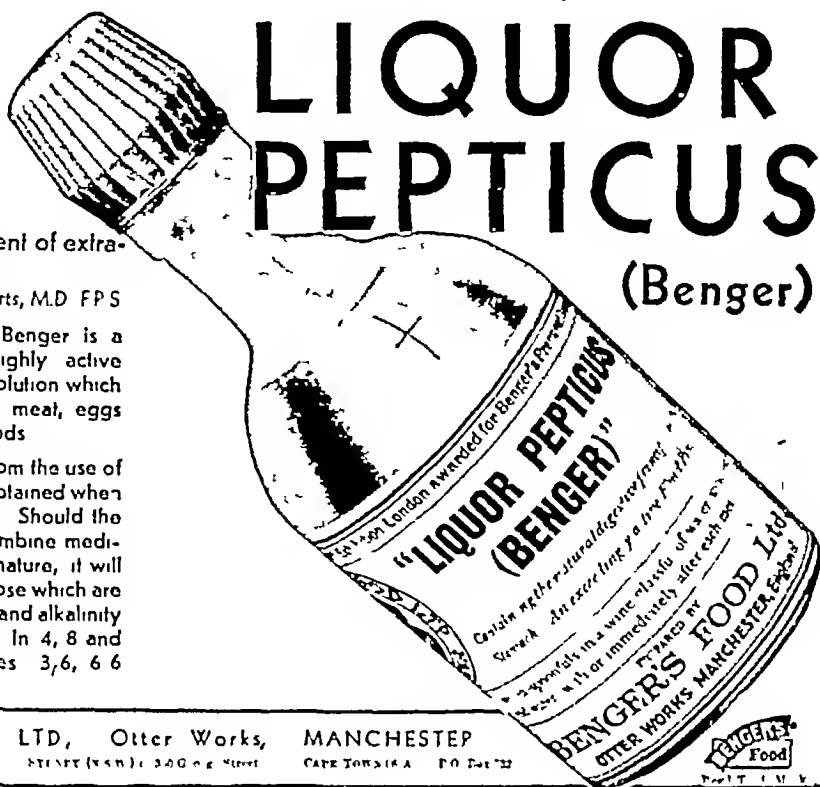
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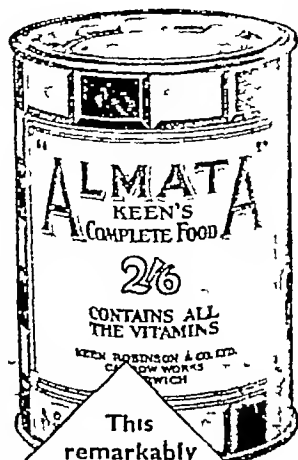
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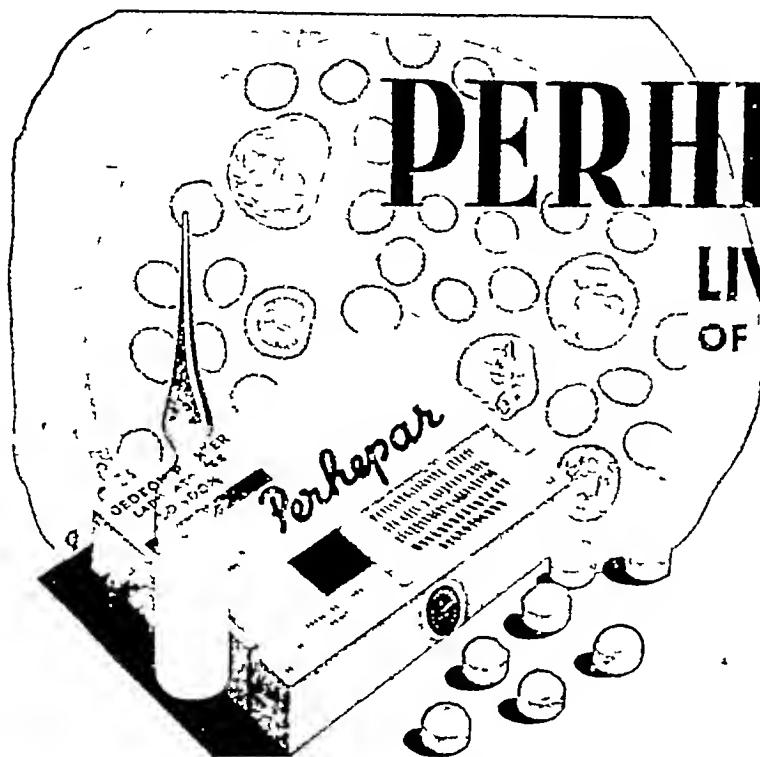
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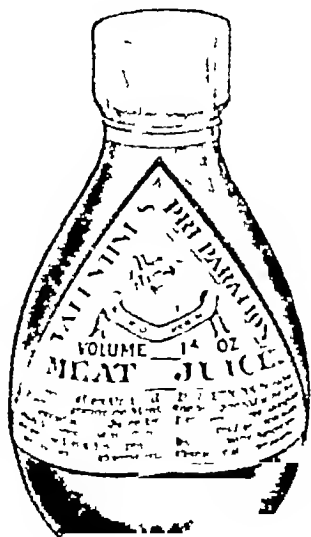
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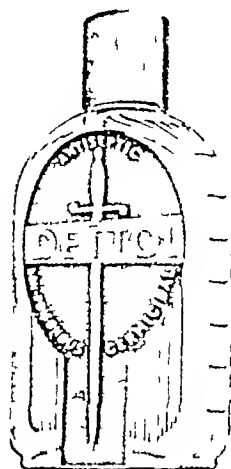
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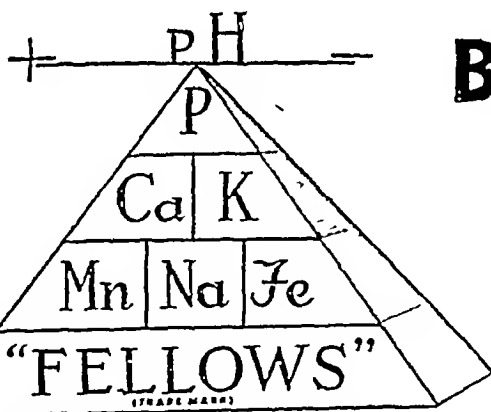
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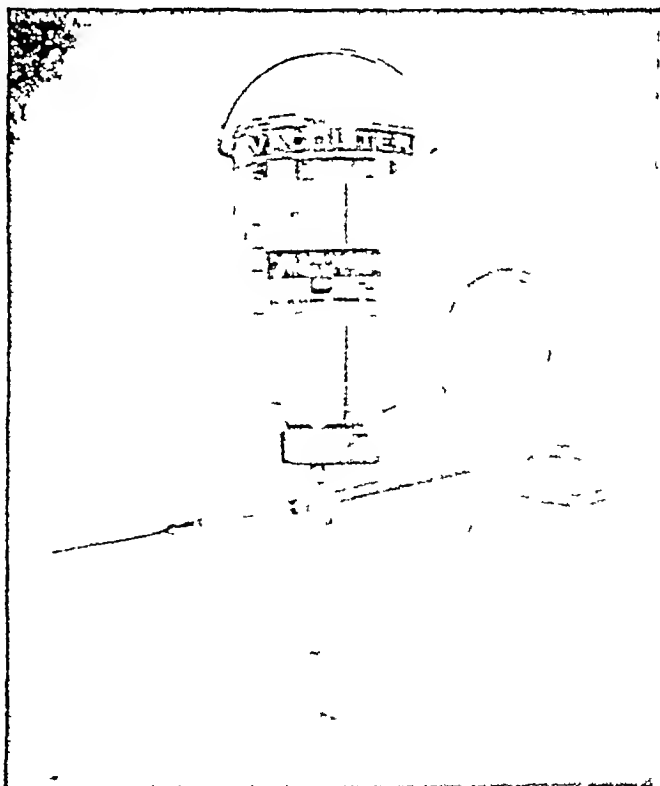
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the rapid blood builder

It is estimated that the amount of iron in the entire body is not more than 3 gm. When this small supply is diminished, serious consequences develop. Essential iron lost through hæmorrhage, deficient food-iron or other causes, is quickly replaced by Ovocerrin.

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it stimulates the jaded appetite—it is tolerated by the most sensitive stomach.

It is readily taken by children. Ovocerrin has all the advantages of therapeutic iron without any of its disadvantages.

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If you have not used Ovocerrin in your practice, we shall be pleased to send you a trial bottle on request.



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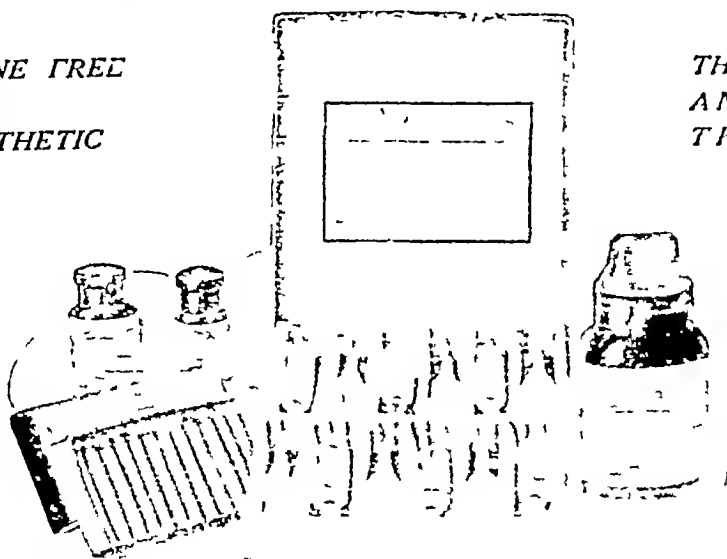
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The Safest and most Reliable Local
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Ampoules of Sterilized Powder

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A PURE MAGNESIUM TRISILICATE WITH EXCEPTIONAL ADSORBENT AND ANTACID PROPERTIES

Indications Novasorb forms a rational treatment in dyspepsia, gastric discomfort due to hyper-acidity, ulceration of the gastro-intestinal tract, and also for the adsorption of intestinal toxins, destructive ferments, or food poisons. Novasorb does not produce alkalosis nor interfere with the peristaltic function with the exception of a slight laxative effect in some cases.

DOSAGE One or two teaspoonsfuls in
water between meals with an additional
dose whenever the discomfort recurs

NOVASORB is issued in bottles —
3½ oz 2/6 8-oz 4/9 16-oz 9/-
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and in tablets —tins of 48 2/3

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ANAHÆMIN B.D.H.

The anti-anæmic principle of liver

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Not only is anahæmin remarkably effective but the cost of anahæmin therapy is exceptionally low.

In average cases of pernicious anaemia six injections usually suffice to re-establish normal blood count within six to eight weeks at a total cost to the physician of 25/- or less.

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ORAL

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(M & B 125)

The introduction of the BENZYL group into the molecule of the simple sulphonamide gives a product which is practically tasteless well tolerated and of high anti-streptococcal activity

Tablets of 0.5 grammes

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Disodium - p (p-phenyl-propyl amino) benzene sulphonamide - α - γ - disulphonate

The first colourless anti-streptococcal drug to be prepared which is suitable for parenteral administration

Ampoules of 5 cc and 10 cc

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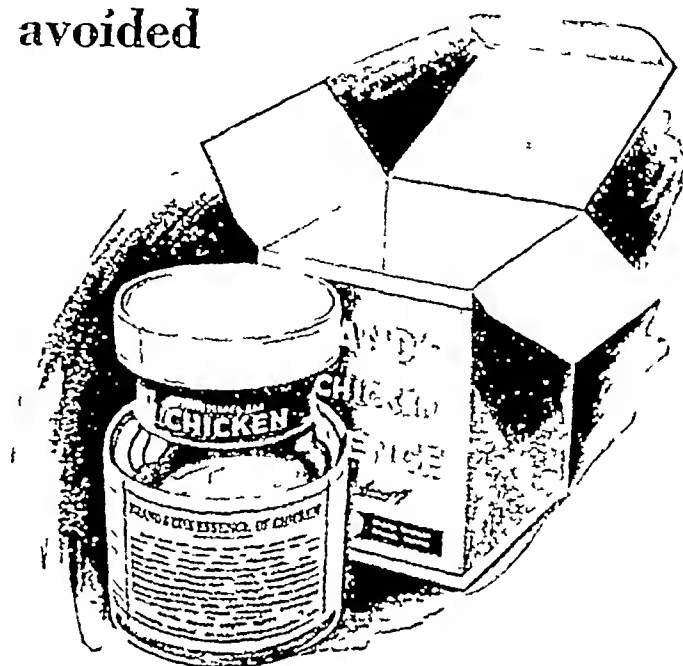
SOLUSEPTASINE is for use either alone or in conjunction with PROSEPTASINE (the first colourless oral anti-streptococcal drug to be presented to the medical profession in this or any other country) It is intended for the treatment of severe streptococcal infections where the immediate presence of the streptococcal drug in the blood is necessary

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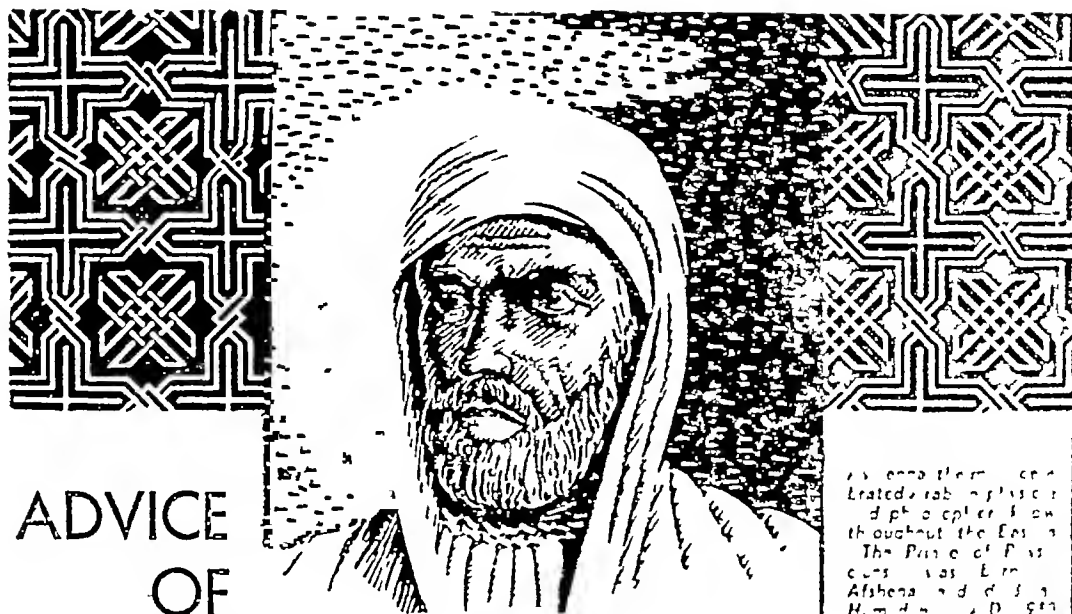
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ADVICE OF AVICENNA

AD 980-1037

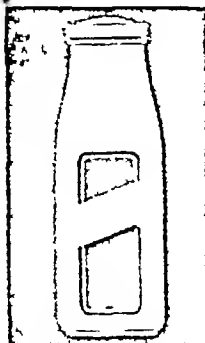
Avicenna (Ibn Sina) was a celebrated Arab physician and philosopher who lived throughout the East. The Prince of Physicians was born in Afshena and died in Hamadan, D. 993.

"Remember that if the intestines are weak, purgatives excite an unduly violent and unduly prolonged action. The same is true for old persons in whom purgation is liable to be injurious." (Canon of Medicine of Avicenna) (Avicenna)

It is interesting to note that the theories regarding purgation held by Avicenna are still supported by the leaders of modern medical thought. The purgative method of treatment of constipation is regarded to-day just as it was in the 10th century as unsuitable and dangerous.

Constipation may be treated in the modern way by the use of Peflag, which by mixing intimately with the intestinal contents produces a soft faecal mass which is easily evacuated by normal peristalsis. Peflag emulsion also has an emollient, soothing action on inflamed colonic membrane and for this reason is invaluable where spastic bowel disease is present.

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BASIC OINTMENT
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PASTE



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Special packings for the Dispensary

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For the maximum convenience Ortho-Gynol is available in the economical bulb tube illustrated. This contains sufficient for 15-20 applications and is sold complete

with unbreakable Applicator for 5-.

A refill of the same size without Applicator costs 4- . Ortho-Gynol is also available in its original packaging of 6 complete units each with disposable nozzle for 4-6.



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STERILIZED
SHELDON, N. J. U.S.A.

Measles Control with

IMMUNE GLOBULIN (HUMAN)

Lederle

BECAUSE of the frequency of complications, the mortality rate of measles is high—higher than that for whooping cough, diphtheria and scarlet fever.

Complications can be avoided by the use of IMMUNE GLOBULIN (HUMAN) *Lederle*, particularly those of broncho pneumonia—responsible for about 50% of deaths in the infant age group (6 months to 3 years).

As a modification dose, one injection of 2 cc. is administered to patients in the infant age group from 6 to 8 days after exposure (for children in the same family this is 2 to 4 days after the appearance of rash in the exposing child). This dosage confers an active and lasting immunity in the majority of cases. For passive immunity of several weeks, a first dose of 2 cc. of IMMUNE GLOBULIN (HUMAN) *Lederle* is administered as soon as contact has been recognized, a second dose of 2 cc. four days later.



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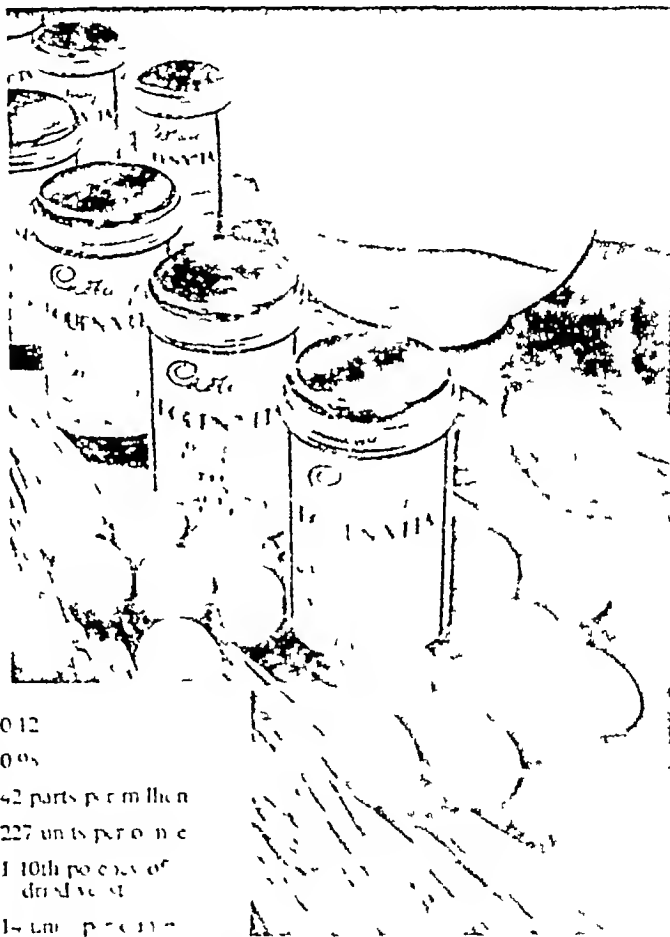
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Iron	42 parts per million
Vitamin A	227 units per ounce
Vitamin B	1/10th per cent of dried yeast
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Cadbury's

BOURN-VITA

THE PROTECTIVE FOOD



A purified fraction of
liver extract possessing
remarkable hæmopoietic properties

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(PARENTERAL)

For intramuscular or intravenous use

Neo-Hepatex (parenteral) is the result of an original process designed to conserve the maximum amount of the active hæmopoietic fraction of liver and is prepared under the supervision of a staff of biologists with ten years' experience in research work on liver extracts

In addition, each batch is clinically tested in hospital. This ensures the high and consistent clinical activity which has made Neo-Hepatex an accepted standard in parenteral liver therapy the world over. A copy of the relative clinical test chart is enclosed in each box.

Neo-Hepatex may be administered in any dosage demanded by the condition of the patient, its clinical potency enabling the clinician to give a more than adequate dosage in small volume.

Neo-Hepatex is issued in Ampoules

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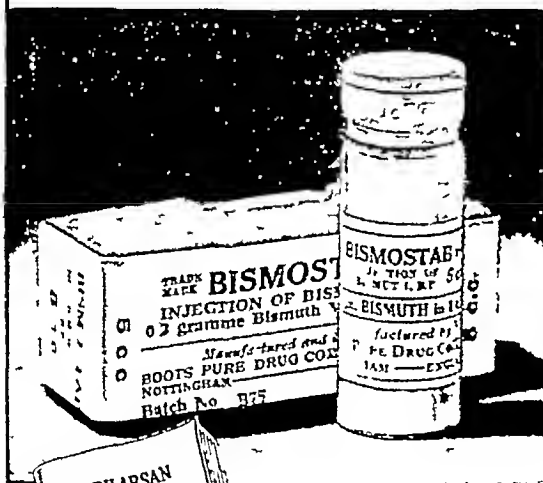
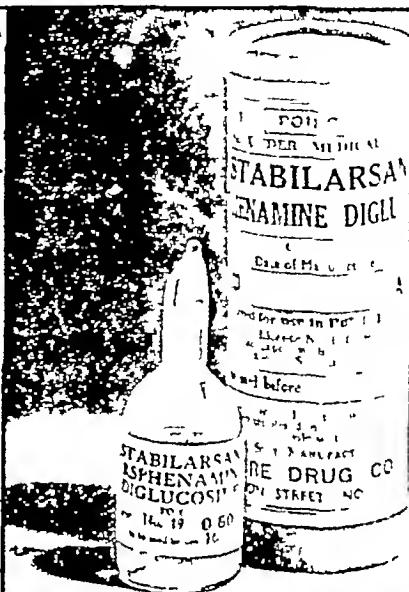
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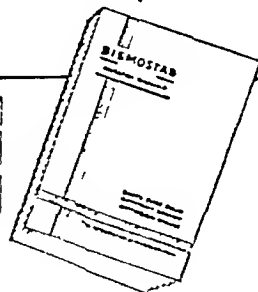
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FOR THE PROPHYLAXIS OF HAYFEVER

Immunization against grass pollen toxin, the specific causative agent in hayfever, is best accomplished by a long succession of prophylactic injections commencing early, in the Spring and continued until a few days prior to the commencement of the hayfever season. Provided a sufficiently high dose is reached, patients previously highly sensitive to grass pollen can pass through the hayfever season with complete immunity from symptoms.

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For patients who experience only mild attacks of hayfever, amelioration of the symptoms during the summer months can often be secured by far fewer inoculations than are required for the complete desensitization of severe cases.

"Pollaccine" is an extract of grass pollen prepared in the Laboratories of the Inoculation Department (Founder, Sir A. E. Wright, MD, FRS) of St. Mary's Hospital, London, and is considered to be polyvalent for the pollen of all grasses.

*Further details concerning its use for the
prophylaxis of hayfever will be
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The digitalis product that is different



Leaves of the *Digitalis lanata*
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DIGOXIN

Digoxin is isolated from leaves of
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active therapeutically than *Digitalis*
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A British product resulting from
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Definite in chemical composition
and stability, thus ensuring uniform
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Use Digoxin whenever digitalis is
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Specify
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Oral **SOLUTION OF DIGOXIN (B W & Co)** 0.5 mgm in 1 cc.
Use *Bottles of 30 cc (with Pipette) 46 cc, 100 cc, 250 cc, 500 cc*

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Injection *Bottles of 10 Hypoid ampoules 1 cc, a 39 price*
L. J. P. 1937



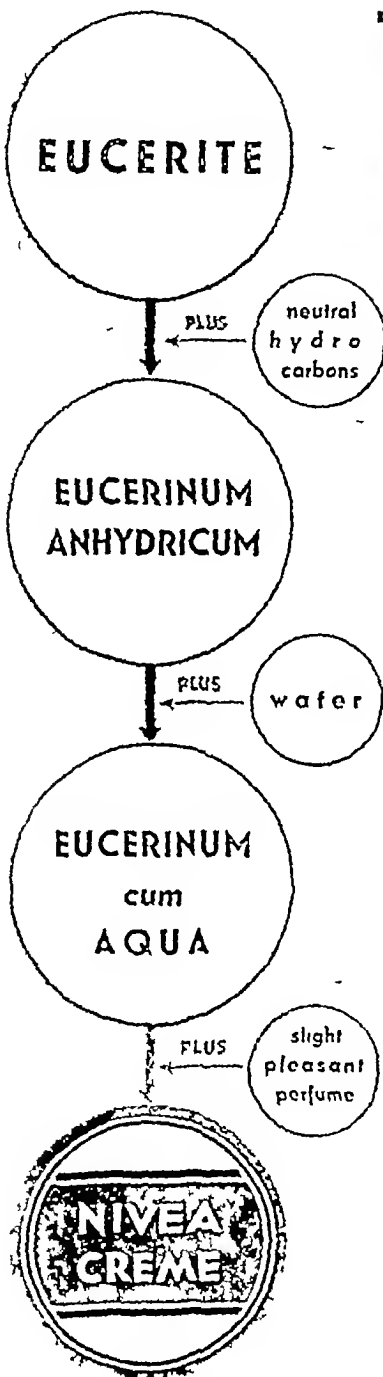
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ANGINA INNOCENS: A CLINICAL STUDY *

by

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For the last eight years I have fully investigated and personally followed up a large number of patients suffering from cardiac pain. The starting point in this investigation has been an analysis of the exact nature of the pain complained of. By observing the position of the pain, its radiation or lack of radiation, its relation to exercise, rest, emotion and posture, it has become clear that patients with heart disease suffer from types of pain which are as characteristic and distinct as are those complained of by patients with gastric disease. These varieties of cardiac pain differ from one another according to the underlying pathological or functional condition.

The pain of coronary thrombosis is characteristic. Its onset is sudden, its severity is greatest at the start and it tends to subside over a period of days. It may be constant during that period or may recur and remit. The pain of true angina of effort presents an equally distinct clinical picture. An intelligent patient is able to describe its exact quantitative relation to exertion—for example, a speed of one mile per hour may produce no pain, a speed of two miles per hour may result in pain after a walk of two or three hundred yards, and a faster speed or a hill will accelerate its onset. Rest invariably allows the pain to subside.

There are two further types of cardiac pain, the nature of which has not hitherto been exhaustively analysed. Spasmodic angina is an attack of cardiac pain, the onset of which may result from exercise, exposure to cold, emotion, or a heavy meal; it is relieved by amyl nitrite, but it is not exactly proportional to exertion. When once such an attack has started it will have to run its course and may increase in severity, although the patient is at rest. The nature and symptomatology of the fourth type of pain have remained unexplored; it is associated with no definite cardiac disease, is apparently of functional origin, and has a favourable prognosis.

Nomenclature

This variety of pain is the subject of the present communication. It tends to start in the left chest, frequently radiates, has no quantitative relation to exertion, and is found generally in hypersensitive or nervous subjects. The term 'pseudo angina' has in the past been applied to this syndrome, but it is a contradiction in terms, for either a patient is suffering from a pain or he is free of it. The description 'neurocirculatory asthenia' is too wide, for it embraces such other symptoms as tachycardia

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palpitation, and certain nervous manifestations. There appears to be no serious objection to labelling this pain 'angina innocens' for this suggests the cardiac and at the same time the innocent nature of it. There is an analogy with diabetes.

It may be thought that the word angina, even though qualified by 'innocens', is not desirable in view of the possible implication of severe cardiac disease. This objection is inadequate for two reasons. It often happens that a patient with angina innocens has been told that he has 'angina', and the same statement is perhaps more often made to the patient's relatives. One of the patients described in this paper was told at a hospital that he was suffering from angina and would have to live a very retired life. Being introspective, the young man's mind is state became such that he seriously contemplated suicide. This case shows that there may be sufficient similarity between angina innocens and angina of effort or spasmodic angina if a careful history is not taken for confusion to arise. Such a label as left subminim pain is too vague. A second reason for fixing the fact that the pain has many of the characteristics of an ordinary cardiac pain is that the patient, from hearing of acquaintances dying with substernal pain radiating to the arms, may confound the two conditions and feel that a non-committal label is an attempt at concealment or prevention on the part of his physician. It would appear more practical and more logical therefore to term the condition 'angina innocens', stressing the latter word.

The observations in this paper are based upon the detailed study of thirty-eight patients suffering from this type of pain who have been under investigation for varying periods since 1929. Simultaneously a study of a large number of patients complaining of the other forms of cardiac pain has served as a background against which the present syndrome has stood out more clearly with the passage of time.

Survey of the Literature

That cardiac pain can occur in the absence of any heart disease has long been recognized. The observation upon which this view is founded is that a patient may not die with cardiac pain and the heart may be completely normal. This variety of pain has been described in the past as 'pseudo angina' (St. Williams, 1903), 'angina nervosa' (who coined this term referred to it as 'angina nervosa' to be left undisturbed by the patient's own ideas with hyperaesthesia. Phlegm, etc., etc.), 'angina hysterica' (D. C. C. 1911), 'angina

Pain is in many cases constant though it may be accentuated by exercise and described as occurring in paroxysms or in the form of an intermittent lancinating stab. Stating that it is frequent after exertion he also observes that in a few cases the pain was not accentuated during exercise but even relieved by it. Dr Costa describes its localization near the cardiac apex and its radiation to the left arm and lays stress upon the presence of hyperaesthesia which often made the pressure of military accoutrements exceedingly unpleasant. Finally he notes that the heart rate may be fast in the erect position and slow when the patient is recumbent. Very little has since been added to this description.

Friedlander and Frickhof (1918) mention the frequency of sore throats as an aetiological factor refer to the left-sided pain and hyperaesthesia and bring out the fact that palpitation, nervousness and giddiness are common in these patients. Dimicopolu (1927) considers that although there are cases of non organic angina they are very rare. He states that the condition is commoner in women and stresses the precordial hyperaesthesia, marked tachycardia, violent palpitation and other evidence of an abnormal function of the vegetative nervous system. He also remarks that the disease is not fatal but that it is very difficult to distinguish it from organic angina. Paul White (1931) writes: "The precordial pain is a dull or heavy ache is a rule lasting for hours and not radiating. But occasionally it is interspersed with sharp stabbing sensations. A substernal oppression is unusual though circulatory ischaemia may and in fact frequently does complicate angina pectoris. An interesting analysis of patients belonging to this group was made by Doris Baker (1930). Her series was collected from a hospital outpatient department; it comprised thirty-two cases in which there was a history of up to twenty-nine years and twenty others. In these cases there was a history of rheumatism in only six; there is no mention of the frequency of sore throats or of other specific infections. The patients apparently had normal cardiovascular systems except that in ten there was high blood pressure and in four mitral stenosis. They were generally of the thin anxious type. The pain was worse after exertion, having no quantitative relation to it; in most cases it was a dull ache though a sharp stab was occasionally complained of. It was accentuated when the patient was tired. Exhaustion as in the present series was a prominent symptom; sighing and palpitation were frequent. Fainting was said to be unusual. The chief physical change was hyperaesthesia, which was present in 68 per cent.

individual produces no symptoms can in a more sensitive person give rise to severe pain. In the latter case the pain may be prominent when the underlying organic basis is so insignificant as to escape detection by any method of examination.

Three criteria have been used here for the diagnosis of *angina innocens*: first that the pain is not proportional to exercise; secondly, that there is no evidence of cardiovascular disease; and thirdly that the course of the disease in patients observed carefully proves its innocent nature. The absence of cardiovascular disease was demonstrated clinically, electrocardiographically and radiologically. The absence of any deleterious lesion is shown by the following facts with regard to twenty-one of the thirty-eight cases. Six of the patients have recovered four of these having been seen five years after the observed presence of the pain. Eight patients improved or were no worse after five years and one after three years. Seven were so young as to make it hardly possible that they could be suffering from coronary disease, their ages being 12, 15, 15, 16, 17, 17 and 20 years. This last patient of 20 in spite of attacks of pain had been for months in the habit of cycling distances of sixty to eighty miles each week end.

In order to give a wider view of the syndrome sixteen more cases with pain of an identical character have been added to the above twenty-one. They consist of eight cases in which the observed duration of the pain has been less than three years and eight of organic heart disease. The latter group is of particular interest: three patients with mitral disease have suffered from an *angina innocens* type of pain for five years; three with hyperpnoea have remained otherwise well for four years and one with hyperpnoea for three years. In the last case the pain was also associated with a microcytic anaemia and disappeared when this was treated. In the remaining patient the only sign of a cardiac lesion was a Q interval of 0.22 of a second. The fact that the latter patient has remained reasonably well and with no signs of failure in spite of organic heart disease is additional proof that this particular type of pain is innocent.

Methods of Examination

In all cases a full history was taken. In the past history the following points were specifically investigated: rheumatic fever, growing pains, chorea, scarlet fever, tonsillitis, diphtheria, syphilis and the history of the pregnancy. Note was also taken of other diseases or surgical operations. A history of previous mental stress or trouble was not recorded.

of cardiac dullness and the sounds were noted. Precordial hyperaesthesia was tested for in every case and the lungs and abdomen examined. An electrocardiograph was taken and in some cases repeated. The Wassermann test was done. A six foot film of the heart was taken, the contour of the heart noted and the heart-chest ratio measured.

Age and Sex Incidence

Of the thirty-eight patients who were examined twenty-two were females and sixteen males. The ages at which the syndrome manifested itself were as follows: of the twenty-two females eleven were between the ages of 36 and 46, ten of the sixteen males were between 41 and 55. Four males and five females were between 12 and 25 years of age. The youngest female was a girl of 15. In one case the onset was between the ages of 36 and 65.

Past History

In the past history two facts stand out. The first is the high incidence of rheumatic infections and tonsillitis and the second the frequency of psychological disorders. In twenty of the thirty-eight patients there was a rheumatic history: rheumatic fever occurred in seven, growing pains in twelve, chorea in two and scarlet fever in six. Twenty-one of the thirty-eight patients had had definite tonsillitis. In twelve of these the sore throat had been recent and in nine there was a history of sore throat in the past. In the latter group one patient had had sore throats for twenty years, two for twelve years and one until tonsillectomy at the age of 21. No quinsies were noted, the tonsillar inflammation being apparently more likely to run the course of the recurrent hyperemic type of inflammation found in acute rheumatism. No definite relation was found between an attack of tonsillitis and the onset of cardiac pain. Nor was there evidence that tonsillectomy relieved the pain. In one case angina innocens appeared immediately after an attack of rheumatic fever and persisted for eighteen months.

Sixteen of the thirty-eight cases had had definite psychological difficulties. Two had attended the Maudsley Hospital. Six had suffered from severe domestic worry and depression. Two complained of severe night terrors and nightmares. One had been a sleep walker and had been in the habit of diving off the end of his bed. One had had a functional hemiplegia and another functional dysphagia and dyspnoea. One had seen Sir Henry Head for psychasthenia and three had suffered from various phobias—syphilophobia, cardiophobia and agoraphobia. A history was obtained of the following diseases: syphilis, adequately treated in three cases; influenza in two; diphtheria, typhoid, paratyphoid, malaria, jaundice, diabetes, nephritis, asthma, epilepsy, mucous colitis and gonorrhoea—each in one case.

Symptoms

In addition to the precordial pain the other symptoms were as follows. Marked lassitude was complained of in thirty cases; this was the outstanding symptom apart from pain; it was severe and almost invariably more complained of than shortness of breath. If the question

'Which causes you the most trouble, tiredness or shortness of breath?' was put the answer would almost invariably be 'tiredness'. Shortness of breath of a not very pronounced degree occurred in twenty-nine cases. Orthopnoea was found in seven cases, one of them a case of mitral stenosis and one of hyperpnoea; in the other five the symptom was not prominent. Palpitation was complained of by twenty-nine patients. It was precordial in position, being generally felt over the apex but it

was not as a rule noticed at the base of the throat. It is often the case in paroxysmal tachycardia or in patients with hyperpnoea. Giddiness was a symptom in twenty-seven cases and faintness without loss of consciousness in seven. Thirteen patients gave a history of fainting in eleven of these the syncope immediately succeeded a sudden severe attack of left-sided precordial pain, generally radiating to the left arm. The details of this syndrome will be discussed later. It is thus apparent that twenty of the thirty-eight patients suffered from a somotor attack. Sudden painful stabs, possibly due to premature beats, were complained of by ten patients; a dull left-sided precordial ache often followed this.

Twenty-nine patients complained of a sense of constriction. This was generally left-sided and was not of the typical substernal central variety found in organic disease of the coronary vessels. A feeling of heaviness over the left praecordium was a commoner symptom than a sense of internal pressure or suffocation. Sighing, in spite of its frequency in patients with neurocirculatory ischaemia, had not been consciously noticed except by four patients, although it is probable that had careful respiratory tracings been taken the respiratory irregularity demonstrated in cases of neurocirculatory ischaemia by Paul White would probably have been found more often. Dyspepsia was present in fourteen cases and in several appeared to be a predisposing or trigger symptom for successful treatment of the dyspepsia generally led to considerable diminution in the severity of the cardiac pain. In no case, however, could it be said that the dyspepsia was the cause of the cardiac pain.

Syncope Type of Angina Innocens

The following cases are examples of a special syncope type of angina innocens in which the pain starts over the precordium or rarely in the mid line and radiates to the arm. The onset is almost always abrupt though most patients are able to reach a chair or a couch in time to sit down. The period of pain which is long enough to be remembered and to allow of the radiation to the arm to be noticed, is followed by an attack of fainting or faintness; the sharpness of the pain is believed by most of the patients to be the cause of the fainting attack. The loss of consciousness may not be complete. In several cases these syncope attacks were the first manifestations of the commoner type of angina innocens described above. Generally the attacks are somewhat infrequent but in one case amounted occasionally to ten a day.

In this patient the attacks had been spread over a period of six years and at the end of that time the heart was apparently perfectly normal.

A second patient was seized with a sudden attack of precordial pain while washing, became dizzy and half unconscious but managed to get back to bed. The pain in this case started in the left chest, radiated to the left arm and lasted for about half a minute.

The third patient was seized with an attack soon after rising and ascribed it to excitement at the prospect of seeing relations.

The fourth patient had four attacks in eight months; the attacks lasted for the unusually long period of ten to fifteen minutes before she lost consciousness; the onset was sudden and the pain started in the precordium and radiated through to the back. At this time the pain came on only with the syncope attacks although previously she had typical precordial pain after exercise. She had made a complete recovery when seen eleven months later.

The fifth patient had a severe sudden pain in the left chest radiating to the left axilla, not to the arm and then fainted.

The sixth patient had fainted two or three times but only in association with precordial pain which preceded the attack by a few seconds.

The seventh patient while getting her husband's breakfast had a sudden precordial pain which passed down the left arm and a sense of tightness in the throat. There was also a feeling of precordial constriction and she then fainted.

The eighth patient while stooping down to clean a stove was seized with a sudden severe attack of pain in the chest radiating to the left arm and felt very faint. Subsequently she had several similar attacks, one in church associated with

stenosis and in one mitral regurgitation. In one case a systolic murmur was heard at the apex and in another a systolic murmur which was loudest at the apex and conducted to the aortic base. No abnormality was discovered in the lungs. In thirty-seven cases the abdomen was normal but in one tenderness was present over the right renal area.

The blood pressure findings in this series of cases of angina innocens are worth careful attention. In thirty-one cases the recumbent systolic and diastolic pressures were normal. In five the blood pressure was subnormal; in two there was some hypertension which responded to dietetic treatment in one instance. In twenty-eight cases the blood pressure was taken with the patient in two positions after recumbency for five minutes and again after assumption of the erect posture for two or three minutes. In twenty-five of these patients there was a marked fall in the systolic pressure in the erect posture, which was associated as a rule with an increase in the heart rate. The average fall for the twenty-five cases was 21 mm Hg and this was accompanied by an average increase in the pulse rate of ten beats a minute. The maximum fall was 50 mm Hg but this was in a patient with hypertension. In three instances no change in the blood pressure or the pulse rate was observed in readings taken standing and lying. These findings are somewhat significant in view of the frequency of giddiness and fainting attacks in angina innocens.

Radiography disclosed abnormality in four cases and some slight prominence of the pulmonary conus in the patients with mitral stenosis. In none of these three was there any gross deviation from the normal. Two of the patients with left ventricular enlargement had hypertension. In twenty-nine cases the electrocardiographic tracing was normal; in eight there was some abnormality. These cases all showed left axis deviation which in five was physiological for the age of the patient. In no instance was there any abnormality of the T waves. In one case the tracing is lacking. The Wassermann reaction was negative in twenty-nine cases; in eight the blood was not examined and in one patient who had previously had a positive reaction the result was now negative.

Differential Diagnosis

The pain of angina of effort is characteristic and a careful history will in all cases differentiate the two.

in some degree, is not severe. Palpitation is prominent in angina innocens and was complained of by twenty nine out of the thirty nine patients whereas in only nine of those with angina of effort was this at all severe though three admitted to having suffered from it in a slight degree. Fainting or syncopal attacks strongly support the diagnosis of angina innocens, for none of the thirty seven patients with angina of effort suffered from these their only analogous symptom being in the case of hyperpetics, some temporary dizziness after stooping or on rising suddenly. Seventeen of the patients with angina innocens gave a history of fainting and none of those with angina of effort did so. Orthopnoea is a point in favour of angina of effort for twelve of the thirty seven patients complained of it in a marked degree and two slightly. Definite evidence of cardiovascular disease suggests angina of effort and in the complete absence of all clinical radiological and electrocardiographical evidence of organic cardiovascular disease angina innocens is the more likely diagnosis this is of course, not conclusive for a slight coronary lesion may obviously be present in a sensitive individual or in syphilitic aortitis and yet be physically undiagnosable. Mitral stenosis is an exception to the above rule for patients with this lesion when they suffer from cardiac pain complain of pain of the angina innocens type. The blood pressure in angina innocens is generally normal, subnormal, or shows a definite tendency to vary with posture that in angina of effort is frequently raised.

There should be no difficulty in distinguishing this condition from coronary thrombosis. The syncopal type of angina innocens, starting with a severe attack of precordial pain and followed by faintness or a syncopal attack may possibly suggest this diagnosis in some cases. There is however very rarely any loss of consciousness in coronary thrombosis. The absence of fever cardiac enlargement leucocytosis, and any electrocardiographic abnormality will confirm the diagnosis.

Picrosystolic tachycardia or auricular flutter may at the onset of an attack be associated with cardiac pain radiating to the arm and with faintness or fainting. Here a very high heart rate, which shows no variation from minute to minute, is characteristic. The electrocardiograph will again elench the diagnosis.

The syncopal type of angina innocens may suggest an epileptic attack with a visceral aura. The onset however is less abrupt than that of epilepsy. The patient generally has time to reach a chair or a couch before losing consciousness. There is a sufficient period to allow of the type of pain being recognized and later described. The tongue is not bitten. Convulsions do not occur. There is no incontinence of urine. The course of the disease is unlike that of epilepsy for there is no progressive increase in the severity of the symptoms. The patients on the other hand, generally show steady if slow improvement. (Since completing the above study I have seen a patient who suffered both from epilepsy and from angina innocens. In no instance were her attacks of epileptic unconsciousness associated with the presence or any exacerbation, of the cardiac pain.)

Other Types of Cardiac Pain

It is conceded that the pictures of angina of effort and of angina innocens are sufficiently distinct anyone with experience of patients with cardiac pain will agree that these two conditions do not account for all cases. Spasmodic angina is one condition in which a severe attack of cardiac pain arises. The exciting cause may be excessive anger, or possibly some digestive upset. The

characteristic of the attack is that when it has once started it has in the words of one patient "to run its course". It would appear as though the exercise or emotion started some definite pathological mechanism and that the pain persisted till such mechanism had ceased. The therapeutic action of amyl nitrite in these attacks suggests that spasmodic angina may be due to coronary spasm. The present investigation has as yet thrown no definite light on the mechanism of spasmodic angina but it has served to show clearly that there is such a symptom complex and that this can quite easily be recognized. More work is necessary before any deductions can be made as to why some patients with angina of effort also suffer from attacks of spasmodic angina or why a patient with angina innocens very occasionally appears also to suffer from these attacks. It would seem to be sufficient for the time being to analyse and to separate out the two clinical entities of angina of effort and angina innocens.

Possible Mechanism of the Pain

It is difficult to understand how the pain of angina innocens is produced. There is quite obviously no coronary disease. The severe spasmodic type of attack may just possibly be associated with some temporary coronary spasm but of this there is as yet no evidence. The known factors which may be concerned with the production of pain in these cases are worth enumerating. There is no doubt that the angina innocens type of pain is that found exclusively in those patients with mitral stenosis who suffer from cardiac pain. There may be some analogy between these cases of mitral stenosis and those with angina innocens and in apparently normal heart. In mitral stenosis the left ventricle is contracting in an abnormal manner. The diastolic filling of the chamber is probably somewhat reduced so that the systole tends to be over emphatic. The high pitched accentuated first sound and the slight but persistent diastolic murmur of tachycardia bear witness to this continuous cardiac over action. In these circumstances the patient's heart or praecordium may become gradually sensitive to the persistent knocking and the sensation may ultimately be magnified into pain.

A second factor is an over active central nervous system due to psychological or endocrine factors. The vasomotor system is also unduly labile. The falling of the blood pressure in the erect position the history of syncopal attacks and finally the curious association between a severe attack of pain and an almost immediate fainting attack all suggest this system may be at fault. A final factor the mechanism of which will remain obscure is the known association between chronic infection and irritable heart. In Dr. Coates' experience the infection was largely of a dysenteric nature but in the present series of cases it would appear to have been pharyngeal.

Prognosis

has persisted with remissions and relapses and is on the whole unchanged. One of this final group has had symptoms for twelve two for seven three for four to five years and two for two years. It is thus apparent that the prognosis is very good as regards life but it is also shown that the symptoms on the whole tend to be chronic. This chronicity when considered in conjunction with the absence of evidence of physical disease suggests very strongly that although there may be some slight physical basis the nervous or functional element preponderates. It is also clear that pain of this type has no bad prognostic significance, even if the patient is suffering from an organic cardiac lesion.

Conclusions

- 1 A cardiac pain of an anginal nature is described, the characteristics of which enable it to be differentiated as innocent. The term *angina innocens* is suggested.
- 2 The differentiation of *angina innocens* from other types of cardiac pain is described.
- 3 An account is given of a syncopal variety of the syndrome.
- 4 The prognosis as regards life is good but the duration of the pain with remissions is often protracted.
- 5 Factors possibly concerned in the production of the pain are discussed.

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PREVENTION OF DISEASE IN INDUSTRY *

BY

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Industrial medicine is the practice of medical supervision, preventive medicine, and public health within the confines of an industry. Its aim is to safeguard the health of the employee and to minimize time lost from work because of sickness or of accidents. Though one of its functions is treatment it is mainly an advisory and preventive service. The industrial medical officer has to co-operate with managers, workers, engineers, chemists, and architects. He has to discover faults in the working environment and try to find remedies. One of his most interesting duties is to bring into the effective service of industry the discoveries of the research worker.

The Factory Department of the Home Office is constantly engaged in effective and progressive work for the prevention of disease in industry. It numbers on its staff men and women who are among the greatest living authorities on different aspects of industrial hygiene and toxicology. Their profound store of knowledge, constant helpfulness and unfailing courtesy industry sometimes fails to appreciate to the full. It is important that doctors should have the special knowledge and training which enables them to offer advice to the employer as to how his industry may be carried out in safety. At present with a few exceptions it is only the medical inspectors of factories who have this knowledge. No doubt with the growth of this branch of preventive medicine more doctors will make themselves competent in this interesting work.

The main principles underlying the prevention of disease in industry can be summarized under fifteen headings:

2 Medical Inspection Under State Support

In this country medical examination of entrants into industry required by law and carried out by certifying surgeons is very limited in extent and applies only to young persons between the ages of 14 and 16 but it was undoubtedly the forerunner of the much more extensive voluntary medical examination now frequently undertaken. An increasing number of employers are realizing the advantages of some kind of medical service in the factory. An additional measure of protection applied in many industries is the periodic medical examination of any workers exposed to known risks. This may be at weekly, fortnightly, monthly or quarterly intervals and may be carried out by the certifying surgeon or an appointed surgeon approved by the Chief Inspector. These examinations are chiefly undertaken in the case of work involving exposure to lead to carbon bisulphide to benzene and other tumes in india rubber works and to chronic acid in chromium plating. After the war a number of medical men were appointed to work as whole or part time works doctors with happy results but there is a need for the employment of a still greater number. They can often detect intoxication before disability is produced. Thus examination of the blood for punctate basophilia is of extreme value in the prophylaxis of plumbism and is indeed essential if the occurrence of manifest plumbism is to be avoided. Similarly in the earliest stages of benzene poisoning the platelet count and white cell count may fall and before tetrachlorethane poisoning appears elevation of the white cell count may be found. Facilities should be available for periodic medical examination and for repeated radiographs of the lungs in persons exposed to the risk of pneumoconiosis.

3 Prevention of Dust and Fume

Dangers from dust and fume may be removed by the application of local or general exhaust ventilation. As Sir Thomas Legge emphasized unless and until the employer has done everything—and everything means a good deal—the workman can do nothing to protect himself although he is naturally willing enough to do his share. Wherever possible exhaust ventilation through hoods must be applied at the point of origin of the dust or fume. It is in use in the manufacture of electric accumulators and of white lead in the manipulation of silica and asbestos and of carbon bisulphide and benzene in india rubber works. In certain instances general as opposed to local exhaust ventilation is applied. Good examples of this are the ventilation of dope rooms and of cellulose spraying shops where it is obviously impracticable to apply local exhausts direct to each doping bench or spraying horse. In dusty lead processes such as mixing and pasting in the manufacture of electric accumulators and the breaking down of the white lead stack the hose pipe must be freely used to reduce dust to a minimum. The breaking down of white lead stacks in a dry state must be forbidden and white lead should be converted direct into an oily pulp without dry grinding. The use of dry sandpaper for the removal of paint must be forbidden, and wet waterproofed sandpaper must be substituted. A preventive method which has been widely applied in the mining, metallurgical and ceramic industries is the substitution of wet methods for the original dry screening grinding milling and mining processes. Dry drilling is the cause of most of the dustiness in mining and while wet drilling does not ensure a dust free atmosphere it reduces dustiness very considerably. In the grinding industries where sandstone wheels are used there should

be a continuous stream of water running over them. In dusty trades respirators should be used where possible, but it is usually difficult to get the men to wear them.

4 Protective Apparatus Uncontrollable by the Workman

Sir Thomas Legge used to emphasize that in the prevention of disease in industry, if you can bring an influence to bear external to the workman—that is one over which he can exercise no control—you will be successful and if you cannot or do not you will never be wholly successful. In the case of exhaust ventilation it is usually a simple matter to have the machinery operating the fans outside the workshop altogether. Even so, the protective apparatus may not be fool-proof as in the case of the workman in a grinding shop who can turn back the hood from his grinding wheel for use as a receptacle for tools thus making the whole apparatus ineffective.

5 Education of Workman as to Nature of Danger

Sir Thomas Legge used to insist that all workmen should be told something of the danger of the material with which they come into contact and not be left to find it out for themselves sometimes at the cost of their lives. The factory physician should insist on the necessity of teaching the workman to take an interest in protecting himself. He should be taught the importance of clean habits in lead works and should be made to understand such things as the principles of dust suppression. For example he should know that a vacuum cleaner is used to remove dust from a workshop for his protection and should therefore never be employed with the motor reversed. Cautionary placards and illustrated notices should be used in the workrooms concerned so that the early lesions of the skin in anthrax and in chrome ulceration are familiar to all. To ensure the prompt treatment of anthrax an individual card has been devised for workers employed in industries exposing them to risk. In case of illness this is presented to the doctor as a hint that the possibility of anthrax should be considered. It is of vital importance to train men in safe methods of artificial respiration so that these can be employed promptly in cases of carbon monoxide poisoning. The factory physician must never agree to a scheme where the workmen are kept ignorant of the poisonous nature of substances handled. In the war American workmen were told that trinitrotoluene might indeed explode but was otherwise harmless. This attitude was a distressing obstacle to those who tried to introduce into American plants the safeguards which had been successfully adopted in this country.

6 Cleanliness of Work Places

In some dangerous trades constant vigilance by a staff of good foremen is necessary. In the manufacture of trinitrotoluene absorption through the skin cannot be prevented unless benches tools floors and walls are kept spotlessly clean. Similarly glaze rooms and dipping rooms in the potteries accumulator pasting shops and all rooms in which a dusty lead process is carried on must be wet-cleaned every night to prevent the inhalation of dust of compounds of lead. Where it is impracticable to use a wet process—as for example in the manufacture of litharge—the foremen must see that no dust is raised in shovelling.

7—Bodily Cleanliness

Cloakrooms washing rooms messrooms baths nail-brushes towels and soap must be provided by the employer and used in their time. Where absorption is known to occur through the skin as in the use of aniline,

nitrobenzene and trinitrotoluene appropriate protective clothing must be worn. If direct contact with the poison cannot be avoided every means must be adopted to protect the skin. The surface which is necessarily exposed may be covered with a bland ointment, dusted with powder or washed frequently. There is a risk in too much washing of the skin and care must be taken in such cases to use the least irritating cleansers to avoid scrubbing and to replace the lost oils of the skin byunction with an animal fat.

8 — General Hygiene

There are certain principles which apply to all trades but are of greater importance in the dangerous trades because to neglect them may increase the susceptibility of the worker to the poisons concerned. Measures must be taken to prevent long hours of work, the employment of boys and girls, undue heat from furnaces and steam from tanks, and the use of underground workshops and bad lighting and ventilation. In this country the law requires that every factory and workshop shall be kept clean and free from effluvia, provided with sufficient means of ventilation, and kept at a reasonable temperature. It does not however contain any provisions as regards lighting. If domestic conditions were always of the standard required by law for a factory or workshop the health of the general population would certainly be improved. It is not suggested that the conditions existing in every factory or workshop in this country are by any means perfect but in the majority a good standard has been attained. During the war it was realized that hygienic surroundings, good ventilation and lighting facilities for obtaining food at a reasonable cost and opportunity for rest and recreation were not only good for the worker but to the advantage of the employer. The benefits derived from such improvements have served to stimulate the provision of further facilities for workers to enjoy a healthy life. Except in the special rooms set aside for the purpose, smoking, eating and drinking must be forbidden in certain works—for example, lead works. Otherwise a man might carry a compound of lead on his fingers to his cigarette and perhaps inhale a dangerous amount.

9 Improvements by Chemists

naphtha and acetone. Further work is required to find for example a harmless substitute for nitrate of mercury in the felting of fur.

10 -Improvements by Engineers

Wherever possible mechanical means should be substituted for hand carriage. Examples of this are seen in the use of cranes, rails, hoists travelling belt covered conveyors and hoppers and automatic packing machinery. The abolition of hand filling of shells, the substitution of shot blasting for sand blasting and of stainless steel for chromium plating and the use of a closed in film steam evaporator in the manufacture of silver nitrate are further examples. The invention of electroplating about 1840 led to a great diminution in the number of cases of mercury poisoning because it replaced water gilding in which mercury was volatilized from an amalgam by heat over a fire. An outstanding contribution to the reduction of the risk of lead poisoning was the invention of the wet pulping method in the manufacture of white lead 90 per cent of the white lead manufactured in this country is never handled in the dry state but is converted from an aqueous pulp to an oily paste in closed machines. Glass workers' cataract has been minimized by the invention of a glass bottle making machine producing bottles at the rate of forty a minute and at one ninth the original labour cost. In iron and steel rolling mills the use of goggles made of Crookes glass protects the eyes from the fire, heat and glare, and so prevents cataract.

11 Knowledge as to Portals of Entry of Toxic Substances -

Where it is known by what route—respiratory, alimentary or cutaneous—a poison is absorbed the physician can in consultation with the employer indicate on what principles the methods of protection should be based. In the majority of industries absorption through the respiratory tract is of overwhelming importance. Except very rarely lead poisoning is not due to eating with unwashed hands. In a few industries absorption through the skin may take place—for example in the handling of aniline, nitrobenzene, trinitrotoluene, nicotine and lead tetra-ethyl. The mechanical details which render the workers in a given industry safe from toxic substances must be settled in consultation with engineer.

smelting and in processes involving exposure to carbon bisulphide, nitrobenzene and trinitrotoluene short shifts must be enforced. Hours of work must be limited for men working in compressed air or in hot deep mines. The factory physician must make use of all known methods to detect the earliest onset of poisoning by substances such as lead, benzene and tetrachlorethane.

14—Selection of Immune Persons

Employment of women and of all persons under the age of 18 in certain lead trades must be forbidden. In gasworks and on blast furnaces where there is a danger of carbon monoxide poisoning it is better to employ middle-aged men who are partially protected by their lesser physical activity and slower respiration. The selection and employment of only immune persons is an ideal the attainment of which must wait on better knowledge. If research could produce satisfactory tests for immunity to various poisons a great deal of suffering and expense could automatically be abolished.

15—Further Researches

It would be idle to suppose that our knowledge of industrial diseases is a finished chapter. Many diseases of occupational origin remain unknown for years, notable instances being asbestosis and Weil's disease. Clearly there must be others still eluding our search. New processes are constantly springing up. In some countries new solvents for quick-drying paints and varnishes have been allowed to poison men whereas they should have been first tested on experimental animals. A new method of tin refining recently produced outbreaks of arseniuretted hydrogen poisoning under circumstances which should have been condemned beforehand by chemists since it is known that the action of water on metallic arsenides is to set free this deadly gas. Until 1933 the co-operation of geologists in attacking the problem of pneumoconiosis had not been sought. The petrological microscope rapidly incriminated silicates such as sericite and sillimanite whereas previously silica had been held solely responsible. Recently fluorosis of bones a new horror of industrial medicine was unearthed. Is this condition widespread among cryolite crushers elsewhere than in Denmark? Do bath enamellers suffer from it? What, if any will be the ultimate consequences to bone and bone marrow of the deposition of calcium fluoride in the skeleton? Is the high incidence of malignant disease of the nasal sinuses in workers in nickel related to substances used in their work, and is there also a high incidence of lung carcinoma among them? Will the chemist find a suitable substitute for nitrate of mercury in the felting of fur? Will the bacteriologist succeed in producing effective inoculation against Weil's disease? What is to be done about Raynaud's phenomenon produced by the use of vibrating tools, including pneumatic drills, rams chisels, and riveting machines? Will the phenomenon hitherto confined to women become equally common in men? These and many other problems await solution. We are on the right path but we have a long way to go.

The King Edward's Hospital Fund for London has made arrangements for Coronation tours of royal palaces and other historical buildings famous throughout the Empire. These privileged visits will take place on April 7, 10, 14, 21 and 28, May 19 and 28. Tickets are 10s each or £2 10s for the series and the entire proceeds are devoted to the Fund. Communications should be addressed to the secretary, King Edward's Hospital Fund for London, 10, Old Jewry, E.C. 2.

EPIDEMIC CATARRHAL JAUNDICE IN SCHOOL CHILDREN

BY

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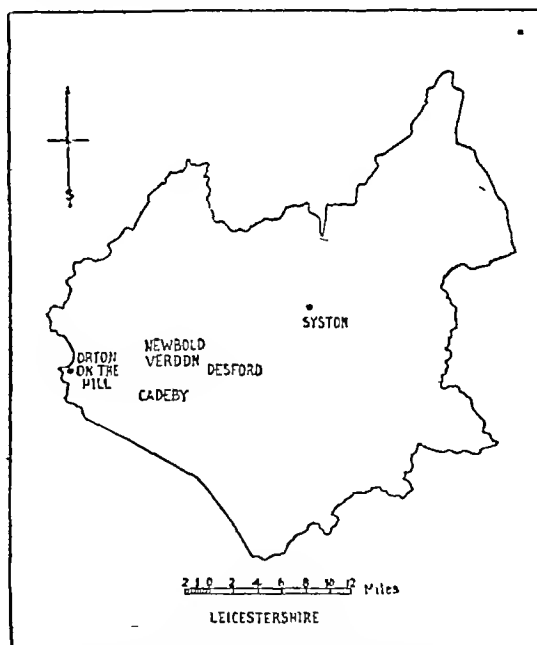
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Towards the end of 1936 an outbreak of jaundice occurred in Leicestershire the villages of Newbold Verdon, Desford and Syston being chiefly affected. The epidemic was mild and no deaths resulted. Altogether forty school children suffered from the disease, and it is estimated that this figure represents 60 to 70 per cent of the total number of cases pre-school children and young adults being also affected.

The first intimation of the outbreak came from Newbold Verdon when the head teacher of the local school reported in November that five children were absent suffering from jaundice. It was decided that I should undertake a special investigation in order to ascertain whether or not the disease was caused by the *Leptospira icterohaemorrhagiae*.

Nomenclature

Epidemics of jaundice have been recorded since ancient times and have occurred at one time or another in every part of the world. No attempt at classification was made until Weil (1886) published an account of the symptoms in a number of severe cases.



Map showing the relative position of the villages where cases of epidemic catarrhal jaundice occurred

Cockayne (1912) went a step further and differentiated between Weil's disease and the milder type by styling the former infectious jaundice and the latter 'epidemic catarrhal jaundice'. This classification was commonly used until Hurst and Simpson (1934) produced definite evidence that there were in reality two forms of the milder jaundice and distinguished the infective hepatic type from the epidemic catarrhal.

In November 1914 Inada and Ido discovered that the organism responsible for Weil's disease or infectious jaundice

dice was the *Leptospira icterohaemorrhagiae*. All attempts to isolate the organism or organisms causing the other types of jaundice have so far failed.

Historical Review

Outbreaks of epidemic catarrhal jaundice are not infrequent in this country. Morgan and Brown (1927) described an extensive outbreak in the Midlands in which two hundred persons were affected and one fatality occurred. Particulars of an epidemic in Surrey were published by Booth in 1928. Two years later Pickles, outlining an outbreak of catarrhal jaundice in Yorkshire, states that in many ways it resembled the Surrey epidemic. Findlay, Dunlop, and Brown (1931) published an account of numerous small outbreaks of jaundice occurring during the two previous years in Surrey and particularly affecting elementary school children. During the same year Glover gave an account of an outbreak in an unnamed small country town in which are situated three boarding schools, all of which were affected. In 1934 Bishford published an account of an outbreak of epidemic catarrhal jaundice among the workers in several departments of the General Post Office in London.

Montford (1934) describes an epidemic in the Castle Donington district of Leicestershire in which forty five cases were identified as acute infective jaundice, all except two being children. Frazer (1935) in reporting the occurrence of epidemic catarrhal jaundice among children in Staffordshire states that the outbreak was of a similar nature to that which occurred during the previous year at Castle Donington which is about fifteen miles distant.

There appears to be some uncertainty with regard to the classification of these two last mentioned epidemics as Barber (1937) classifies both of them as infective hepatic jaundice.

Ramage (1935) describes an outbreak of epidemic catarrhal jaundice in Holland, Lincolnshire, and estimated that 80 per cent of the cases occurred among school children.

Incidence

The present investigation was confined to the outbreak of jaundice among school children, though as mentioned above this figure represents about 65 per cent of the total number of cases as pre-school children and adults also contracted the disease, particularly young adults between the ages of 16 and 25.

The distribution of the cases was as follows:

District	Village	Population	Number of Cases (49) Investigated
Market Bosworth R.D.	Newbold Verdon	1,251	21
Market Bosworth R.D.	Desford	432	7
Market Bosworth R.D.	Donington	1,163	4
"	Causton	12	2
"	Oulton	191	1

As this epidemic occurred in the autumn and winter months the seasonal incidence corresponds with that recorded in the majority of similar outbreaks.

It is also interesting to note that the age and sex incidence as shown below agrees with the findings in previous investigations in that it is evenly distributed between the sexes and the highest incidence occurs in children between the ages of 6 and 10.

Age	Males	Females
0-5	2	
6-10	14	15
10-15	3	3
	19	21

Aetiology

Every effort was made in an endeavour to ascertain the mode of spread of the disease.

Attention was first directed to the water and milk supplies in the villages concerned. Excepting Desford and Syston each of which has a main water system, it was found that the sources of water supply were multiple, there being a large number of pumps each supplying one or more houses. The children have of course common access to the water supply at the school which they attend, but this fact was not helpful as all the children in any one of the villages affected did not attend the same school. The sources of milk supply were equally varied and thus no evidence was found of a likelihood that the disease was transmitted by either of these two routes.

The question of infection spreading by means of rats was also considered, but here again no definite evidence was forthcoming. During the past few years the villages have been comparatively free from these vermin, there fore any contamination of food is unlikely.

On investigating the spread among the school children several interesting facts came to light. With few exceptions the children who developed the disease gave a history of having been in close contact with other children who either had the disease at the time or developed it shortly afterwards. The contact was in most cases either a relative or another child habitually sitting in the next seat at school.

Although all those in contact with a case did not develop the disease it would appear that a very close personal contact is necessary for the spread of epidemic catarrhal jaundice and whatever the causal organism it is no doubt transmitted by droplet infection. It would also seem almost certain that a child was infectious during the incubation period of the disease.

It was difficult to determine the probable incubation period and although in Newbold Verdon the cases tended to occur in batches with three day to five day intervals between them little can be deduced from this fact. In several instances where two children in the same family were affected there was approximately a month between the dates of the first symptoms in each case and it is quite reasonable to assume that the second victim contracted the disease from the first. On summarizing the length of time between the date of the first symptom and the alleged contact with the disease it is found in the forty cases under observation that this period more nearly approaches four weeks than one week.

The distribution of the epidemic in the county is at first difficult to account for, there being no direct communication between the villages concerned with the exception of Newbold Verdon and Desford. Investigation, however, disclosed the fact that a number of young adults from the villages work in factories some distant away. It was also learnt that cases of jaundice had occurred among the factory workers and indeed the epidemic probably originated through this channel from an extraneous source.

Clinical History

The clinical history of the disease is rather uncharacteristic, though the course is usually

the severity. In one instance symptoms were completely absent until jaundice appeared.

The onset was gradual and for several days before definite symptoms developed the child complained of a headache with perhaps nausea, loss of appetite, and a feeling of lassitude and sleepiness. At this stage the tongue was usually covered with a slight fur and the breath fetid. In most cases bradycardia could be detected, while in some the face was flushed, though the temperature was found to be normal. Diarrhoea was sometimes present but constipation was more usual. Vomiting which is the first definite symptom then occurs and varies in severity, some children only vomiting once while others continued for an hour or more. This vomiting has been attributed by some writers to a duodenitis. Pain in the upper abdomen accompanied the vomiting in several instances being so severe that the parents thought the child had appendicitis. The pain diminished as the vomiting subsided, but a slight tenderness on palpation persisted for some days over the region of the gall-bladder, which was palpable in several cases. There appeared to be a correlation between the rise in temperature and the severity of the disease, for in those cases which were febrile the symptoms were more marked.

From one to fourteen days after the acute symptoms developed jaundice appeared and the child at once began to feel better. At first the conjunctivae were affected, then the skin of the face, neck, arms, trunk and lower limbs became yellow. In some instances the jaundice was less intense and did not spread beyond the eyes or face, while in others it was very intense and the patient exhibited the peculiar orange flush of the face that has been described in previous epidemics. About the same time as jaundice appeared the faeces became pale and the urine dark, though an occasional dark bile stained stool was passed. Itching of the skin was only present in those children where the jaundice was widespread and deep in colour. Convalescence was complete in about a fortnight and no complications occurred.

The chief symptoms in order of frequency in the forty cases investigated are here summarized.

	occurred in 40 cases
Jaundice	40
Faeces pale	40
Urine dark	40
Vomiting	36
Pain in the epigastrium	34
Loss of appetite	34
Lassitude	34
Sleepiness	31
Headache	30
Dizziness	21
Temperature	18
Rambling	17
Itching	12
Diarrhoea	8
Sore throat	1 case

Laboratory Investigation

Investigation under this heading was undertaken by the Leicester City and county laboratories. The following is a summary of the specimens submitted for examination, and the findings.

Blood—Specimens of blood were taken from two cases each on the sixth day of the disease. On microscopical examination of the centrifuged deposit no spirochaetes were detected. Another specimen taken from a case on the forty-ninth day after the first symptoms developed was also submitted and the serum tested for agglutination against the following proved negative in all dilutions: *B. typhosus* H and O, *B. paratyphosus* A and B, *B. dysenteriae* Sonne, *B. dysenteriae* Shiga, *B. dysenteriae* Flexner, *B. aertryche* and *B. abortus* Bang. Blood films were taken at various stages of the disease from all the forty cases investigated

and a differential count made. A number of the films showed an eosinophilia sometimes as high as 15 per cent but as this high count is frequent in routine films taken from country children where the cause is usually threadworms no significance is attached to the present findings. In the majority of the films however a monocytosis was evident, varying from 2 to 19 per cent while in a number of others taken from contacts who did not develop the disease the monocytic counts were normal.

Urine—Altogether twelve specimens of urine were examined for spirochaetes where the period of the disease varied from the seventh to the thirty-third day. A centrifuged deposit from 15 ccm of urine was injected peritoneally into two series of guinea pigs all of which survived three weeks. In addition the specimens of urine which were deeply bile stained were examined microscopically. An occasional leucine crystal was present in one specimen but the others showed no leucine or tyrosine crystals, red blood corpuscles or casts. No spirochaetes were found in any centrifuged deposit.

Faeces—A specimen from a typical case was collected in the acute stage and submitted for examination for any abnormal bacteria. The result was negative.

In my opinion the above results can be accepted as definite evidence against the epidemic being either of spirochaetal origin or due to any of the other possible organisms for which tests were carried out.

Differential Diagnosis

Weil's Disease (*Spirochaetosis icterohaemorrhagica*)—Weil (1886) was the first to publish an account of this disease. Since then a number of similar outbreaks have been described and referred to as Weil's disease but it was not until 1914 that the disease as described by him became definitely linked with the *Leptospira icterohaemorrhagiae*. In November of that year two Japanese workers Inada and Ido inoculated a guinea-pig with blood from a patient suffering from the symptoms of Weil's disease and subsequently discovered the spirochaete in the animal's liver. Since then a good deal of work has been done in various epidemics notably that by Dr Adrian Stokes during the great war who proved that rats carried the organism. Many outbreaks of spirochaetal jaundice have occurred on the Continent and in Asia. With regard to this country outbreaks of Weil's disease are very rare. Buchanan and Gulland (1923) report the finding of the spirochaete in the blood and urine of miners in East Lothian who were suffering from jaundice. Since then other small outbreaks in Scotland and England have been reported. The onset of the disease is sudden and is ushered in with general malaise, severe headache, violent muscular pains, giddiness, loss of appetite, high fever, epistaxis and usually diarrhoea. The symptoms become more acute as the disease progresses, and nervous disturbances increase, delirium frequently being present. From about the third to the fifth day jaundice appears and is accompanied by enlargement of the spleen and liver and tenderness over the latter organ. The urine contains albumin and perhaps blood. Disturbances of the digestive system are marked, there being furred tongue, vomiting and abdominal pain. The temperature falls about the twelfth day and the jaundice begins to fade about the same time. Convalescence is slow and leaves the patient weak and exhausted. The death rate is relatively high and has been estimated in one epidemic even as high as 45 per cent. The *Leptospira icterohaemorrhagiae* can be isolated and identified microscopically in a centrifuged deposit of the blood taken about the third day of the disease in a similar deposit of the urine in the later stages or by animal inoculation with the same material and subsequent recovery of the organism from the liver and spleen. The above are the

usual symptoms that occur, but some variation in type and severity has been noticed in several of the epidemics described.

Infective Hepatic Jaundice—Hurst and Simpson (1934) showed conclusively that this type differed from the closely allied epidemic catarrhal jaundice. Several epidemics are classified under this heading by Barber (1937) particularly those recorded by Montford (1934) in Leicestershire and Richards (1933) in Derbyshire. The clinical picture is quite distinct from that in either Weil's disease or epidemic catarrhal jaundice. Usually there are no pre-icteric symptoms of any kind. Pale faeces and dark urine occur immediately prior to the appearance of jaundice, which is accompanied by headache, general malaise, occasional vomiting, diarrhoea and a slight rise in temperature. The liver and spleen are enlarged though epigastric tenderness is absent. The jaundice is less marked but of longer duration than that of epidemic catarrhal jaundice. Convalescence is prolonged and the patient is left very weak. The mortality rate though low, is higher than that in epidemic catarrhal jaundice. Appropriate tests disclose an hepatic insufficiency and in the few post-mortem examinations described hepatic necrosis was present.

Simple Catarrhal Jaundice—Usually of a very mild character and due to a mechanical obstruction of the biliary passages said to be due to colds, chills etc. and often occurs in children. The symptoms of this type and of epidemic catarrhal jaundice are very similar and it is often difficult to differentiate between the two. Owing to the absence of bile the stools in simple catarrhal jaundice are pale and remain so until obstruction to the bile flow is removed. In the epidemic type although the stools are for the most part pale, an occasional bile stained stool is passed.

Enteric Group—Jaundice rarely occurs in this group of fevers and although the symptoms resemble in some respects those in epidemic jaundice the agglutination tests and bacteriological examination of the excreta reveal the presence of the organisms belonging to this group.

Acute Yellow Atrophy of the Liver—Of very rare occurrence particularly in children. The post-mortem findings are somewhat similar to those in infective hepatic jaundice.

Treatment

All the cases which occurred in this epidemic were under the care of the local general practitioners and treatment chiefly consisted of confinement to bed for a few days and the relief of symptoms.

It was not considered desirable or necessary to close any of the schools involved. These children who had been in contact with the disease, also the senior children from the affected villages attending central school, were however excluded for several weeks, and it was impressed upon the parents of the former to keep them in strict isolation during the period away from school. The parents of children who had contracted the disease were advised to prevent them mixing with other children until convalescence was complete.

3 There was no evidence that the disease was spread through the medium of water or milk supplies or by rats.

4 It is evident that epidemic catarrhal jaundice is spread by close personal contact, probably by means of droplet infection.

5 The incubation period is about four weeks and children with the disease appear to be infective during this stage.

6 No causal organism was found, though undoubtedly it exists probably in the form of a virus as suggested in previous epidemics.

I am indebted to Dr J. A. Fairer, county medical officer of health for permission to publish the particulars of this investigation.

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EXTERNAL VERSION FOR BREECH PRESENTATIONS *

BY

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Compared with vertex presentations the incidence of breech presentations is low but the foetal mortality is high. Pierson (1923), Westman (1931), Dearnley (1931), Studdiford (1932), Geothals (1936) and Williams (1924) placed the incidence of breech deliveries between 2.3 and 3.7 per cent. Kedar Nath Das (1926) placed it at 3.3 per cent and the latest report of the Wadia Hospital (1935) at Bombay gave it as 3.1 per cent. Ryder (1923), Pierson (1923), King and Glidden (1929), Githberd (1931), Studdiford (1932), Morton (1932), Donovan (1933), Cannell and Dodel (1934), Gordon, Garlick and Oguz (1934), Burn (1934), Geothals (1936) and St. Mary's Hospital report for 1935 record the foetal mortality as varying from 5 to 26 per cent in complicated and premature breech presentations it was as high as 43 per cent and 48.6 per cent.

Scope of Investigation

Desiring to find out the state of affairs at the Bhagat Hospital for Women and at my private hospital I have reviewed 5028 deliveries—3628 from my private hospital and 2000 from the Bhagat Hospital.

In the first 1240 deliveries at my hospital and 2120 at the Bhagat Hospital the incidence of breech presentations

as a therapeutic measure for complications such as placenta praevia are excluded from both the groups, and only those who were under observation for some weeks before labour are considered

Breech Presentations in 5028 Deliveries

	Group I	Group II	Group II	
			Untreated	External Version Performed
Total number of deliveries	3240	1788	—	—
Breech cases diagnosed antenatally		110	55	55
Primiparae	—	13	5	8
Multiparae	—	97	50	47
Breech deliveries	88 (2.7%)	110 (6.6%)	9	2
Primiparae	21	3	2	1
Multiparae	67	8	7	1
Cases delivered as vertex	—	99	46	53
External version performed	—	55	—	55
Mature babies born	53	94	43	51
Average weight	6 lb 3 oz.	—	—	—
Stillbirths	6	1	1	—
Deaths	1	—	—	—
Foetal mortality	7 (13.2%)	1 (1%)	1	—
Premature babies born	35 (39.6%)	16 (14.5%)	12	4 (7.3%)
Average weight	3 lb 8 oz.	—	—	—
Stillbirths	16	3	3	—
Deaths	10	1	1	—
Foetal mortality	26 (74.3%)	4 (25%)	4	—
Total foetal mortality	33 (37.5%)	5 (4.5%)	5 { 4 breech 1 vertex	—
Stillborn	22	4	4	—
Died	11	1	1	—
Average weight of stillborn and dead	4 lb 10 oz.	3 lb 14 oz.	—	—
Foetal mortality in primiparae	7 (33.3%)	2 (15.4%)	2	—
Stillborn	5	2	2	—
Deaths	2	—	—	—
Foetal mortality in multiparae	26 (38.8%)	3 (3%)	3	—
Stillborn	17	2	2	—
Deaths	9	1	1	—
Average age of primiparae	19.6 years	18.1 years	—	—
Average external pelvic measurement in primiparae				
Interspinaous	21.4 cm.	20.1 cm.	—	—
Intercristal	23.4 cm.	22.4 cm.	—	—
External conjugate	17.0 cm.	17.6 cm.	—	—

The average weight of the children born in the two hospitals was 5 lb 14 oz. the incidence of breech presentations in the whole series was 1.9 per cent.

Untreated Cases

In the first group of 3240 deliveries in which breech presentations were not interfered with during pregnancy eighty-eight women were confined as breech deliveries giving an incidence of 2.7 per cent and the foetal mortality in these cases was 37.5 per cent—twenty-two infants were stillborn and eleven died during the first ten days of the puerperium. The standard for deciding prematurity was not based on the gestation period counted from the first day of the last menstruation because this was found to be very unreliable. A foetus weighing 5 lb and over was taken as mature and one below 5 lb as premature. This proved more satisfactory. The average weight of the children at the two hospitals under review has been 5 lb 14 oz.

On this standard we found fifty-three mature and thirty-

livery in Group I, with the average weight of 6 lb 3 oz and 3 lb 8½ oz respectively. Foetal mortality in the mature was 13.2 per cent and in the premature 74.3 per cent. The average weight of the dead was 4 lb 10 oz. Of the eighty-eight breech presentations in the group twenty-one were in primiparae, with a foetal mortality of 33.3 per cent and sixty-seven in multiparae with a foetal mortality of 38.8 per cent. Among the primiparae seventeen (81 per cent) were mature and four (19 per cent) were premature—three of the mature were stillborn and two stillbirths and two deaths occurred in the premature children. The average weight of the dead in the mature was 6 lb 8½ oz while in the premature infants it was 3 lb 8½ oz. The average age of the primiparae was 19.65 years. The average external pelvic measurements were interspinous 21.4 cm, intercrystal 23.4 cm and external conjugate 17 cm.

Of the sixty-seven children born of multiparae thirty-six were mature and thirty-one (46.3 per cent) premature with an average weight of 6 lb 2 oz and 3 lb 8 oz respectively. The foetal mortality was 11 per cent in the mature and 71 per cent in the premature. The average weight in the dead was 3 lb 7 oz. There were seventeen stillbirths and nine infants died during the first ten days after birth, three stillbirths and one death occurred in the mature and fourteen stillbirths and eight deaths in the premature.

Foetal Mortality

The heavy foetal mortality in breech presentations has always worried obstetricians. In endeavouring to reduce it various factors have been blamed and a number of suggestions made. Gentleness, patience, episiotomy, sacral anaesthesia, preliminary ironing of the vagina, forceps for the after-coming head, and many other suggestions have been made by different writers. In spite of all this the lowest figure for the foetal mortality in breech presentations has remained higher than that in vertex presentations.

In Cleveland Maternity Hospital Barney (1934) found a foetal mortality of 18.9 per cent in breech cases excluding prematurity. Hirst and Williams have advised external version, as have Ryder (1923), King and Gladden (1929), Wilson (1930), Gibberd (1931), Studdiford (1932), Dearnley (1931), Donovan (1933), Cannell and Dodek (1934), Munro Kerr (1933), and Aleck Bourne (1933). In the last 1788 consecutive deliveries at my hospital all cases of breech presentation diagnosed during the later months of pregnancy were carefully kept under observation. The practice at the hospital has been to register the patients for confinements about twelve weeks before term, and they are made to report frequently for observation. A breech presentation was diagnosed in 110 cases but only eleven of them became breech deliveries—that is 0.6 per cent. It was a coincidence that in exactly fifty-five cases the breech either turned to vertex naturally while under observation or confined as breech before it was decided to perform external version. The remaining fifty-five cases were treated by external version during pregnancy.

Results of External Version

The total number of breech deliveries in Group II was eleven—nine among the non-treated and only two in the treated cases. The foetal mortality in the series of 110 cases was five (4.54 per cent) and all the deaths were in the non-treated cases. Of the five four were stillborn and one died during the first ten days. The average weight of the dead was 3 lb 14½ oz. There was no mortality in

ality of 37.5 per cent in Group I should be compared with that of 4.54 per cent in Group II with no mortality in the cases treated by external version.

Prematurity

The number of premature infants in this group was sixteen of which twelve were in the non-treated group. This represents 14.5 per cent as compared with 39.6 per cent in Group I. What is the reason for such a fall in the number of premature labours? Is it due to the improvement of the general health of the patients as a result of ante-natal care or is it that the breech presentation has a tendency to bring on premature labour? If the latter hypothesis can stand critical examination then the belief that prematurity is an aetiological factor in breech presentation will need to be reconsidered. It was frequently noticed that patients with the foetus lying in the breech position complained of vague pains in the abdomen and were more uncomfortable than those with the foetus lying normally in the vertex position. Is it possible that the breech position irritates the uterus in some way and if this is the case is such irritation likely to initiate uterine contractions prematurely?

Among the non-treated cases of this group forty-six were confined as vertex presentations and nine as breech. Of the five deaths in the children there were three in the breech deliveries and two in the vertex. Of the fifty-five cases in which external version was performed forty-seven were multiparae and eight were primiparae. Version was successful in fifty-three and failed in two. There were fifty-one mature and only four premature infants. The number of premature births was thus one-fourth of those found in the non-treated cases and far below that of Group I. There was no foetal mortality among these treated cases. Of the two failed cases one was a primipara 17 years old who came under observation only five days before delivery with the breech fixed in the pelvis; external version though tried could not be performed. The second case was a multipara diagnosed as a breech presentation on September 21; external version was tried on October 1. She did not report again and came to the hospital in labour on October 16; a female child weighing 4½ lb was delivered by the breech.

Many foetuses diagnosed as breech presentations during pregnancy turn to a vertex position before term just as many do not turn naturally. This is seen from the comparison of the results of the two groups reviewed. The incidence in Group I was 2.7 per cent while in Group II it was 0.6 per cent. Thus 2.1 per cent failed to turn

difficult to perform version again. Anaesthesia was never found necessary in the series reported. It might be required and might be of help if the operation was postponed to the later weeks. Most authors are in favour of turning the child during the thirty-fourth or thirty-fifth weeks. Aleck Bourne (1933) and others advised it at the thirty-sixth week. Two weeks earlier than this has to my mind an advantage in the ease with which manipulations can be carried out particularly in primiparae.

Possible Dangers

The early onset of labour and separation of the placenta and consequent ante-partum haemorrhage have been mentioned as possible dangers of version. Rider (1923) had one case of bleeding per vaginam and premature labour but with no untoward consequence. Wrigley (1934) criticizing ante-natal work, observed that in two London obstetric hospitals where external version is performed under anaesthesia the manipulations had caused rupture of membranes in some cases and in one the cord prolapsed while in three there was brisk ante-partum haemorrhage. Foetal deaths were caused by asphyxia owing to detachment of the placenta and constriction of the umbilical cord as a direct result of a somewhat violent effort to turn the baby. He observed that external cephalic version under anaesthesia must be regarded as a manipulation that was not free from danger and must not be performed with any force. McCullough (1933) besides the complications already mentioned suggested a possible danger of rupture of the uterus at the time of labour subsequent to the version, particularly in breech with extended legs. He collected four cases of this kind from the literature and therefore advised x-ray examinations before and after version concluding that if the child presented by head and feet it should be turned again and delivered by the breech.

Aleck Bourne (1933) maintained that the risks of version were counterbalanced by greater safety to the woman and far greater safety to the child. Munro Kerr (1933) advised that all breech presentations should be corrected to vertex. Studdiford (1932) believed that the operation of version was harmless but quoted Lister as stating that anaesthesia was dangerous. Rider (1923) was enthusiastic about the good results of external version. He pointed out that by doing an external version one was able to judge the size of the pelvis and the risk was that as undue force might be applied.

In our cases no anaesthesia is used in any patient in whom anaesthesia might have been of use; the presentation was allowed to continue as a breech. If version is

her pain. She was asked to go on taking gradual deep breaths followed by complete expiration. This allowed the operator's fingers good access down into the pelvic cavity. The breech was taken out of the pelvis and into the superior strait. Once this was accomplished the rest was not difficult. The breech was pushed out and up towards the back of the foetus and the head in and down towards the child's abdomen. A few movements like this were necessary to get the head into the iliac fossa. Then the patient was asked to turn a little to the side opposite to that in which the back of the foetus was lying. When this was done the head was pushed inwards and downwards and the breech lifted upwards. The head was felt passing over the brim into the pelvic inlet. The dorsal position was then resumed and the head was gripped between the fingers and pushed down into the pelvic cavity. This last manoeuvre gave us an idea of the size of the pelvis. Once the head was in the pelvis the version was complete. Occasionally it was necessary to push the breech towards the child's abdomen and the head towards its back, the child turning by anti-clockwise movement. Pushing out the breech from the pelvic cavity by the help of fingers introduced in the vagina was also occasionally required. No binder or any other appliance was found necessary to maintain the vertex position.

The patient was asked to report two days later and was kept under observation subsequently. If at any later visit reversal to a breech position was noticed another attempt at cephalic version was made. More than two attempts were never found necessary and that too in a very small number of cases. We did not meet with any untoward complications due to the manipulations.

I cannot conclude without expressing my thanks to my house surgeons Drs. Jhaveri and Shah.

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A special tour in Central Europe has been arranged for May 23 to June 10 in connexion with the meeting at Bucarest of the Permanent Committee of the International Congress of Military Medicine and Pharmacy. Leaving Paris on May 23 at 10.15 p.m. the places to be visited include Venice, Dubrovnik, Cettigne, Serajevo, Belgrade, Turnu Severin, and seven days in Bucarest. The fee of £61 10s covers all travel expenses from Paris to Bucarest and back with second-class rail travel with Wagons lits and first-class passages on river boats and various excursions on the way. An alternative return journey through Budapest and Vienna, extending over June 10 to 16, can be made for £7. For further details and for booking application should be made to Gellatly, Hanley and Co. Ltd. 62 Pall Mall London SW 1 or at the offices of this firm in Manchester, Liverpool or Glasgow.

A NEW STABILIZER FOR SCHICK TOXIN

BY

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AND

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The improvement in methods of making dilutions of diphtheria toxin used in the Schick test has steadily increased their stability during the past sixteen years and now such dilutions remain unaltered for at least six to twelve months or more at room temperature. We have retested many batches that have been returned to us from such distant places as Bombay, Shanghai, Capetown, the Federated Malay States, and the Argentine. These dilutions have travelled by ordinary post or by air mail and have always been of full strength when tested on their return. Recent papers, however, have shown that the present dilutions produce allergic reactions in a very small percentage of subjects. H. J. Parish (1936) summarizes fourteen such cases including one with very severe reactions attributed to peptone reported by G. Bousfield (1936). The possibility of producing with Schick toxin a severe allergic response to peptone has induced us to find another stabilizing agent free from this disadvantage. We propose for the purpose human serum.

Experimental Work

The strength of Schick toxin dilutions has been measured quantitatively at the Wellcome Physiological Research Laboratories by the determination of the minimal reacting dose in guinea-pigs and by titration against antitoxin (Glenny and O'Brien 1921). Stability has been judged by tests made after exposure to higher temperatures than would be encountered during normal storage. As improvements have been made so we have increased the temperature by different stages from 30°C to 45°C. Results of this rapid test for deterioration have always been confirmed by subsequent tests on material left for long periods at room temperature. In his pioneer work in this country on diphtheria immunization Dr. R. A. O'Brien used for the Schick test dilutions in saline containing 0.5 per cent phenol, the common U.S.A. diluent. Such dilutions remained stable for a week at 15°C but retained only 5 to 15 per cent their original strength after twenty-four hours at 35°C. A few seconds shaking in partially filled bottles caused total destruction (Glenny *et al.* 1925). Experimental work showed that a buffer solution increased the stability of toxin dilutions and although a phosphate buffer was more suitable to use at the optimum pH for stability, a boric borate buffer (Glenny *et al.* 1928) of slightly higher pH was chosen for its bacteriostatic properties. Some batches of toxin diluted to Schick strength in buffer were more stable than others remaining at full strength for fourteen weeks at room temperature whereas others were only stable for four weeks. Weaker toxins needing less dilution were more stable than stronger toxins. Assuming that increased stability was due to a higher broth content, the next step was to increase the amount of broth in the dilution to 0.5 per cent. Such dilutions remained stable for six months at room temperature. Bunney (1931) suggested the use of 2 per cent peptone. Experiments at these laboratories showed that 0.1 per cent Witte peptone in borate buffer solution was sufficient to stabilize Schick toxin so that it would remain of full potency for twelve months or more at room temperature.

We have chosen human serum as the stabilizer which is least likely to cause allergic reactions or to act as a sensitizer in human subjects. It is necessary to choose serum which does not contain enough antitoxin to interfere with the balance between the toxicity and combining power (antitoxin binding power) of the toxin. We have used serum containing no detectable antitoxin (that is less than 0.0005 unit per ccm). The stability of Schick dilutions containing various amounts of human serum and of peptone is given in the table.

Diluent	Number of Days Exposure to 45° C. (Percentages of the Original Strength)					
	1	2	3	7	14	28
Boroborate buffer containing 1 in 1000 Witte peptone	85	80	70	55	30	20
1 in 1000 human serum	<40	20	—	0	—	—
1 in 500 "	75	60	45	25	10 or less	0
1 in 200 "	70	70	45	40	20 or less	0
1 in 100 "	90	80	55	45	30 or less	10

Experience of all former diluents has shown that any material losing less than 40 per cent of its potency after twenty-four hours at 45° C. remains stable for at least six months at room temperature. We consider that 1 in 500 human serum will remain stable (that is at least 80 per cent of its original strength) for six months at room temperature. This is sufficient for all practical purposes and although the toxin could be further stabilized by increasing the serum content to 1 in 100 this would involve the use of unnecessarily large amounts of human serum.

Summary

Dilutions of diphtheria toxin for use in the Schick test need a stabilizer.

Peptone has been used for this purpose but has been reported to cause allergic reactions.

Human serum is shown by animal experiments to be a suitable substitute.

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Clinical Memoranda

Migration and Excretion of a Foreign Body

This unusual case is of interest because it demonstrates how Nature can occasionally deal with a situation in which surgery is powerless.

On September 24, 1936 a man aged 40 years wished to commit suicide shot himself in the chest with a revolver. The bullet entered the left sixth intercostal space half an inch outside the left mid-clavicular line. A skiagram showed a foreign body lying in the midline and just anterior to the tenth thoracic vertebra.

The patient developed pneumonia with a temperature of 102°. It was decided not to operate on account of the inaccessibility of the bullet and in view of the patient's poor general condition. Moreover he had undergone a gastro-enterostomy only two months before admission. Commitment was made upon the fact that the bullet although injuring the left lung had apparently missed such vital structures as the heart and the larger blood vessels.

Thirteen days later in the course of defecation the patient passed a foreign body in the stools. It was a bullet half an inch in length. A subsequent skiagram showed no evidence of a foreign body and the patient made a complete recovery.

Similar cases are rare. However Evans (1931) reports the migration of a 5-cm. piece of metal from the abdominal wall. Operation for its removal was unsuccessful and it was recovered from the stools four days later. He emphasizes the importance of taking a skiagram immediately before any attempt at removal with special consideration to the migrating tendencies of foreign bodies.

For permission to record this case I wish to thank Dr Edward Miles, medical superintendent of Oldchurch Hospital, Romford.

Romford

ANDERSON GARLAND, M.D., D.P.H.

RECEIVED

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Temporary Post-traumatic Total Blindness

The following unusual case may be of interest. A man aged 22 was admitted to this hospital recently. His history was as follows:

CASE RECORD

2.50 p.m.—He received a slight kick in the right front leg region while playing Rugby football. He sat it out for a short time but continued playing.

One Day Later—Vision was almost normal in the left eye indistinct at more than four feet in the right eye. The papilloedema was much decreased being seen on the inner side of each disk only. The swelling on the forehead had subsided and there was no discoloration there.

Two Days Later—Visual acuity was normal in both eyes fields of vision were complete. The inner edges of the disks were still blurred. A skiagram of the orbit revealed no fracture.

Twelve Days Later—He had frontal pain on looking up pupils were wide and reacted normally. Examination of the fundi showed in the right eye a trace of papilloedema but no pulsation of the vessels the blind spot was increased by a quarter diameter. In the left eye there was slight papilloedema with marked venous pulsation, the blind spot was increased by two diameters.

It would appear that this man must have had a slight local haemorrhage immediately in front of the optic chiasma and affecting, at first, the right optic nerve more than the left. Unfortunately no lumbar puncture could be done on the night he arrived.

I am very much indebted to Dr Horatio Matthews consulting ophthalmic surgeon to the hospital for his advice and his permission to publish this case.

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A Physical Sign in Perinephric Abscess

It is notorious that perinephric abscess is often missed till in a patient worn out and wasted with fever a large collection in the loin demands attention. The reason is that in many, probably most cases urinary signs and symptoms are absent, and so examination is not directed specifically to this area. If the condition is borne in mind diagnosis can be made at an early stage by means of the following test.

The patient is placed prone and quite straight and attention focused on the angle between the last rib and the erector spinae. Inspection may detect a slight fullness on one side but even before this change is visible palpation will reveal an increase in muscle tone. On the sound side the fingers can be dipped deeply in towards the kidney and on the other there is a demonstrable difficulty in doing so. There may be present to the examining fingers the sense of a deeply placed mass but this represents a relatively late stage of the disease. Tenderness is sometimes present. It is surprisingly inconspicuous.

Guarding of the muscles in the loin is not, of course, confined to cases of perinephric abscess. It may be seen for instance, after injury to the spine in osteo arthritis of the spine, and in perinephric infiltrations of other types such as haemorrhage. These are all as a rule easy to exclude. Pyonephrosis may give rise to some difficulty but the enlarged kidney is usually palpable and recognizable as such, and it is possible to eliminate this lesion if there be serious doubt by routine urological methods.

Operation in a case diagnosed thus early shows the kidney sheath rigid and pale in colour. When it is opened pus may be found at once, but if not the finger swept round the kidney will soon locate it.

In the second edition of Mr Hamilton Bailey's valuable book *Physical Signs in Clinical Surgery* reference is made to examination of these cases in the sitting posture. I believe that if the patient is prone diagnosis will be made even earlier and more certainly. In this position the muscles in the loin are completely relaxed upon the normal side. And, further the kidney tends to fall away from the examining finger thus accentuating the difference between the normal and what is found when we are dealing with a rigid and adherent kidney sheath as in cases of perinephric abscess.

Liverpool.

JOHN T. MORRISON, F.R.C.S.

Reviews

PSYCHOTHERAPY AND CONDUCT

Mind Medicine and Metaphysics The Philosophy of a Physician By William Brown D.M. D.Sc. F.R.C.P. (Pp. 294 7s. 6d. net.) London H. Milford Oxford University Press 1936

A series of addresses and essays by Dr William Brown now collected under the title *Mind Medicine and Metaphysics* forms a volume which will be of great interest to many people, including medical practitioners. The importance of psychology to medicine in all varieties of practice has now become recognized even officially and Dr Brown reminds us in his preface that metaphysics was defined by William James as an unusually obstinate effort to think clearly, and that metaphysics as the asking of ultimate questions about the nature of reality cannot be avoided any more than the speaking of prose. No more suggestive volume than this, for those who do not necessarily know a little of psychology and have a desire to think clearly about its practical application to medicine and its bearing upon fundamental ideas of philosophy can well be imagined. Since the successive chapters were addressed to various audiences medical and lay in varied circumstances there are in the book a good many repetitions of certain facts arguments and theories but this is no disadvantage because though the author's thought is consistent and coherent from beginning to end the volume need not be read through as a consecutive whole. The first three chapters are those which will be of most direct interest to medical readers so far as actual practice is concerned. They deal with psychotherapy in its relation to the miraculous, to physical treatment and to psychoanalysis. Other chapters deal with sex control, mediumistic trance, character and personality intermatrimonial relations moral obligation and free will religion and the group movement—all of course from the point of view of psychology.

As is well known the views of Dr William Brown on the nature and value of religion differ radically from those held by Freud, and he expounds and illustrates these views very clearly and effectively in the present volume. The survival of personality is another subject of general interest on which he has an excellent chapter. One of the chief merits of the book is the clearness with which the author makes and demonstrates certain distinctions differences and relations which are not always apprehended even by fairly instructed readers. As such may be instanced the relation between the method of suggestion and that of mental analysis, between functional and organic disease between will and imagination between moral and psychological factors in conduct and the essential differences between hypnosis and sleep, between confession and analysis between repression and self control. Dr William Brown emphasizes too, the value of mental analysis in enhancing the normal as well as in remedying the abnormal, and the extent to which health depends upon self-understanding and a right outlook and appreciation of the values of existence. From the point of view alike of medicine and of metaphysics this is an important and revealing book.

DEVELOPMENT OF PHTHISIS IN ADULTS

Die Entwicklung der Lungentuberkulose des Erwachsenen By Wilhelm Kremer (Pp. 38 55 figures R.M. 3.60) Leipzig Georg Thieme 1936

It is pointed out in the preface that the publication of this small book by Dr Wilhelm Kremer was prompted by the

discovery during post graduate teaching that there existed among practising physicians much vagueness about the development of pulmonary tuberculosis in adult life. The compilation of the brochure was made possible by the opportunity given to the author of obtaining a large number of serial skiagrams over a period of several years at a convalescent institution extensively used by the members of a large insurance society. Although Dr. Kremer states that a great many adolescents and adults develop pulmonary tuberculosis as the result of a primary infection during adolescence not more than 60 per cent of persons being infected at the age of 15 even in large towns he bases his description of the development of phthisis on the three stage theory of Ranke. Thus adult phthisis generally arises directly or indirectly from the pulmonary residua of the general dissemination constituting Ranke's second stage, even when the primary infection occurs in adolescence the sequence of events is similar, the corresponding intervals being shortened. Dr. Kremer admits, however, that an infiltration may arise without any obvious connexion with an old lesion though here too it is possible that the latter exists but is not detected radiologically because of its small size or peculiar situation. In sixteen excellent diagrams are depicted the various results which may follow primary infection including its progress to phthisis in the adult. Serial radiographs well reproduced, serve to illustrate the stage of generalization, its sequelae, and the development of the adult lesion.

This little volume can be recommended to clinical workers in tuberculosis who wish to obtain a clear picture of the conception that phthisis is the final episode of an infection in childhood.

THE LATERAL EYE MUSCLES

The Extra Ocular Muscles. A Clinical Study of Normal and Abnormal Ocular Motility. By Luther C. Peter. A.M. M.D. Sc.D. Second edition. (Pp. 351. 136 figures. 21s. net.) London: H. Kimpton, 1936.

Inevitably the greatest changes in the new edition of this book are to be found in the chapter on concomitant squint. A new part on operative technique makes its appearance while throughout the text stress is laid upon the more precise use of terminology. Thus 'diction' is limited to mean movement of the eye against prisms instead of the wider significance generally attached to the word. As an attempt at a comprehensive review of this branch of ophthalmology Dr. Peter's monograph stands alone among recent publications. Generally it departs but little from the accepted teaching though to English readers a good deal may appear of small practical importance. The sections on cyclophoria indicate that more attention is

contributions jostling cheek by jowl with recent publications of no particular significance. Nor do a difficult style and cross references make for readability. The nomenclature in the book, whatever scientific merit it may have, is distinctly confusing, and the ten page section on nystagmus presents many linguistic puzzles. What for instance could an English reader devoid of German make of 'endstellend nystagmus' not further defined or of the Brunner's *Dreschirm*? The author's weakness for fusing Latin words will not commend itself to everyone when such monstrosities as corticofugal and infra geniculate make their appearance, to say nothing of such barbarisms as *ex anopsia* spelt as if it were one word.

More care in proof reading would have avoided such misprints as 'synstagnus' (p. 339) and references to such non-existent bodies as the British National Research Council. The second edition represents a considerable expansion of the first. Should a third edition be called for it is the reviewer's hope that the book will have undergone a slimming course. If a third of its present bulk it would not be mirasmic.

A BIOCHEMICAL TEXTBOOK

Principles of Biochemistry. By Albert P. Mathews. (Pp. 512. 20s.) London: Baillière Tindall and Cox, 1936.

Professor Mathews like the authors of other textbooks of biochemistry, has been faced with many problems. In his *Principles of Biochemistry* he has done his best to overcome them and has been to a great extent successful. In the first place he has had to bring his book as far as may be up to date, in face of the bewildering rapidity with which new work makes its appearance. The experimental work proceeding in almost every civilized country is such that not only are fresh details of the subject coming to light almost from week to week, but observations are being made which change fundamentally our outlook at many important points. The discovery of the role of the anterior pituitary in carbohydrate metabolism is changing our conception of diabetes, the distinction between hormones, vitamins, and enzymes grows less and less sharp as one after another of these substances is isolated as a pure product and its chemical constitution studied. Our conception of the nature of nervous function may be fundamentally altered as evidence accumulates supporting the 'humoral theory' of nervous activity.

Not only must the author of a biochemical textbook be aware of all these rapid changes in and additions to existing knowledge but if he writes for student he must make up his mind how much of it is suitable for teaching purposes, for it is clear both that a limit must

The book contains an account of much new work, which is represented in a clear and interesting manner. Whether the chemical constitution of the carbohydrates deserves quite as much space as the author has given to it is a matter of opinion. It is possible that biochemistry may develop more rapidly in the future on the dynamic and biological side. If this should prove to be the case some method will have to be found of presenting to the student the fundamental chemical conceptions which it involves without loading him too heavily with chemical detail.

INTRANASAL IONIZATION FOR HAY FEVER

Hay Fever With Special Reference to Treatment by Intranasal Ionization. By Clive Shields B.M. B.Ch. (Pp 77 illustrated 7s 6d net.) London: H. Milford Oxford University Press 1937.

This book adequately fulfils its function of giving practitioners and students a detailed description of the author's technique of intranasal ionization in the treatment of hay fever. It contains a historical account of the aetiology of the disease which is excellent in every way. The description of the symptomatology and differential diagnosis will also be found interesting and helpful. There is an account of the anatomy and physiology of the nose and accessory sinuses and of the action of various drugs and their component parts on the mucosa; this too is admirable and as it is illustrated by photomicrographs it will carry conviction.

Some of the author's generalizations may be taken however *cum grano salis* because he appears to regard any other method than his own as being useless. For instance the results of previous desensitizing injections in a series of his patients are given as 82 per cent no relief, 18 per cent slight relief and none great relief whereas the results of his own form of treatment are given as complete relief or 90 per cent relief in 93 per cent of cases. This seems to the impartial observer a rather high average. The last chapter gives a clear and concise account of the technique of the author's method of treatment and from this point of view Dr. Shields's book is of interest; it is not however an unbiased contribution to the literature of hay fever.

This volume is excellently produced and printed and is of interest as giving an understandable account of one particular form of treatment of hay fever.

MENTAL DISORDER IN TIMES PAST

History of Notes on Psychiatry (Early Times—End of 16th Century). By J. A. Whitwell M.B. (Pp 252 10s 6d.) London: H. K. Lewis and Co. 1936.

Dr J. R. Whitwell, well known as the honorary librarian of the Royal Medico-Psychological Association and formerly medical superintendent of St. Andrew's Hospital, Melton, Suffolk, writes a curiously interesting book. The title is too modest for the contents which discuss in the light of modern knowledge the various forms of mental disease which have afflicted men from the earliest times to the end of the sixteenth century. Dr. Whitwell shows himself to be a man of very wide reading and an excellent scholar. He groups his notes into instances taken from the Bible from the Talmud from the Koran from the classics and from mediaeval literature. The mental states of Saul, David, Nebuchadnezzar, St. Paul, Hector, Achilles, Ajax, Cambyse and many others come under consideration and are placed in their proper classification. The views of Pythagoras, Plato and Aristotle are considered, and extracts are given from many of the classical

medical writers from Hippocrates and Avicenna to Felix Plater (1536–1614), the acute clinical observer who was among the first to look for a pathological basis of mental disorder.

The book is full of odd information. The reader will learn that fifty-one names have been given to epilepsy; he will learn much about the Nightmare and will be able to answer the question 'What is acedia?' which was long numbered fourth amongst the seven deadly sins. Of the Iodestone he is told: 'This hath a discerning faculty of a woman that is chaste and of her that plays the adulteress, for if any do set it secretly upon ye bed of ye chaste woman she being overborne with sleep both opens her hands towards her husband and cleaves close to him but the other being troubled with dreams with foul labours falls out of bed.' The latter part of the book contains a series of extracts and translations from many early writers on mental diseases which will prove a mine of information for those less skilled in the classics than is Dr. Whitwell. The last section contains some valuable chronological data.

Notes on Books

Dr A. G. AULD's book *The Nature and Treatment of Asthma, Hay Fever and Migraine* (H. K. Lewis and Co. Ltd. 12s 6d.) includes a selection from the author's clinical investigations which have been largely occupied by the subject of allergy. With the exception of one chapter all the material published in this volume has appeared in the columns of the *Lancet* or the *British Medical Journal*. The opening item is a lecture on asthma, given at the North East London Post Graduate College in 1908 and the final item is a case history dated 1885.

Dr ISRAEL BRAM, medical director of the Bram Institute for the Treatment of Goiter and Other Diseases of the Ductless Glands has in *Exophthalmic Goiter and its Medical Treatment* (Kimpton 25s.) brought out what is a nominal second edition of a work published in 1920 but the text has been so completely revised and enlarged that this is really a new book. It is based on an experience of more than five thousand cases during a quarter of a century and concentrates on the success of medical psychotherapeutic and hygienic measures. The author draws a sharp distinction between toxic adenoma which he regards as primarily a local condition and amenable to surgery and Graves's disease which is a constitutional state and does not respond in a satisfactory manner to mere thyroid ablation. Dr R. G. Hoskins of the Harvard Medical School in a brief and cautious foreword makes the best of this appeal against thyroidectomy and remarks that 'habitual reliance upon surgery as the therapy of choice may lead to a mental scotomosis.' It must be freely admitted that the thyroid may be secondarily and not primarily affected in Graves's disease but on the other hand from a practical point of view the available evidence points to thyroidectomy as the most successful form of treatment. The author who has obviously taken much trouble not only in the collection of his matter but in the manner of its presentation describes about twenty-four different types of Graves's disease and the Bram quinine test for hyperthyroidism—namely tolerance to 20 to 90 grains of quinine daily for several weeks.

Dietetics for the Christian by Dr MILTON A. BRIDGES of New York which was reviewed in our issue of August 18 1934 has now reached its third edition (Kimpton 45s.). In preparation for this new edition the author has made an extensive survey of the literature on diet therapy and has rewritten much of his text in the light of recent knowledge of foods and their nutritive, vitamin, and mineral constituents.

THE RECENT EPIDEMIC OF INFLUENZA IN GERMANY

[FROM A MEDICAL CORRESPONDENT IN BERLIN]

In Germany as in England influenza is not a notifiable disease but the data published by the Reichsgesundheitsamt respecting new cases of influenza and pneumonia reported to the sixteen largest Krankenkassen of the Reich give an instructive picture of the course of the epidemic. Table I sets out the figures down to the end of February received by four departments.

It will be seen from Table I that the course of even was different in the different cities. In Berlin the maximum was reached in the week ending December 5 in Breslau to the south east at the beginning of January. Frankfurt on the west had its maximum in the same week as Berlin as did Hamburg. Frankfurt recorded a higher maximum than the other three cities here tabulated but this was exceeded by Königsberg in East Prussia which returned a rate of 27.8 per 10,000 for the week ending December 19 and by Brunswick with a rate of 25.5. It is pointed out in the *Reichsgesundheitsblatt* (1937 Nr. 4) that the eastern and southern parts of the

TABLE I—New Cases of Influenza and Pneumonia among Insured Persons

In the table the figures and rates shown within parentheses relate to notification of pneumonia. The number shown in those and after the name of each city.

Period	Berlin (8454)		Breslau (1194)		Frankfurt-am-Main (1452)		Hamburg (218)	
	Notifications	Per 10,000 Insured Per Week	Notifications	Per 10,000 Insured Per Week	Notifications	Per 10,000 Insured Per Week	Notifications	Per 10,000 Insured Per Week
22.11.36—3.12.36	3781 (119)	6.4 (0.23)	103 (—)	1.7 (—)	189 (7)	17.8 (0.07)	1013 (1)	6.0 (0.1)
4.12.36—17.12.36	8147 (175)	13.8 (0.23)	123 (—)	1.4 (—)	1893 (6)	18.9 (0.06)	1621 (1)	0.3 (0.01)
18.12.36—31.12.36	564 (82)	9.5 (0.1)	145 (1)	1.7 (0.01)	—	—	1618	10.3 (0.01)
1.1.37—19.1.37	3507 (701)	5.9 (0.85)	287 (10)	3.4 (0.12)	1334 (7)	13.5 (0.02)	1112	7.3 (0.1)
20.1.37—30.1.37	—	—	313 (7)	5.1 (0.11)	736 (7)	7.4 (0.07)	51	4.0 (0.0)
31.1.37—2.2.37	1705 (17)	2.9 (0.08)	781 (12)	12.8 (0.73)	64 (6)	6.5 (0.06)	401	4.1 (0.02)
3.2.37—9.2.37	2071 (401)	3.5 (0.05)	1247 (11)	16.1 (0.13)	781 (8)	7.9 (0.08)	67	4.1 (0.07)
10.2.37—16.2.37	1660 (51)	3.1 (0.07)	881 (9)	10.5 (0.11)	607 (—)	6.8 (—)	47	3.0 (0.3)
17.2.37—23.2.37	1729 (66)	2.9 (0.11)	591 (7)	7.1 (0.03)	635 (1)	5.4 (0.03)	46	2.9 (0.07)
24.2.37—30.2.37	1181 (87)	3.0 (0.15)	452 (10)	5.5 (0.12)	45 (4)	4.3 (0.01)	42	2.9 (0.07)
31.2.37—6.3.37	1587 (73)	2.7 (0.12)	365 (3)	4.3 (0.04)	548 (1)	5.5 (0.01)	31	2.5 (0.01)
7.3.37—13.3.37	1314 (72)	2.2 (0.13)	301 (7)	3.5 (0.03)	322 (6)	3.3 (0.06)	21	1.5 (0.01)
14.3.37—20.3.37	1160 (75)	2.0 (0.13)	215 (5)	2.9 (0.07)	38 (1)	3.5 (0.01)	27	1.5 (0.01)
21.3.37—27.3.37	1019 (65)	1.7 (0.11)	202 (5)	2.5 (0.06)	23 (1)	2.9 (0.03)	17	1.0 (0.0)

Returns of deaths ascribed to influenza and pneumonia are available for all cities with populations of 100,000 or more and are shown in Table II.

TABLE II

Week	Deaths from	
	Influenza	Pneumonia
25.10.36—31.10.36	2	215
1.11.36—7.11.36	40	27
8.11.36—14.11.36	57	270
15.11.36—21.11.36	114	318
22.11.36—28.11.36	153	62
29.11.36—5.12.36	26	57
6.12.36—12.12.36	44	27

Reich tended to be affected later. This is illustrated by Breslau and Stuttgart. In Munich there was a peak on December 14 and a second maximum on January 4.

Having regard to the close and uninterrupted communication between such cities as Berlin, Breslau, Hamburg and Frankfurt these differences in the course of the epidemic must be referred to local perhaps meteorological factors.

The mortality figures of Table II show the accustomed parallelism between mortality from influenza and pneumonia although as we should expect the movement of the influenza record is more striking. Although a serious epidemiological event the epidemic in Germany as in England has been less serious than on some other occasions since the pandemic of 1918-19 and of course trivial in comparison with the pandemic of 1918-19.

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MALARIA IN EUROPE

There have been few changes so remarkable in our outlook upon any disease as those which have followed as a result of the discovery by Ross of the mosquito cycle in malaria. Not the least remarkable of these changed conceptions are those arising out of recent researches and discoveries connected with the natural history of malaria and its prevention in Europe. It is no surprise therefore, to those familiar with this recent work to find Dr Hackett giving an account of the most up-to-date advances in malariology under the title of *Malaria in Europe*.¹ This book published under the terms of the bequest, is a presentation of materials gathered for the Heath Clark Lectures given by the author during December 1934 at the London School of Hygiene and Tropical Medicine. Prior to the war little importance was attached to the fact that malaria so important in the Tropics also occurred in a number of countries in Europe. Endemic malaria in the modern epidemiological sense was scarcely recognized as existing. Dr Hackett's book opens with an appreciation of what is now understood by this term, "the great complex and organized exchange of gametocytes and sporozoites which we now call endemic malaria." Endemic malaria in Europe is likened to "a great lake which a century ago was inundating all Europe but which after the middle of last century was found to be gradually draining away by unknown channels unaccountably subsiding to lower levels, abandoning first the cold north and then becoming shallow over great zones of Europe, finally revealing islands irregularly distributed here and there, but remaining in deep pools which were the permanent centres of the more extensive endemic range of the disease."

The causes underlying this 'silent almost unnoticed' withdrawal of malaria from Europe, which has had nothing to do with any conscious activities or efforts of man to bring it about has long been the subject of conjecture. Better housing improved economic conditions and many other reasons have been put forward to explain it but in large part at least it is now known to have depended upon quite unsuspected facts in the natural history of malaria itself. The basal and

underlying causes are related to the fact that the carrier species of anopheles in Europe, *A. maculipennis*, is not, as was thought until recently a single biological unit, but consists of some four or five subspecies, or even distinct species so similar in appearance that they can only be identified with certainty, even by the entomologist through differences in their eggs. But while in appearance so similar each of these subspecies possesses small peculiarities in habits and behaviour which have in so remarkable a manner fitted in with human affairs and influenced transmission that many of the major epidemiological features of malaria in Europe are to be explained on this basis. Under normal circumstances a female anopheles, through development of its ovaries and the necessity for oviposition, must every few days leave the house or stable where she has had her blood meal in order to deposit her eggs. When she returns for the purpose of feeding again she usually does not enter the same feeding place. The result of this is a sort of general post, the places where the insects are found resting during the day being no certain indication of where they have actually obtained their blood meal. With any particular race or species it depends upon the conditions and the anopheles's own predilections under these conditions how far their blood meals are obtained from man or cattle respectively, and hence how far the species by feeding more than once on man with the necessary interval for the development of sporozoites, is likely to be an effective agent in the transmission of malaria. It is for this reason that the "precipitin index" or percentage found under any given conditions to have made their last blood meal on man is now the most reliable index to the association of a species with malaria and its status as a carrier.

Thus the old idea of a species having a fixed value as a carrier has now become largely modified. In Holland and some other parts of Europe still existing malaria is associated with *atroparvus* and the forms *messeae* and *typicus* play no part. But these usually harmless forms can nevertheless act as carriers under different circumstances, as they do in some parts of Europe or at special times when the conditions under which the inhabitants are living are such as to favour this. The conditions determining the presence of endemic malaria in Europe are largely bound up with agriculture. Primitive agriculture is usually associated with malaria. With the rotation of crops comes the necessity to maintain cattle to feed on the fodder crops and stall feeding tends to replace pasture feeding. With 'stabulation' there come the optimum conditions for the deviation of any species of zoophilic habits, and if these zoophilic

¹ *Malaria in Europe. An Ecological Study.* By L. W. Hackett. M.D. London: H. Milford Oxford University Press. (10s.)

forms alone are present as is the case over a large part of Europe malaria disappears though anophelids are still abundant. In the carrying out of preventive measures the correct 'appraisal of the malaria situation' becomes of great importance. In the presence of an inveterate human feeding species such as *labiacluae* or *clutus* Dr Hackett maintains that no improvements in agriculture, housing or social status are likely to be effective and the species must be attacked in its breeding places or if this is impracticable all human dwellings must be screened. But with *atroparius* and still more so when malaria is associated only with *messeae* or *typicus* preventive measures aiming at deviation are more appropriate. Such 'species sanitation' does not only apply to Europe and much work has been done recently in the Tropics in the way of tracking down the inveterate human feeder and devising methods for its elimination.

All such recent ideas on carrier species and many other matters of great interest in connexion with malaria such as the part played by the parasite itself and the role of immunity in man as well as the nature of attack methods are dealt with in Dr Hackett's book. This is by far the most informed, readable and up to date popularized account of the malaria situation as we now know it that has come to our knowledge. Dr Hackett himself is one of the chief pioneers in these fields.

LEGISLATION FOR THE DEAF

The demand for a Deaf Persons Act is cogently set forth in the annual report of the National Institute for the Deaf. Proposals for such legislation have the practically unanimous support of all organizations which make this section of the community their special care. Save for the education of children in special schools almost everything that has hitherto been done to help the deaf has been carried through by voluntary effort but voluntary effort cannot fully cope with the economic side of the problem and the co-operation of the State is becoming more and more necessary. The county and county borough councils were asked some time ago by the Ministry of Health to exercise their powers under the Poor Law Act 1930 to make grants to the local societies for the deaf and dumb in order that these might act as employment agencies for their members. The response, however, has been disappointing. Reasonably adequate grants have been made in but a few areas, insufficient grants in the majority and in some areas none at all. The friends of the deaf feel that the State should become responsible for the deaf as it is

already for the blind. There are in this country 40,000 persons who are deaf-born—that is who were deaf before speech could develop—and an unnamed number who have become deaf through disease or accident later in life. It seems obvious that the settlement of these people in employment should be a State concern. Voluntary effort can find plenty of exercise in devising measures to mitigate their loneliness and draw them into the social circle.

The latest report (the first to be issued from the new headquarters of the National Institute at 105 Gower Street, London, which was opened in June last by our present King, then Duke of York) shows how much kindly help is available for the deaf through local societies and regional associations. The National Institute itself does a surprising amount of good work on an annual expenditure insufficiently met by income of under £2,000. It is to be hoped that a Deaf Persons Act may before long find its way on to the Statute Book. One of its provisions, the Institute considers, should be the lowering of the compulsory school beginning age of deaf children from seven to five years. This has been advocated by teachers of the deaf for a generation and is known to have the sympathy of the present Minister of Education. A second provision which is urged is the extension of State assistance where necessary for all cases of disabling deafness irrespective of its origin or the age of the sufferer. Again about 400 deaf and dumb children leave the special schools at the age of 16 each year and the task of finding suitable employment for them is one of obvious difficulty. It is suggested that the obligation be laid on county and county borough councils to train deaf adolescents as well as to retrain in suitable occupations those who because of their affliction cannot follow their normal calling. At present the regional associations for the deaf of which there are six covering England and Scotland act as intermediaries between the local societies for the deaf and the schools but it can be argued with a great deal of force that the responsibility for the preparation for industry of these school leavers should fall on the community as a whole.

The committee of the National Institute is now sponsoring a piece of research into the most suitable occupations for the deaf. This is being directed from the department of industrial physiology of the London School of Hygiene and it is hoped that as a result suggestions may be made to employers whereby through an appropriate training of members of their staffs a bridge is built between some of the unemployed and the result of acquired deafness may be prevented. Yet another provision which might well fit into

measure would be the earlier granting of old age pensions to deaf persons who by reason of sickness or other infirmity can no longer be employed. Among those who have started life with so heavy a disability there will always be a number whose capacity for work ceases at an earlier age than the normal. Finally, it is advocated as a part of the measure that there should be set up an advisory committee on the deaf for the consideration of matters referred to it by the Ministry of Health and other departments and for bringing matters on its own initiative to the attention of the Government.

IMMUNIZATION AGAINST DIPHTHERIA

The results of epidemiological surveys of comparable groups of Baltimore children in respect of diphtheria morbidity and carrier prevalence and of antitoxic immunity as estimated by the Schick reaction during the two periods 1921-4 and 1933-6 have recently been published by W. H. Frost¹ and others.² The individuals investigated in each survey were alike in respect of environment, season of the year and age distribution; such differences as existed were so slight that adjustment did not alter the figures significantly. So far as possible a uniform bacteriological technique was followed but the use of highly selective media particularly of the tellurite-cystine-blood agar in the later years led to an appreciable and increasing proportion of successful attempts at isolation of *C. diphtheriae* where whole culture virulence tests were negative—4.5 per cent against 1 per cent in the earlier years. The suggestion that whole-culture virulence tests may be safely employed as a substitute for the more elaborate procedure of isolation in pure culture is hardly borne out by the later findings. When due allowance is made for the discrepancies in the bacteriological results it is seen that during the period between each survey the prevalence of *C. diphtheriae* fell for the season November to March inclusive from 2.44 to 1.08 per cent. The difference in the numbers examined 3,319 and 3,288 respectively is large enough to place them well beyond the range of probable sampling variation but insufficient to permit of precise measurement. In the earlier survey the carrier-frequency was higher in the 5-9 years age group than in the 10-14 years group; the figures for November and December were slightly in excess of those for February and March but not enough to be of statistical significance while in the 1934-6 survey the carrier frequency was generally so low that but little importance could be attached to the small differences that were observed. Comparative observations on negroes and white children revealed no significant difference in the 1921-2 survey and the numbers of the former under observation in the later survey were too meagre for adequate comparison. The period of accelerated decline in carrier-frequency corresponded fairly closely to the time when artificial immu-

nization on a large scale was being carried out in Baltimore although the numbers actually immunized were relatively small in comparison with the observed lowering of morbidity. The Schick-positive rate among white children of the age group 5-14 years in 1921-2 before artificial immunization was introduced was compared with the rate recorded in 1933-4 by which time immunization had been carried out on a restricted scale for some eight years and on a large scale for five years; the proportion was seen to have fallen from 49.4 per cent to 32.3 per cent—that is a ratio of 1 to 0.65—the reduction remaining fairly constant in the separate age groups. Among unimmunized subjects the proportion of Schick-positive reactors was approximately the same in both surveys 45 per cent. Following the diminished incidence in identified carriers a decline in the amount of natural immunization might have been expected but for the fact that all save the youngest children have been heavily exposed to infection before 1928 when the marked reduction in morbidity was first observed. Since just over 50 per cent of the children had received artificial immunization and the Schick-positive rate fell by no more than 35 per cent the efficiency of immunization as determined by the Schick negative state is rather less than 70 per cent. This low rate is attributed partly to the long interval—five to ten years—between immunization and retest when a proportion of relapses may reasonably be expected and partly to the fact that not all had had the complete course of inoculations. The data presented here do not support the assumption that liability to infection is less among Schick-negative reactors than among non-immunes but they do show that over a given period the former group is less liable to diphtheria. On the other hand, only a proportion, generally small of positive reactors who become infected with *C. diphtheriae* suffer clinical attack. In 1921-4 the proportion observed to contract the disease was several times greater than it was in 1933-6. The authors believe that artificial immunization is the main factor in reducing diphtheria morbidity; the other two important factors which may influence morbidity—namely diminished infection frequency and a lowered ratio of attacks to infections—are held not to be related directly to artificial immunization. Moreover they consider that changes in the dispersibility and virulence of the causative organism or alterations in host resistance not necessarily specific in character or a combination of these factors are more likely to be responsible for the decline in morbidity than altered environmental conditions such as improved hygiene and housing or reduction in the size of families.

Further information on artificial immunization and morbidity of diphtheria is given in a comprehensive report issued by the United States Public Health Services which describes a survey of 130 localities situated in eighteen different States between 1928 and 1931. It was ascertained that immunization had been afforded to 43 per cent of all children under 9 years of age but that at older ages the rate declined progressively until in the 20-24 years age group there was a history of immunization in only 5 per cent. During the same period 7 per cent in this group gave a history

¹ Amer. J. Hyg. November 1936 p. 568.

² Publ. Hlth. Rep. Wash. December 18 1936 p. 1736.

of clinical attack. In the course of twelve months 305 per cent of the children under 15 years were artificially immunized; the measure was applied just as frequently in rural areas as in the towns but the incidence of the disease was as is usual much higher in the latter. The immunization rate was seen to rise in correspondence with increase in the family income so far as the pre school child was concerned but at later ages no consistent relation between immunization and income was observed. The amount of artificial immunization and the incidence of diphtheria in particular localities are detailed but no clear-cut epidemiological conclusions emerge, this may be attributable in part to differences in the intensity and scope of the immunization campaigns sponsored by the various public health authorities.

PERIARTERITIS NODOSA

Since the recognition in 1866 by Kussmaul and Mier of periarteritis nodosa a spite of literature has not thrown much light on the aetiology of the condition. McCallum¹ states that it 'is essentially an infective process which produces changes in the media and intima of small arteries with cell exudation and hyalinization followed by more extensive leucocytic infiltration of the adventitia and immediately adjacent tissue'. Harris and Friedrichs believe that the disease is caused by a filterable virus. In a recent account of seventeen cases observed personally Rose Spiegel² reports that the disease was often preceded within two months of its first manifestation by an infection, tonsillitis, sinusitis or scarlet fever occurred in seven out of the seventeen cases. Klotz by injecting streptococci or serum into rats highly sensitized against streptococci chains to have produced similar lesions in these animals. The suggestion is put forward that periarteritis nodosa is an allergic phenomenon, allergy thus adds another disease to its list. The injury to the vessel wall leads to the formation of aneurysms, to thrombosis and to haemorrhage. The occurrence of purpura suggests that the capillaries are also affected. The course of the disease may be acute, subacute or chronic and the result is in most cases fatal although recoveries have been recorded. It appears at any age and is commoner in males. In Rose Spiegel's series cardiac lesions were found in all the fatal cases—that is in fifteen out of seventeen. The coronary arteries were frequently involved, pericardial haemorrhage from rupture of the vessels occurred twice and auricular necrosis once. Aschoff bodies were found in four cases and pericarditis in three. The disease was present in just over half the

a second died of renal haemorrhage. Vascular lesions were responsible for scattered ulcerations in the intestinal tract and haemorrhagic pancreatitis occurred in three cases. The skin lesions were various, tender reddened or slightly scaly nodules, purpuric spots and urticaria. A condition which was apparently a reaction to the course of the disease rather than a result of the vascular changes was polyserositis involving the pericardium, the pleura or the peritoneum.

THYROID THERAPY IN CRETINISM

It is common experience that whereas the physical development of cretinous infants is almost invariably benefited by the administration of thyroid, the effects of therapy on the mental state are much less certain. Tredgold has suggested that there are in fact two types of cretin, one in which the mental and physical retardation are both due to hypothyroidism and one in which a primary amentia is complicated by hypothyroidism. In spite of the recognition of such discrepancies in thyroid therapy and of the enormous literature on cretinism (thirty years ago 2468 titles were listed) a recent publication from the Clinic of Child Development and the Department of Pediatrics, Yale University School of Medicine is said to be the first detailed objective study of the effect of thyroxine on early mental growth. The authors Drs A. Gesell, C. T. Amatruda and C. S. Culotta³ have investigated six cases of cretinism or hypothyroidism in which the condition had been recognized and adequately treated in infancy and have included for comparison a normal infant and an adult male cretin untreated in infancy. The mental findings were formulated quantitatively using the Yale norms of infant development. The methods of studying and recording mental progress were largely those which the senior author has already made familiar; extensive cinematograph films were made for permanent record and comparison. The appearance and disappearance of cretinoid signs and symptoms were charted in individual cases over the period of study. It was found that of the six children investigated two remained mentally defective and four reached a fair degree of normality. On the other hand all six patients who before treatment showed no pronounced variation from the physical picture of cretinism lost the cretinous stigmata and habits. In giving a prognosis of mental development the authors point out that those patients did best who reacted best to small doses of the dried gland and were intolerant of larger doses, whereas those in whom mental development was unfavourable did not display this intolerance.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

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NOTES OF THE WEEK

Prescription Forms Supplied by Chemists

The attention of the Central Ethical Committee of the B.M.A. has been drawn to the fact that certain members of the profession are using prescription forms supplied by a firm of chemists the name of which is printed at the foot of the form. The Committee considers it very undesirable that medical practitioners should make use of prescription forms bearing the name or the advertisement of any individual pharmacist or firm of pharmacists.

Public Medical Service at Llandudno

A public medical service, designed on the lines of the Association's model scheme has been formed for the Llandudno district. The subscription rates for the service have been fixed at

1 adult	6d per week
1 adult and 1 child	8d
1 adult and 2 children	10d
1 adult and 3 or more children	1s
Additional adults	6d

A person over the age of 16 is considered an adult.

The scheme comes into operation on April 3, and all the doctors in the area are co-operating. Dispensing is to be undertaken by the local chemists on the same basis as the national health insurance and the pricing will be done by the National Pharmaceutical Union. The scheme has caused considerable interest in the district, and promises to start very successfully. Practitioners in the Conway area have made requests for their area to be included in the scheme, and this matter is being considered.

Control of Proprietary Medicines in South Africa

A Bill has been introduced into the South African Parliament for the control of advertisements of proprietary articles. It proposes that all such advertisements shall state the name and address of the manufacturer and that if the article advertised is an appliance, its specific use shall be stated. Other provisions are that an advertisement may not contain any reference to testimonials, offer free treatment or supplies of the article advertised, contain the expressions "doctor," "physician," "medical practitioner" or "surgeon" invite correspondence from the public contain a statement that the

article is a cure or specific remedy for any disease or pathological condition, or state that the article is a palliative unless the nature of the palliative action is clearly stated. It is proposed to form a register of proprietary articles, and advertisements may not contain any information which differs from that which is given to the registrar. The Bill contains a schedule of disorders which proprietary articles may not claim to cure and this schedule includes all those conditions which the Select Committee in Great Britain recommended for prohibition and also many others.

Air Raid Wardens

The Air Raid Precautions Department of the Home Office has recently issued "Memorandum No 4," which explains the need for an organization of citizen volunteers to augment and relieve the normal resources of the civil authorities for safeguarding the general public in time of air attack. The chief duties of these volunteers who will be called air raid wardens will be to advise their fellow citizens on the officially recommended precautions and in time of war to assist them immediately in any trouble resulting from air raid damage and generally to act the part of a good neighbour. It is considered that the responsibility for initiating the new service should rest with local authorities. Alternative schemes of organization are suggested and the qualifications and training of the wardens are discussed. The Memorandum is published by H.M. Stationery Office, price 2d (post free 2½d).

Dr T. C. Routley, General Secretary of the Canadian Medical Association, which is affiliated to the British Medical Association is now on a visit to this country in order to study national health insurance problems.

The Report of the Royal Commission on Tyneside Local Government recommends the establishment of a Northumberland Regional Council which shall deal with public health, medical and other services including mental hospitals, mental deficiency and public assistance.

The Minister for Home Affairs in Northern Ireland has appointed a committee to inquire into the organization of the maternity services in the country. Evidence is to be invited from witnesses interested in the different aspects of maternity services.

THE ASSOCIATION AND PUBLIC HEALTH

In addition to a large agenda of some twenty five items, the Public Health Committee of the Association at its meeting on March 12 had several reports of subcommittees and other documents to consider. It also received a deputation from the Consulting Pathologists Group Committee in support of a scale of fees—which the Public Health Committee approved—applicable to the testing of designated milk in accordance with the requirements of the Order.

Nursing Problems

A report was brought forward by a subcommittee appointed jointly by the Public Health and Medico-Political Committee in response to a communication from the College of Nursing seeking the views of the Association on such questions as interchangeability of pensions, the establishment of a domiciliary nursing service, and the supply of and the demand for the services of the trained nurse by the community.

Professor Picken from the chair, said that the subcommittee had given a great deal of time to the preparation of this document, which he presumed would be sent to the College of Nursing in the form of a reply. It was a useful piece of work, and one likely to bring the Association into closer touch with the organizations representing the nursing profession and demonstrating interest in nursing problems, which were to a certain extent also the problems of the medical profession in the public service and in the service of institutions.

On one matter the joint subcommittee had forsaken its strict terms of reference, and had put forward a view on the question of the examination papers of the General Nursing Council. It was explained that there was a natural desire on the part of those controlling entrance to the nursing profession to eliminate the illiterate nurse who still by some means or other occasionally made her appearance, but, on the other hand, to exact too high a standard in this respect meant that a whole class of persons of reasonably good education and with a personality well fitting them to be good nurses were in some danger of being turned down because they were not good examinees. On a particular point the subcommittee brought forward a recommendation—which was accepted by the Public Health Committee—that while it was appreciated that the General Nursing Council desired the education of the State registered nurse to reach a high standard both in theoretical and practical subjects it was difficult to understand why it should be necessary or indeed advisable for nurses to have the knowledge required to enable them to answer some of the questions set in the examination papers which relate to diagnosis and medical treatment as distinct from nursing care. It was considered that the inappropriate nature of such questions might be a possible cause of the difficulty experienced in securing a sufficient supply of State registered nurses.

The full report of the subcommittee is being sent to the College of Nursing and it is intended that it should appear in the *Supplement*.

The Role of the Health Visitor

The Committee had a brush with the Ministry of Health over the Minister's circular No. 1550 concerning children under school age. That circular had been considered at a previous meeting when attention was drawn to the fact that the conception of the circular was that such children should be visited at regular intervals by a health visitor who should only refer them to a medical practitioner if she had grounds for suspecting disease or defect. A letter to the Ministry was accordingly sent in which it was pointed out that this was not the generally accepted view of the medical profession, who held that children under school age should be safeguarded. The children should be under the medical supervision and seen from time to time by

a medical practitioner in order that the progress of the child might be noted and the mother advised as to the regime. The circular in fact was felt to magnify unduly the part the health visitor played in this work. It was pointed out that the Association had no desire to minimize the work of the health visitor, but it was unable to see how an increase in the health visiting staff alone without a corresponding increase in the medical supervision of the child would bring about the desired result.

To this letter it was reported that a reply had been received, in which the following passage was especially noted:

In the Minister's view health visitors are well qualified as a result of their training and experience to give valuable assistance and advice to mothers in the care of their children in matters of personal and domestic hygiene and when early manifestations of departures from normal health or development are present to recommend the seeking of medical advice in such cases.

As though, as one member of the Committee put it, medical advice were only called for when there were departures from the normal or as if medical attendance upon these young children was only a question of treating them in illness. A melancholy conception of the function of the profession to be entertained in Whitehall! It was resolved to send a rejoinder on those lines.

The Midwives Act in Operation

Dr W. Paterson, chairman of the Maternity and Child Welfare Subcommittee, reported that from information received at the Head Office sixty Branches or Divisions of the Association had appointed representatives for the purpose of consultation with local supervising authorities, and that such consultations had taken place with representatives of twenty-four county and thirty-one borough councils. In two instances the local supervising authority had failed to consult representatives of the profession in accordance with the Act and representations had been made to the Ministry.

It was reported that in the various schemes prepared for submission to the Ministry the policy outlined under the following headings had received a fair amount of recognition: (1) the desirability of the provision by the local authority of an adequacy not only of midwives as midwives but of midwives as maternity nurses; (2) the necessity of securing free choice of midwife by the patient as far as practicable; (3) arrangements for booking to be made direct between patient and midwife rather than through an officer of the local authority; (4) nomination by the patient of the practitioner who would be called in by the midwife if subsequent events made this necessary; (5) distinction between salaries according to qualifications and experience of midwives who are employed by local authorities. On another point Branches and Divisions have been advised to press for two scales of assessment of patients' contributions: one for the services of a midwife as such and the other for the services of a midwife acting as a maternity nurse on the assumption that a woman who books a doctor and midwife acting as maternity nurse is less able to pay than a woman of the same income who contents herself by booking a midwife only. It was stated, however, that in the schemes so far to hand there was a definite tendency to charge the patient the same contribution whether the midwife was engaged as such or as a maternity nurse.

It was also mentioned that the London County Council scheme was not yet available, but that the implications of the Act had been discussed with the Chief Medical Officer. The Metropolitan Counties Branch had intimated a willingness in connexion with the application of the Act to approach practitioners in the L.C.C. area as to whether they were desirous of having their names included on a panel of practitioners prepared to act in an emergency when called in by a midwife. The Branch was also prepared to compile a list of such practitioners and submit it for the use of the Chief Medical Officer.

One suggestion made in the Committee was that a double list should be prepared—namely, a list of practitioners who are ready to attend any case on the request of the midwife, and a list of practitioners who are prepared to attend only cases in the families of their own practice. It was felt that many practitioners, while prepared to attend the latter, might not wish to be subject to a wider call.

Agreement with the Society of Medical Officers of Health

The Committee gave consideration to a proposal for a slight modification of the agreement between the Association and the Society of Medical Officers of Health. The agreement consists of two main paragraphs, the first dealing with the question of interrepresentation, two representatives of each council having seats on the other, together with representation on the Public Health Committee, and there is no suggestion that that arrangement should be altered. The other paragraph makes the Association responsible for the medico political activities of the two bodies. It has been found in recent years that the agreement in its existing form rather tied the hands of the society in making representations and formulating policy in relation to public health on matters with which the Association was not really concerned. The efforts of a joint conference have been directed to the recasting of this part of the agreement, so that it will be mainly on matters affecting the interests of public or private medical practice of mutual concern to both the society and the Association that there will be any tying of hands, and on other matters of common interest there will be machinery for more rapid communication.

It is unnecessary to set out the precise terms of the revision, which was arrived at with the greatest good will on both sides and approved by the Public Health Committee. It is expected that the new agreement will make not for more harmonious working—for the working is already as harmonious as could be desired—but for greater expedition and convenience.

HOSPITAL RESIDENT MEDICAL OFFICERS

The Council of the British Medical Association has approved the following statement of the principles which should guide hospitals in the appointment and employment of junior resident medical officers.

The conditions of work of resident medical officers vary so greatly, as between large hospitals with several residents, small hospitals with few residents and special hospitals with special functions that no advantage is served by formulating detailed model rules applicable to all. The following statement of certain principles may be a help to hospitals in formulating or revising their rules on the duties of resident medical officers.

Note 1—The term "responsible medical officer" is used in this Statement of Principles to denote (a) in voluntary hospitals a member of the honorary staff (b) in council hospitals the Medical Superintendent or one of his deputies.

Note 2—In the case of voluntary hospitals with a Medical Superintendent or House Governor some of the duties assigned to the responsible medical officer might suitably be devolved on him and in council hospitals with a visiting medical staff some of the duties might properly be devolved upon the members of this staff.

1 Resident medical officers must be registered medical practitioners possessed of such qualifications as the Committee of Management may determine and should devote their whole time to the service of the hospital.

2 Their duties should be such as are required by the Committee of Management of the hospital.

3 (a) These duties should include the admission and discharge of inpatients in accordance with the wishes of the responsible medical officer in charge of the case. (b) They may be required to give lectures to nurses. (c) They may

be required to examine and treat nurses and servants and in serious cases should report to the responsible medical officer.

4 They should as soon as possible notify the responsible medical officer of the admission of urgent and important cases and of any serious change in the condition of any case.

5 They should not permit any patient prescription paper or notes to be examined by anyone without the sanction of the responsible medical officer and should not furnish any person unconnected with a patient with any information respecting the case without the sanction of the responsible medical officer and the consent of the patient.

6 They should have instructions as to their powers to limit the admission of visitors.

7 Off-duty time. (a) Off-duty time should be a matter of arrangement with their colleagues and of agreement by the responsible medical officer and generally speaking resident medical officers should be permitted to be absent from the hospital for short periods when their routine work for the day is done. (b) They should not be absent for long periods (for example, a whole day or night) without the sanction of the responsible medical officer. (c) Not more than half the resident staff should be absent from the hospital at the same time. (d) Resident medical officers must arrange with their colleagues for the performance of their duties during their absence. (e) Resident medical officers should have definitely prescribed periods off-duty (for example, two half-days per week after 2 p.m. and alternate Sundays after 11 a.m.) These periods are in addition to those referred to in (a) above.

8 Resident medical officers should have two weeks holiday for every six months completed service.

9 The responsibility of the senior and junior resident medical staff for giving certificates and medical reports and their entitlement or non-entitlement to retain fees for them should be clearly defined in the hospital rules. Resident medical officers should be permitted to issue certificates and reports which are required for legal purposes under the general authority only of a responsible medical officer. Copies of all such certificates and reports should be retained in the hospital records.

(Note—It is customary in hospitals particularly voluntary hospitals for resident medical officers holding short term appointments to be allowed to retain fees for such certificates and reports and for evidence given in a court of law.)

10 In the case of hospitals with one resident medical officer only it is of urgent importance that the Committee of Management should arrange with a non-resident medical officer to be on short call for the purpose of urgent duties in the absence of the resident medical officer.

11 Resident medical officers should as a condition of appointment be or become members of one of the medical defence societies.

12 The appointment of resident medical officers should be for a specified period with possibility of renewal and should be determinable by reasonable notice on either side.

MEDICO-POLITICAL ACTION OF THE ASSOCIATION

The usual meeting of the Medico-Political Committee of the Association held on March 17 under the chairmanship of Dr J. W. Bone was occupied morning and afternoon on a wide range of important business. It had before it the minutes of no fewer than five subcommittees, various questions submitted by Group Committees and Divisions, proposed legislation such as the Government's new Factories Bill, and a dozen items arising under correspondence on which it was asked to consider whether any point of principle arose on which the Association should take action.

The Factories Bill

On the Factories Bill the chairman reported that the Home Office had been interviewed but that only a few of the suggestions previously made by the Committee were included in the text of the Bill as introduced into Parlia-

ment by the Home Secretary. The joint committee set up some time ago to facilitate communications and common action where desired between the Association and the Trades Union Congress had appointed a sub-committee, which had considered certain further amendments to the Bill and these amendments being agreed on both sides had been conveyed to the Home Office. They related to such matters as the temperature of work-rooms, adequate lighting, inspection of fire escapes and first-aid boxes, rest periods and medical examinations for fitness for work. It was urged that as a general rule the works medical officer should not be appointed examining surgeon and that the latter should be allowed opportunities apart from any direction of the Secretary of State to make special inquiry and examination whenever he deemed this to be necessary, and should have the right, subject to the consent of the employee, to inspect the records of the medical officer employed by the management.

An important proposal was made with regard to the employment of pregnant women. The Home Office was urged to accept the recommendation of the Departmental Committee on Maternal Mortality and Morbidity that pregnant women should not be employed in factories during the last six or eight weeks of pregnancy. It was not yet known how far these proposals had impressed the Home Office, but the Committee thought it well that the medical members of Parliament should be informed of their nature.

Rules for Industrial Medical Officers

At its previous meeting the Committee had considered and after amendment had approved certain draft rules for industrial medical officers and decided that they should be submitted to the Central Ethical Committee. The latter had made certain amendments largely verbal and these were approved. One rule as it had left the Committee laid it down that no pressure or persuasion should be used to influence the worker to undergo treatment at the works clinic and to this had been added except in case of first-aid or emergency treatment. The Central Ethical Committee had also suggested the rewording of another rule which stated that where the special experience of the industrial medical officer might be of assistance in the diagnosis and treatment of a case the medical officer might offer to meet the works practitioner in consultation. It was thought that a better reading would be "The industrial medical officer should where possible respond to any invitation to meet the works practitioner in consultation."

One member of the Committee urged strongly that the time had come when a system of training for first-aid people, nurses or others, should be recommended. He pointed out that a good deal of industrial disability could be stopped if persons immediately at hand knew what to do in an emergency. It was decided as a first step to ask the Association of Industrial Medical Officers for its observations on the subject.

Proposed Diagnostic Consultation * Clinique

A proposal was before the Committee from Dr H. S. Collier, reader in industrial medicine at the University of Birmingham, transmitted through the honorary secretary of the Birmingham Division for the setting up of a diagnostic out-patient consultation clinic for diseases of occupation and industrial illness and disability. Dr Collier attended in support of his proposal and described the object of such a clinic as designed to fulfil three purposes: the diagnosis of occupational illness and injury, the discovery of occupational factors in the causation of ordinary illness and ill health, and the recommendation of preventive measures or safeguards. Treatment would fall outside its scope. The advantages of such a clinic would be that the examinations of patients would be by a generalist of recognised standing, which the Division of Industrial Hygiene and Medicine must

undertake, laboratory investigations and research could be correlated with clinical material, and an opportunity would be afforded for extending the clinical aspect of the teaching undertaken by the department.

Asked whether such work was not already covered by the Industrial Research Board, Dr Collier said that the Board was doing a good deal in London but not so much in provincial centres and there would be no risk in such a field of duplication of work. He thought that probably the best plan would be to link up the University clinic with one or other of the voluntary hospitals and to hold evening sessions to which practitioners or consultants could refer cases, the clinic being also open at any time by appointment for patients referred by local doctors.

The Committee decided to defer to its next meeting a decision on Dr Collier's proposal and in the meantime to have evidence collected as to the scope and need for such a clinic.

Payments to General Practitioners Under Provident Schemes

Dr R. Forbes, who has been chairman of a sub-committee to investigate the possibilities of payments being made for general practitioners' services as part of a provident scheme, gave a report on the subject. The matter arose out of a motion brought forward at the last Annual Representative Meeting when it was referred to the Council to explore further the problem of the insurance of persons of the middle and professional classes in respect of all illnesses whether treated institutionally or at home, with the object of producing if possible a scheme whereby such a service might become available as a benefit additional to those provided by the existing Provident Schemes for middle-class patients.

Dr Forbes stated that the principles of such a scheme of insurance had been fully considered. With regard to the provision of general practitioner treatment it was felt that a scheme of insurance must define schedules of fees varying proportionately with the premium proposed, an initial payment by the patient to be deducted from all claims, the annual limit to which claims would be met, and a reduced premium where no claim was made in the previous year. A scheme of insurance should provide a grant-in-aid towards the cost of domiciliary nursing, maintenance and nursing while the patient was in inmate of a hospital or nursing home and consultations and operative or other specialist treatment. It was considered that it would be impracticable to afford full "cover" against the cost of treatment. As a result of further consideration and a second meeting the subcommittee found itself unable to recommend the formulation of any scheme on a mutual insurance basis to give effect to the proposals made at the Annual Representative Meeting and that it would be impracticable to provide full cover at attractive premiums against the cost of a complete general practitioner service. It was added however that at its next meeting the subcommittee was to discuss with the representatives of two important insurance companies the outline of a less ambitious scheme.

Mortuary Facilities

The Committee had before it the results of inquiries made in a number of rural Divisions as to the mortuary facilities in their areas. These showed that in many areas there was dissatisfaction in this respect—in some cases profound or considerable dissatisfaction was noted—and in most areas the facilities were inadequate. It was suggested that the reason for the absence of proper facilities in many country districts was that the county councils had no power to establish mortuaries, the parish and district council being the authority in this respect. The chairman of the Committee said that he thought it might be urged to the Ministry of Health that when the opportunity for legislation arises steps should be taken to confer the necessary powers on county councils. In the meantime it was decided to urge the Min-

Health to exercise the powers given to him under the Public Health Act, 1936, which comes into force next September

Medical Representation in Parliament and on Local Authorities

A report was made by the subcommittee appointed to consider the question of the representation of the medical profession in Parliament and on local authorities. The view put forward by the subcommittee was that the peripheral machinery of the Association is overloaded with the result that the implementation of central policy is hampered, and it was decided to recommend that an investigation be made into the peripheral organization with a view to strengthening it, particularly in regard to Parliamentary and local legislation and so that central policy generally may be more effectively carried out. It was also suggested that at stated times in each year the Divisions and Branches should be urged to take action upon the lines of the resolution of the Annual Representative Meeting last year—namely, to encourage members to interest themselves in local politics and offer themselves as candidates through the recognized machinery in view of approaching municipal and county council elections. Among other recommendations on the subject was one that the appropriate portions of circular letters relating to general Association policy which are sent by the Medical Secretary to the secretaries of Divisions and Branches should also be sent to medical members of local authority councils. Certain recommendations were also made with regard to Parliamentary medical matters. All these recommendations will in due course come before the Council.

Other Business

The Committee gave further consideration to the Dental Benefit Regulations in regard to the scale of fees for anaesthetics. Strong exception had been taken to the new scale, and the matter has been before the Committee previously and was the subject of an article in the *Supplement* of September 26 1936. Representations have been made to the Minister of Health and the Dental Benefit Council for a revision of the scale, and the Dental Benefit Council promised that consideration would be given to the representations of the Association when the scale came up for consideration in April of this year. The Committee approved a statement for presentation to the Dental Benefit Council making suggestions for the revision of fees in accordance with the Association's policy.

The scale of fees at present in force for medical witnesses appearing in criminal courts is under consideration, and it is proposed to make representations for an increase in the present scale. A case is being prepared with this object in view.

Endorsement was given to a resolution of the Radiologists Group Committee that representatives of the Association should join in the deputation to the Postmaster-General arranged by the British Institute of Radiology on electrical interference with broadcasting. It was stated that this presented a serious problem for the radiologist from the point of view of his apparatus.

The report of the Select Committee on Patent Medicine Stamp Duties was considered, but it was not deemed to call for any action on the part of the Association.

King Edward's Hospital Fund for London has issued the 1937 edition of its list of pay beds for the professional and middle classes at voluntary hospitals in London. This shows an increase of 115 beds since last year, the total now being 2,112. The increase in the number of pay-beds is, of course, in addition to an extension of the accommodation for patients in the ordinary wards of the hospitals. The pamphlet gives the charges at each individual hospital. Copies may be obtained from Messrs Geo Barber and Son, Ltd., Fumival Street E.C.4 price 3d post free.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

The Acceptance of an Insured Person

Cases arise from time to time which appear to make it desirable to give an exposition of the obvious. When an insured person brings his medical card for the first time to a doctor's surgery and the doctor receives the medical card and signs it (or it is signed on his behalf by a partner, assistant, or deputy duly authorized) the doctor immediately becomes responsible under his terms of service for the treatment of that insured person free of charge. If the patient is on another doctor's list in the same district he can only accept the patient with the consent of that doctor, or, alternatively, at the end of a quarter. Subject to these reservations the obligation to give treatment free of charge is in no way qualified by the fact that for the purposes of the quarterly count the name will not appear on the doctor's list until the beginning of the next quarter. This effect on the doctor's remuneration is compensated for by the fact that an insured person going off the doctor's list after the beginning of a quarter is included in the 'count' for the whole quarter.

It would seem unnecessary to state what is so well known to insurance practitioners generally, but the statement is prompted on reading the following extract from the report of a case heard by a Medical Service Subcommittee.

The practitioner has been under agreement with the Committee for the provision of medical attendance and treatment of insured persons since January 1919 and at present he has over 2,000 insured persons included in his list. We were therefore surprised to hear him say as he did when he attended before us that he thought he was entitled to accept fees from insured persons in respect of treatment provided during the period following the presentation to him of the medical card and the date when the registration of the acceptance is notified to him by the committee. In his letter of reply the practitioner wished the committee to believe that the action of sending in an account to the insured person concerned in this case was due to inadvertence but this could hardly have been the case if it was part of a regular practice. He told us also that this was an isolated case but we did not feel able to accept this contention which was entirely at variance with his statement quoted above with regard to the period for which he was entitled to accept fees.

'The insured person's form of medical record was, with the consent of the insured person produced to us at the hearing. The first attendance recorded by the practitioner is that on February 10, and immediately above the entry for that date is written the word "panel".' We think that this note may be regarded as a confirmation if such were needed of the practitioner's theory that he was entitled to charge fees until he received from the committee notification that the patient had been added to his list. The point which the practitioner could not explain to us was the delay in forwarding the insured person's medical card to the committee. The card was clearly received by him on January 7. He said that it was sent to the committee on January 24. Whether this was the case or not we do not know but it was certainly not received by the committee until February 2. It may be noted that the notice of the acceptance of an insured person must be sent by a practitioner to the committee within seven days of the date of acceptance.

The practitioner's contention that he was entitled to accept fees from the insured person on the footing of private treatment prior to the date when he was notified that his (the insured person's) name had been placed on his list scarcely admits of argument. It has always been held that where a medical card has been presented to and accepted by a practitioner that practitioner is under obligation to

mittee have not notified him that the insured person's name has been placed on his list. It is clear beyond controversy that the practitioner's obligation to treat the patient as an insured person arose on January 6—that is the date on which it was first represented to him that the patient was in fact an insured person.

The Insurance Committee in this case came to the conclusion that the practitioner must have been aware of the fact that he was charging fees improperly, and the practitioner was censured and a substantial deduction made from his remuneration.

Partnership with a Non Insurance Partner

At the last meeting of the Insurance Acts Committee of the B.M.A. a communication was considered from the Buckinghamshire Panel Committee raising again the question of a partnership between a practitioner who is doing insurance work and another who is not. A statement had, however, been received from the Ministry to the effect that there was no ground upon which exception could be taken to such a partnership. The question had arisen because of a suggestion from the Insurance Committee that the partner with the private practice only should agree not to charge fees to his partner's insured patients. It may be recalled that the following motion by Lancashire was referred by the 1934 Annual Conference to the Insurance Acts Committee for consideration:

That in the opinion of this Conference an arrangement whereby an insurance practitioner is in partnership with a doctor who is not on the medical list is prejudicial to the observance of the regulations governing insurance practice and must of necessity conduce to abuses in the matter of receipt of fees by insurance practitioners from patients on their lists.

The committee's view was that any abuses which could be attributed to such a partnership were of such rare occurrence that it did not feel the situation was one demanding a special regulation to deal with it. The 1935 Conference concurred in this view.

Specification for Wound Dressings

The Ministry of Health has under consideration a draft specification for wound dressings which it is proposed to include in the Drug Tariff on July 1. Subject to the concurrence of the Insurance Acts Committee and the Pharmaceutical Union the specification will be as follows:

Each wound dressing consists of a pad medicated as uniformly as possible with boric acid and fixed to a base of flesh coloured elastic cotton fabric spread evenly with a rubber adhesive compound. The adhesive compound is prepared with the best para rubber and contains not less than 20 per cent of zinc oxide. The medicated pad is fixed to the spread fabric centrally as possible so as to leave a margin of adhesive fabric on each side. The elasticity of the spread fabric is across the narrow width of the medicated pad. The medicated pad and margin of adhesive surface have a protective covering of loosely attached muslin.

Standards and sizes for the spread fabric and medicated pad are set out in detail with instructions for packing and the following directions for use:

"In the absence of any special direction by the doctor the dressing should be used as follows: (1) Cleanse the wound with plain boiled water or antiseptic solution and dry the surface. (2) Remove the protective covering from the dressing. (3) Apply the medicated pad to the wound. (4) Press the muslin covering of the dressing to the skin."

PHYSICAL TRAINING AND RECREATION BILL

The Physical Training and Recreation Bill, which has just been issued, contains the Government's proposals for increasing the facilities for physical training and recreation. The main purposes of the Bill are (a) to give fuller definition to the work of the National Advisory Councils and the Grants Committee, and of the local and regional committees which they are setting up, (b) to enable the Board or Secretary of State for Scotland to make grants to voluntary bodies and local authorities in accordance with recommendations of the Grants Committees, and (c) to widen the existing powers of local authorities.

Under the Bill it will be the duty of the National Councils to arrange for the establishment of local committees (in Scotland "regional committees"), whose functions shall be to review existing facilities and encourage and promote further and better provision in their areas to consider proposals including applications for grant put up to them, and to transmit these applications to the Grants Committees with their recommendations. The Board or Secretary of State for Scotland is empowered, in accordance with the recommendations of the Grants Committees to make grants towards the capital cost of facilities for physical training and recreation including the provision and equipment of gymnasiums, playing fields, swimming baths, holiday camps and camping sites and other buildings and premises for physical training and recreation. The words "whether as a part of wider activities or not" are used, making it clear that the benefit of grants is not restricted to accommodation or equipment for physical training or recreation in the narrow sense but extends to clubs or community centres of the activities of which such training and recreation form part. Grants towards the maintenance of facilities are payable only in exceptional cases specially certified by the Board or Secretary of State for Scotland.

Powers are also given to assist the training and supply of teachers and leaders to contribute towards the funds of national voluntary organizations and on the recommendation of the Grants Committees and with the approval of the Treasury to incur expenditure on publicity for physical training and recreation.

Powers of Local Authorities

The powers of local authorities are extended to cover not merely athletic but social or educational objects. They will thus be able to provide community centres. In order that effective use may be made of these facilities the local authority will be empowered to provide wardens, teachers and leaders. Local authorities may contribute towards expense incurred either by another authority or by a voluntary organization in providing any of these facilities. The Bill also provides simpler machinery than at present exists for the compulsory acquisition of land. A local authority (other than a parish council) which cannot acquire by agreement land for any of the purposes mentioned will be enabled to acquire land compulsorily. In order to be confirmed by the Minister of Health after local inquiry in the case of opposition. Similar extensions of powers are given to local authorities in Scotland.

Certain powers of local education authorities under the Education Act 1921 are extended. Under Section 86 of that Act local education authorities for higher education are at liberty to supply or maintain or aid the supply or maintenance of facilities for social and physical training including specific objects as centres and equipment for physical training and playing fields for persons over the age of 18 who are attending educational institutions. They will now be able to use those powers for the benefit of persons of any age who are attending an educational institution or persons attending educational institutions. They will now be able to provide as a means of recreation for children attending educational institutions as a means of voluntary organizations carrying on such work and (b) to provide holiday school camps for

attending schools or young people attending continuation classes. The Bill proposes to extend the powers under (b) so that authorities will be able to provide holiday or school camps and other facilities for social or physical training in the day or evening not only for school children and continuation class students but also for any person resident in their area.

Under existing acts the Board has power to aid by grant the expenditure of local education authorities on the training of teachers, and also to pay grants direct to the governing bodies of training colleges. The proposal that the Board should have power to provide, maintain, and aid a national college or colleges for England and Wales, which is one of the most important parts of the Government's proposals, requires legislative sanction.

BOMBAY MEDICAL COUNCIL

The following are extracts from a summary of the proceedings of the meeting of the Bombay Medical Council held on February 1, 1937.

The Council considered further the draft revised code of medical ethics and resolved (1) that it is not desirable to issue any binding rules or to insist on a rigid code which shall have the force of law but that full freedom should be retained to treat any case on its merits and (2) that further elaboration of the ethical principles which should guide members of the profession is not necessary.

The Council considered further a reference from the Medical Council of India regarding the conditions of medical practice in the French establishments in India affecting Indian nationals possessing medical degrees included in the First Schedule to the Indian Medical Council Act 1933 and resolved to endorse and agree with the following resolution passed by the Madras Medical Council on October 27, 1936.

This [the Madras Medical] Council resolves to request the Medical Council of India immediately to recommend to the Government of India to correspond with the French Government in order that registered medical practitioners in the Provincial Registers in this country may be allowed to practise in French India and in case the French Government refuses to comply with this suggestion that the Government of India may be requested by the Medical Council of India to enact suitable legislation to prevent practitioners from French India from practising in British India unless they are in the Provincial Registers.

Consideration was also given to a reference from the Medical Council of India regarding the conditions of medical practice in Portuguese India affecting Indian nationals possessing medical degrees included in the First Schedule to the Indian Medical Council Act 1933 and resolved (1) that no further action in the matter appears called for as the reciprocity at present existing between the Government of Bombay and the Government of Portuguese India has been continued but (2) that the Medical Council of India should be informed that the Bombay Medical Council would urge that the Government of Portuguese India be requested to allow all medical practitioners registered under the Bombay Medical Act, VI of 1912 to practise in Portuguese India.

In response to a request of the dean of the Nair Hospital Dental College Bombay for support in bringing a Dentists Registration Act on the Statute Book, the Council resolved that it would be prepared to assist in the preparation of a Dentists Registration Act for Bombay if a demand for such an Act was made by an organized dental profession.

This being the last meeting on which Major General E. W. C. Bradfield had to preside in view of his impending departure to take up the appointment of the Director General Indian Medical Service, Sir Temulji Nariman moved "That the Council place on record their appreciation of the cordial way in which General Bradfield had always conducted the meeting of the Council and the great help he had rendered in the disposal of the business which came before them." The motion was seconded by Sir Nasarwanji Choksi and on being put to the vote was carried unanimously. General Bradfield expressed his thanks to the Council.

Correspondence

THE VOLUNTARY HOSPITAL AND CONTRIBUTORY SCHEMES

SIR—I was interested to read your remarks in the *Supplement* to your issue of March 6 (p. 114) on hospital contributory schemes, in which you suggest that the medical staffs should receive 20 per cent of funds collected under such schemes.

Do you realize that many contributing schemes only pay to the voluntary hospitals about 70 to 80 per cent of the actual cost of treating their contributors and dependants? Is not your suggestion if adopted likely to kill the goose that laid the golden egg? It must be clear to everybody actively engaged in running a voluntary hospital that the main trouble is financial so that the more money taken out of these funds the nearer the end of the voluntary hospital system. You may ask what is the remedy? Honestly I do not know. It may be that the price of beds will have to be put up for all except the necessitous poor or the employment of a permanent paid medical and surgical staff with consulting honoraries, the hospital taking all fees which would be fixed in a ratio to the amount charged for accommodation.

This matter is of such vital importance for the saving of the voluntary hospital system that a strong joint committee of lay and medical representatives should be formed to go into the whole matter—I am, etc.

Liverpool, 8, March 24

LAYMAN

THE CAPITATION FEE

SIR,—It is a matter for great surprise that the deputation to Sir Kingsley Wood, with reference to the capitation fee for juveniles and also increase of the capitation fee agreed at once to arbitration. It would seem as if we have no power behind our arguments. I thought all G.P.s agreed to have nothing to do with juveniles for a reduced capitation fee. The present capitation fee is not even net much has to be paid for out of it.

In this district the Oddfellows and the Foresters offer 3s 6d a visit 2s 6d without medicine 2s 6d at the surgery with medicine, 1s 6d at surgery without medicine and 1s 6d medicine only. They say there is no question of long journeys as the radius is only four miles. They only pay half yearly. Now the Oddfellows is even suggesting worse terms in this district 6s a year for all ages up to 18 years. It is really time we had some unison in the profession otherwise it will be impossible to carry on. The children go to school doctors and welfare centres, maternity cases go to maternity homes, and many patients who used to attend as private patients go to hospitals. Besides all this the bad debts for those patients the doctor does attend privately are increasingly heavy. With all these losses how can a doctor manage if the capitation fee is not increased perhaps reduced also a less fee accepted for juveniles?

If the profession agrees to exclude juveniles at a certain fee is it advisable for a deputation to adopt another course? The present capitation fee is of far less value than that before the war—I am, etc.,

March 23

G.P.

SIR—The reply of the Minister of Health to the B.M.A. deputation on the question of the capitation fee was characteristic and in the light of his previous offer for juveniles not altogether surprising. It is to be hoped that his statement to the effect that a flat rate substantially below the present figure could well be justified will be immediately countered.

Such a statement shows that he must be totally out of touch with the working of an insurance practice. Our capitation fee has never been at a proper level and it has been several times lowered. Our expenses mount up and our work especially clerical work is added to to the detriment of our patient. After an expensive and long curriculum many of us find it difficult to save for our old age and as we can expect no pension there can be little thought of retirement as in Government departments. The labourer is worthy of his hire and

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Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street Dublin (Telegrams Bacillus, Dublin Tel 62550 Dublin)

Diary of Central Meetings

APRIL

- 2 Fri. Journal Board 2 p.m.
Welsh Committee 2.15 p.m. (at Shrewsbury)
- 6 Tues. Council, 2 p.m.
- 7 Wed. Council, 10 a.m.
- 9 Fri. Medical Students and Newly Qualified Practitioners Subcommittee 2.30 p.m.
- 13 Tues. Interim Committee re Provident Schemes 3 p.m.
- 15 Thurs. Radiologists Group Committee, 2.30 p.m.
- 29 Thurs. Charities Committee

MAY

- 18 Tues. Organization Committee 2 p.m.

Scholarships and Grants in Aid of Scientific Research

Scholarships

The Council of the British Medical Association is prepared to receive applications for Research Scholarships as follows: an Ernest Hart Memorial Scholarship, of the value of £200 per annum, a Walter Dixon Scholarship, of the value of £200 per annum, and three Research Scholarships, each of the value of £150 per annum. These Scholarships are given to candidates whom the Science Committee of the Association recommends as qualified to undertake research in any subject (including State medicine) relating to the causation, prevention or treatment of disease. Preference will be given, other things being equal, to members of the medical profession. Each Scholarship is tenable for one year, commencing on October 1, 1937. A Scholar may be reappointed for not more than two additional terms. A Scholar is not necessarily required to devote the whole of his or her time to the work of research, but may hold a junior appointment at a university, medical school, or hospital provided the duties of such appointment do not interfere with his or her work as a Scholar.

Grants

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of research into the causation, treatment or prevention of disease. Preference will be given other things being equal to members of the medical profession and to applicants who propose as subjects of investigation problems directly related to practical medicine.

Conditions of Award Applications

Applications for Scholarships and Grants must be made not later than Saturday, May 8, 1937, on the prescribed form, a copy of which will be supplied on application to the Medical Secretary of the Association, B.M.A. House, Tavistock Square, London, WC1. Applicants are required to furnish the names of three referees who are competent to speak as to their capacity for the research contemplated.

Sir Charles Hastings Clinical Prize

The Sir Charles Hastings Clinical Prize which consists of a certificate and a money award of fifty guineas is again open for competition in respect of 1938. The following are the regulations governing the award.

1 The Prize is established by the Council of the British Medical Association for the promotion of systematic observation, research and record in general practice. It includes a money award of the value of fifty guineas.

2 Any member of the Association who is engaged in general practice is eligible to compete for the Prize.

3 The work submitted must include personal observations and experiences collected by the candidate in general practice and a high order of excellence will be required. If no essay entered is of sufficient merit no award will be made. It is to be noted that candidates in their entries should confine their attention to their own observations in practice rather than to comments on previously published work on the subject though reference to current literature should not therefore be omitted when it bears directly on their results, their interpretations and their conclusions.

4 Essays or whatever form the candidate desires his work to take must be sent to the British Medical Association House, Tavistock Square, London, WC1, not later than December 31, 1937. The Prize will be awarded at the Annual General Meeting of the Association to be held in July 1938.

5 No study or essay that has been published in the medical press or elsewhere will be considered eligible for the Prize and a contribution offered in one year cannot be accepted in any subsequent year unless it includes evidence of further work. A prizewinner in any year is not eligible for a second award of the Prize.

6 If any question arises in reference to the eligibility of the candidate or the admissibility of his or her essay, the decision of the Council on any such point shall be final.

7 Each essay must be typewritten or printed, must be distinguished by a motto and must be accompanied by a sealed envelope marked with the same motto and enclosing the candidate's name and address.

8 The writer of the essay to whom the Prize is awarded may on the initiative of the Science Committee be requested to prepare a paper on the subject for publication in the *British Medical Journal* or for presentation to the appropriate Section of the Annual Meeting of the Association.

9 Inquiries relative to the Prize should be addressed to the Medical Secretary.

Katherine Bishop Harman Prize

The Council of the British Medical Association is prepared to consider an award of the Katherine Bishop Harman Prize, of the value of £75 in the year 1938. The purpose of the prize, founded in 1926, is the encouragement of study and research directed to the diminution and avoidance of the risks to health and life that are apt to arise in pregnancy and child bearing. It will be awarded for the best essay submitted in open competition, competitors being left free to select the work they wish to present provided this falls within the scope of the prize. Any medical practitioner registered in the British Empire is eligible to compete.

Should the Council of the Association decide that no essay submitted is of sufficient merit, the prize will not be awarded in 1938 but will be offered again in the year next following this decision and in this event the money value of the prize on the occasion in question shall be such proportion of the accumulated income as the Council shall determine. The decision of the Council will be final.

Each essay must be typewritten or printed in the English language, it must be distinguished by a motto and accompanied by a sealed envelope marked with the same motto and enclosing the candidate's name and address. Essays must be forwarded so as to reach the Medical Secretary (to whom inquiries may be sent) B.M.A. House, Tavistock Square, London, WC1, not later than December 31, 1937.

Branch and Division Meetings to be Held

BIRMINGHAM BRANCH, WARWICK AND LEAMINGTON DIVISION.—Joint meeting with Rugby Division at Manor House Hotel Leamington Spa Thursday April 8 5.50 p.m. Election of Representative and Deputy Representative for the two Divisions 6 p.m. Lecture by Dr. George Bray Allergic Diseases To be followed by dinner.

GLASGOW AND WEST OF SCOTLAND BRANCH, LANARKSHIRE DIVISION.—At Royal Infirmary Glasgow Wednesday April 7, 3.30 p.m. Mr J. M. Melvin Surgical Demonstration.

HERTFORDSHIRE BRANCH, EAST HERTFORDSHIRE DIVISION.—At Cell Barnes Colony St Albans Wednesday April 7 3 p.m. Dr N. H. M. Burke Mental Deficiency Colonies.

LANCASHIRE AND CHESHIRE BRANCH, ROCHESTER DIVISION.—Joint meeting with Bury and Oldham Divisions Friday April 9 8.30 p.m. B.M.A. Lecture by Mr Geoffrey Jefferson The Surgical Treatment of Intractable Pain.

METROPOLITAN COUNTIES BRANCH, CITY DIVISION.—At Metropolitan Hospital Kingsland Road E. Tuesday April 6 9.30 p.m. Dr R. D. Lawrence The Practitioner and Diabetic Emergencies.

METROPOLITAN COUNTIES BRANCH, NORTH MIDDLESEX DIVISION.—At North Middlesex County Hospital Wednesday April 7 3.30 p.m. Clinical meeting.

METROPOLITAN COUNTIES BRANCH, SOUTH WEST ESSEX DIVISION.—At Wesleyan Schools High Road Leyton Tuesday, April 6 9.15 p.m. Mr A. J. Wylie Reminiscences of an Insurance Committee Clerk.

METROPOLITAN COUNTIES BRANCH, STRATFORD DIVISION.—At King George Hospital Ilford, Friday, April 16 3 p.m. Clinical meeting. At Educational Offices Stratford Broadway Tuesday April 20 9.15 p.m. Dr Henry Semon Cutaneous Allergy.

NORTH OF ENGLAND BRANCH, GATESHEAD DIVISION.—At Whinney House Tuesday, April 20 Clinical evening.

NORTHERN IRELAND BRANCH.—At Whitla Medical Institute College Square North Belfast Thursday April 8 4.10 p.m. Meeting of a subcommittee of the Branch and members of the Branch to consider the maternity services in Northern Ireland.

NORTHERN IRELAND BRANCH, BELFAST DIVISION.—Thursday April 15 4.30 p.m. Dr G. C. Anderson (Medical Secretary). The B.M.A. and the Future of Medical Practice. All members of the Northern Ireland Branch are invited.

NORTH OF ENGLAND BRANCH, NORTH NORTH MERLAND DIVISION.—At Belford Wednesday April 21 Consideration of programme for summer and autumn months.

NORTH OF ENGLAND BRANCH, INVERNESS DIVISION.—At Royal Northern Infirmary Thursday April 8 4 p.m. Appointment of Representative and Deputy Representative to the B.M.A. Annual Meeting in July. Consideration of adoption of resolution under ethical rules of Division.

SOUTH WALES AND MONMOUTHSHIRE BRANCH.—At Newport Thursday April 8 Branch meeting.

SHIRLEY BRANCH, CROYDON DIVISION.—At Shirley Park Hotel Thursday April 8 Annual Dinner and Dance.

SURREY BRANCH, RICHMOND DIVISION.—At Richmond Royal Hospital Friday April 9 3 p.m. Clinical meeting.

SUSSEX BRANCH, HASTINGS DIVISION.—At Queen Hotel Hastings Tuesday April 6 8.30 p.m. Mr Gavin Livingstone Allergy.

SUSSEX BRANCH, WEST SUSSEX DIVISION.—At Worthing Hotel Thursday April 8 3 p.m. Clinical meeting.

YORKSHIRE BRANCH, BRADFORD DIVISION.—Wednesday April 7 Cinematograph Film The Preparation of Vaccines.

Meetings of Branches and Divisions

CYPRUS BRANCH

At a meeting of the Cyprus Branch held at Nicosia on March 9 Dr GOKTER presented two cases of eye affections and Mr CHARLES ARBUTT lectured on "Some Points in Medical Jurisprudence." Nineteen members and friends were present.

BEDFORDSHIRE BRANCH

At a meeting of the Bedfordshire Branch held at Luton on March 9 the film of the B.M.A. World Tour was exhibited and commenced upon by Dr J. W. BONS. An interesting address of members and their ladies expressed their appreciation of Dr BONS' kindness in arranging the meeting.

DORSET AND WEST HANTS BRANCH, BURNLEY DIVISION.

At a meeting of the Burnley Division held at Burnley on February 24 with Dr J. C. A. NORMAN in the chair Dr NORMAN referred to the death of a member of the Division Dr HENRY HALL and the members stood in silence for a minute in respect to his memory. Dr NORMAN then said that he felt sure that a large number of the members present at a meeting of the very day would be able to tell him that they had been on the same boat.

Dr James MAXWELL read a paper on 'Lung Abscess.' The lecturer said that by lung abscess he meant a non-tuberculous suppuration with cavity formation in lung tissue, this definition excluded suppuration in bronchiectatic cavities. The causes were (1) Lesions of the respiratory tract (2) abdominal conditions (3) peripheral septic conditions (4) lesions of the nervous system and (5) the primary group. There were two theories of the causation of lung abscess (1) that infection was by aspiration (2) that infection was borne by the blood stream. As regards the clinical picture in a certain group of cases there were few or no symptoms whatsoever. In another group there might be definite respiratory symptoms. The sputum might be pure pus sometimes there was haemoptysis and often pain. Signs were obvious if the abscess was close to the chest wall but they might be very few if the abscess was deep seated. Bronchopneumonia empyema pyopneumothorax septic endocarditis and cerebral abscess were the most frequent complications.

Speaking of special investigations to make certain of a diagnosis the lecturer said the examination of the sputum should never be neglected and bronchoscopy was absolutely essential also. He related how on more than one occasion a pea nut had been discovered by bronchoscopy and how its removal had cleared up symptoms very rapidly. Ray examination was very useful but lipiodol did not help unless an abscess cavity communicated with the bronchus and in those cases the diagnosis was never in doubt. Needling should never be done to locate an abscess for fear of infecting the pleural cavity.

As regards treatment Dr Maxwell said that prevention was of the utmost importance and advised the routine inhalation of CO₂ after operations. In influenza patients where there were any lung symptoms injections of quinine were helpful. All cases should be treated medicinally for two months, as many cleared up without surgical intervention. Artificial pneumothorax was he thought a dangerous procedure and if an operation was decided upon then a two stage procedure should always be carried out.

An interesting discussion then followed, in which Drs J. DIXON GREEN, B. W. GOLDSTONE, A. KINSY, MORGAN, R. V. FACEY, SIMMONS, W. BLICH, A. R. N. MCGILLICUDDY, N. F. ADENEY, A. BASIL ROOKE, and S. A. MONTGOMERY took part. A very hearty vote of thanks was then accorded Dr Maxwell for his interesting and instructive lecture and to Dr W. R. PRATT for operating the lantern.

HERTFORDSHIRE BRANCH, BARNET DIVISION

At a meeting of the Barnet Division, held at Old Ford Manor Golf Club on March 9 with Dr N. G. THOMSON in the chair Dr C. E. LAKIN gave a talk on Toxaemia of Pregnancy. He illustrated his remarks with a case and then went on to give an explanation of the modern conception of jaundice. Several curious phenomena were discussed including a jaundiced lactating female who never showed stained milk unless mastitis was present. A jaundiced bronchitic had normal sputum but a patient with pneumonia and jaundice showed stained sputum. The meeting closed with a hearty vote of thanks to Dr Lakin for his address.

KENT BRANCH, EAST KENT DIVISION

A meeting of the East Kent Division preceded by an informal dinner was held at Canterbury on March 19 with Mr W. I. C. WYNNE in the chair.

Dr A. M. WATTS was elected representative and Dr F. W. CHEESE deputy representative in the Representative Body.

Dr CONRANT PENDER read an interesting paper on "The Organization and Work of the County Public Health Laboratories." After a lively discussion the meeting closed with a hearty vote of thanks to Dr Pender for his address.

LANCASHIRE AND CHESHIRE BRANCH, PRESTON DIVISION

At a joint meeting of the Preston Division and the Preston Medical-Ethical Society held at Preston Royal Infirmary on March 16 Dr JOHN I. WATKINSON (Mar. 1937) gave an address on "Toxic Anaemias." Dr WILKINSON dealt as fully as time would permit with his very wide subject. There was a large and attentive audience and an interesting discussion took place.

SOUTH WALES AND MONMOUTHSHIRE BRANCH, SOUTH GLAMORGAN AND BLACKBROOK DIVISION

At a meeting of the North Glamorgan and Blackbrook Division held at Pen-y-dalen on March 16 Dr WILLIAM EVANS delivered a B.M.A. Medical Association Lecture on "The

Diagnosis and Treatment of Heart Failure In its manner of delivery and in its subject matter the lecture was greatly appreciated. A discussion followed in which several members and guests took part. A supper followed.

UNITED PROVINCES BRANCH

At a clinical meeting of the United Provinces Branch held at Lucknow on January 29, with Lieut-Col R S TOWNSEND I.M.S. in the chair, cases were demonstrated by Captain K S NIGAM. One was a case of suspected intracranial neoplasm about the pituitary region which had been approached by Frazier's transfrontal route. The patient subjectively appeared much improved three weeks after the operation, his severe headaches and giddiness had disappeared, and he took more interest in life. The wound healed up uneventfully.

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

Section of Orthopaedics—Tues 5.30 p.m. (Cases at 4.30 p.m.) Film by Mr K H Priddy Treatment of Fractures of the Neck of the Femur
Section of History of Medicine—Wed 5 p.m. Dr P H Manson Bahr, Historical Landmarks in Tropical Medicine
Section of Surgery—Wed, 8.30 p.m. (Specimens on view from 5 p.m.) Pathological Meeting
Clinical Section—Fri, 5.30 p.m. (Cases at 4.30 p.m.) Annual General Meeting Election of Officers and Council for 1937-8
Section of Epidemiology and State Medicine—Fri 8.15 p.m. Paper by Prof. Claus Jensen (Copenhagen) Active Immunization against Diphtheria by the Combined Subcutaneous and Intranasal Method

MEDICAL SOCIETY OF INDIVIDUAL PSYCHOLOGY—At 11 Chandos Street W. Thurs 8.30 p.m. Dr H Crichton Miller Puberty and Adolescence

WEST LONDON MEDICO-CHIRURGICAL SOCIETY—At De Vere Hotel Kensington Road W. Fri 8.30 p.m. Discussion Sudden Death To be opened by Dr Edwin Smith, Dr B T Parsons Smith and Dr T Skene Keith

WEST KENT MEDICO-CHIRURGICAL SOCIETY—At Miller General Hospital, Greewich S.E. Fri 8.45 p.m. Debate That Contraception is to the Advantage of Humanity. Proposer Dr Jane Hawthorne, seconder, Dr Margaret Green. Mover of negative Dr Jaquet M C Gray, seconder of negative, Dr F A Beattie

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road W.—Daily 10 a.m. to 4 p.m., Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations Mon 2.30 p.m. Dr C W Buckley Arthritis Wed 12 noon Clinical and Pathological Conference (Medical) 2.30 p.m. Dr King Acidosis and Alkalosis 3.15 p.m. Clinical and Pathological Conference (Surgical), 4 p.m., Dr J E H Roberts Surgery of the Chest 4.30 p.m. Dr W E Gye, Experimental Cancer Research Thurs 12 noon Clinical and Pathological Conference (Obstetrics and Gynaecology), 2.30 p.m. Dr Duncan White Radiological Demonstration 3.30 p.m., Mr A K Henry Demonstrations on the Cadaver of Surgical Exposures 3.30 p.m., Mr Clifford White Benign Neoplasms of Uterus Fri 2 p.m., Operative Obstetrics 3 p.m. Department of Gynaecology Pathological Demonstration

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road W.C.—Mon to Fri 4.30 p.m. Course in Methods of Examination and Diagnosis Fri 4 p.m., Mr A Lowndes Yates Familial Sinusitis

NATIONAL HOSPITAL FOR DISEASES OF THE HEART Westmoreland Street W.—Tues 5.30 p.m. Dr Maurice Campbell Paroxysmal Tachycardia

St JOHN CLINIC AND INSTITUTE OF PHYSICAL MEDICINE Ranelagh Road S.W.—Fri 4.30 p.m. Dr G T Calthorpe Demonstration of X Rays of Conditions Simulating the Rheumatic Diseases

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE Hammersmith W.—Daily 2 p.m. Operations, Medical and Surgical Clinics Mon 10 a.m. Dr Post Demonstration of X Ray Films Skin Clinic 11 a.m. Surgical Wards 2 p.m. Surgical and Gynaecological Wards Eye and Gynaecological Clinics 4.15 p.m. Mr Green Armytage Alarums Tues 10 a.m. Medical Wards 11 a.m. Surgical Wards 2 p.m., Throat Clinic Wed 10 a.m. Children's Ward and Clinic 11 a.m. Medical Wards 2 p.m. Eye Clinic Gynaecological Operations 4.15 p.m. Mr Gibb Demonstration of Eye Cases Thurs 10 a.m. Neurological and Gynaecological Clinics 12 noon Fracture Clinic 2 p.m., Eye and Genito-Urinary Clinics 4.15 p.m. Dr W S C Copeman Respiratory Disorders Fri 10 a.m., Medical Wards Skin Clinic 12 noon Lecture on Treatment 2 p.m. Throat Clinic 4.15 p.m. Mr Simpson Smith Blood per Rectum Sat Children's and Surgical Clinics 11 a.m., Medical Wards The lectures at 4.15 p.m. are open to all medical practitioners without fee

GLASGOW POST GRADUATE MEDICAL ASSOCIATION—At Royal Infirmary Wed 4.15 p.m. Dr David Smith Haematemesis

MANCHESTER ROYAL INFIRMARY—Tues 4.15 p.m. Mr Wilson H Hey Diagnosis Fri, 4.15 p.m. Dr Charles S D Don Demonstration of Medical Cases

VACANCIES

ACCRINGTON VICTORIA HOSPITAL—H.S. Salary £150 p.a.
BATH ROYAL UNITED HOSPITAL—(1) H.S. (male unmarried) for the Ear, Nose, and Throat Department Salary £150 p.a. (1) Hoo Assistant Gynaecologist and Obstetrician (3) H.I. (male unmarried) Salary £150 p.a.
BEDFORD COUNTY HOSPITAL—(1) First H.S. (2) Second H.S. Males unmarried Salaries £155 p.a. and £150 p.a. respectively.
BELGRAVE HOSPITAL FOR CHILDREN Clapham Road S.W.—(1) Two H.P.s (2) H.S. Males Salaries £100 p.a. each
BENEDICT NATIONAL SANATORIUM—J.H.P. Salary £150 p.a.
BIRMINGHAM CITY—(1) M.O.s (females) to the Maternity and Child Welfare Department Salaries £600-£25 £800 p.a. each (2) A.M.O. (male) for Colleshill Hall
BIRMINGHAM AND MIDLAND EYE HOSPITAL—R.S.O. Salary £200 p.a.
BLACKBURN ROYAL INFIRMARY—R.H.S. (male) Salary £175 p.a.
BLACKPOOL VICTORIA HOSPITAL—H.S. (male) Salary £200 p.a.
BOURNEMOUTH ROYAL NATIONAL SANATORIUM—(1) Medical Superintendent (2) R.A.M.O. Salaries £800 £25 £850 p.a. and £200 p.a. respectively
BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR Sick CHILDREN—H.S. (male) Salary £120 p.a.
BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL—Hon Clinical Assistant to the Early Nervous Disorders Department
BRISTOL ROYAL INFIRMARY—Clinical Anaesthetist to the Dental Department Honorarium £150 p.a.
BRITISH PHOSPHATE COMMISSIONERS Aldwych W.C.—A.M.O. (male, unmarried) for Ocean Island Gilbert and Lillie Island Colony Central Pacific Salary £500 p.a.
BRITISH POST GRADUATE MEDICAL SCHOOL Ducane Road W.—Obstetric H.S. Salary £105 p.a.
BURTON-ON-TRENT GENERAL INFIRMARY—H.S. (male) Salary £150 p.a.
BURY INFIRMARY—Third H.S. (male) Salary £150 p.a.
CAMBRIDGE ADDENBROOKE'S HOSPITAL—(1) H.P. (2) H.S. to the Special Departments (3) Resident Anaesthetist and Emergency Officer Males unmarried Salaries £130 p.a. each
CAMBRIDGE BOROUGH—M.O.H. and School M.O. Salary £1000 £50-£1,200 p.a.
CHELSEA GENERAL AND EYE HOSPITALS—H.S. (male) to the Eye, Ear, Nose, and Throat Department Salary £150 p.a.
CHICHESTER ROYAL WEST SUSSEX HOSPITAL—J.H.S. Salary £125 p.a.
COLCHESTER ROYAL EASTERN COUNTIES INSTITUTION FOR THE MENTALLY DEFECTIVE—A.M.O. (male, unmarried) Salary £400 p.a.
CONNAUGHT HOSPITAL Walthamstow E.—(1) Medical Registrar (2) C.O. (male) Salaries £175 p.a. and £100 p.a. respectively
DARLINGTON MEMORIAL HOSPITAL—H.S. (male) Salary £150 p.a.
DERBY COUNTY BOROUGH—(1) A.M.O. Salary £500-£25 £700 p.a. (2) A.R.M.O. (male) for Derby City Hospital Salary £200 p.a.
DEWSBURY COUNTY BOROUGH—Assistant School Dentist Salary £450 p.a.
DORCHESTER DORSET COUNTY HOSPITAL—H.S. (male unmarried) Salary £150 p.a.
DUDLEY GUEST HOSPITAL—Second H.S. (male) Salary £120 p.a.
DURHAM COUNTY COUNCIL—Assistant School M.O. (male) Salary £500-£25 £700 p.a.
EAST HAM AND SOUTHEAST-ON-SEA COUNTY BOROUGH—Assistant Resident P. to Runwell Hospital Salary £350-£25 £450 p.a.
EAST LOTHIAN EAST FORTUNE SANATORIUM—Senior R.M.O. Salary £350 p.a.
EGGON COUNTY COUNCIL AND THURROCK URBAN DISTRICT COUNCIL—Assistant County M.O. and Assistant M.O.H. (female) Salary £500-£25 £700 p.a.
EVELING HOSPITAL FOR Sick CHILDREN Southwark S.E.—H.S. (male) Salary £120 p.a.
EXETER ROYAL DEVON AND EXETER HOSPITAL—H.S. (male) to the Ear, Nose and Throat Department Salary £150 p.a.
GLASGOW EAR NOSE AND THROAT HOSPITAL—Two H.S. Honorariums £50 per six months each
GLASGOW REDLANDS HOSPITAL FOR WOMEN—Two R.M.O. (females) Salaries £50 p.a. each
GREAT BARROW BARROWMORE TUBERCULOSIS SANATORIUM AND SETTLEMENT—H.P. (male) Salary £150 p.a.
GUY'S HOSPITAL S.E.—Two Part-time Clinical Assistants for the Radiology Department Salaries £150 p.a. each
HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.—H.S. (male unmarried) Salary £100 p.a.
HARROGATE CLINICAL LABORATORY—Clinical Pathologist Salary £450-£750 p.a.
HARROGATE ROYAL BATH HOSPITAL—R.M.O. (male) Salary £150 p.a.
HARTLEPOOL HARTLEPOOL HOSPITAL—J.H.S. (male) Salary £150 p.a.
HEMEL HEMSTEAD WEST HEATHS HOSPITAL—J.R.M.O. (male) Salary £120 p.a.
HOSPITAL FOR Sick CHILDREN Great Ormond Street W.C.—H.I. (male) Salary £150 p.a.

ROYAL WATERLOO HOSPITAL FOR WOMEN AND CHILDREN Waterloo Road S.E.—(1) R.C.O. (2) H.P. Males Salaries £150 p.a. and £100 p.a. respectively

ST ALBANS AND MID-HERTS HOSPITAL.—R.H.S. Salary £150 p.a.

ST LEONARDS-ON-SEA BUCHANAN HOSPITAL.—J.H.S. (female) Salary £125 p.a.

ST MARY'S HOSPITAL FOR WOMEN AND CHILDREN Plawton E.—(1) R.H.S. (2) R.H.P. Salaries £155 p.a. and £150 p.a. respectively

SALISBURY GENERAL INFIRMARY.—R.M.O. (male) Salary £200 p.a.

SCARBOROUGH NEW HOSPITAL.—Two H.S. (females) Salaries £130 p.a. each

SEAME'S HOSPITAL SOCIETY Greenwich S.E.—A.M.O. (male unmarried) for King George's Sanatorium for Sailors Liphook Salary £200 p.a.

SHEFFIELD JESSOP HOSPITAL FOR WOMEN.—H.S. (male unmarried) Salary £100 p.a.

SHEFFIELD ROYAL HOSPITAL.—Post on Resident Medical Staff Salary £80-£100 p.a.

SHEFFIELD UNIVERSITY.—Assistant Bacteriologist and Demonstrator Salary £500 p.a.

SURREYBURY ROYAL SALOP INFIRMARY.—R.H.S. (male unmarried) Salary £160 p.a.

SOMERSET COUNTY COUNCIL.—County M.O.H. and School M.O. Salary £1500 p.a.

SOUTHAMPTON ROYAL SOUTH HAVES AND SOUTHAMPTON HOSPITAL Hon. Ophthalmic S.

STOCKTON-ON-TEES STOCKTON AND THORNABY HOSPITAL.—H.P. (male unmarried) Salary £150 p.a.

STOLE-ON-TRENT BURNLEY HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.—R.H.P. Salary £150 p.a.

STOURBRIDGE CORBETT HOSPITAL.—H.S. Salary £100 p.a.

SUNDERLAND ROYAL INFIRMARY.—C.O. Salary £150 p.a.

TURO ROYAL CORNWALL INFIRMARY.—H.S. (male) Salary £110 p.a.

WARRINGTON LIVERPOOL SANATORIUM Delamere Forest.—Senior Assistant (male unmarried) to the Medical Superintendent Salary £350 p.a.

WEST BROMWICH COUNTY BOROUGH.—H.P. (male) to Hallam Hospital Salary £200 p.a.

WESTERN OPHTHALMIC HOSPITAL Marylebone Road N.W.—J.R.H.S. Salary £100 p.a.

WEXMOUTH AND MELCOMBE REGIS BOROUGH.—M.O.H. and School M.O., and M.O. to the Weymouth and Portland Joint Hospital Board Isolation Hospital Salary £800 p.a.

WOLVERHAMPTON ROYAL HOSPITAL.—H.S. Salary £100 p.a.

WORTHING HOSPITAL.—Ophthalmic S.

CERTIFYING FACTORY SURGEONS.—The following vacant appointments are announced Stranraer (Wigtownshire) Beekenhamp Kent) Dorchester (Dorset) Applications to the Chief Inspector of Factories, Home Office Whitehall S.W.1 by April 6.

Notifications of offices vacant in universities, medical colleges and of vacant resident and other appointments at hospitals will be found at pages 50, 51, 52, 53, 54, 55, 56, 57 and 60 of our advertisement columns and advertisements as to partnerships, assistantships and locumtenencies at pages 58 and 59.

BIVING Rev. M.R.C.S. L.R.C.P. Anaesthetist Brighton and
Hove Dental Hospital
DAVIS D. A. F.R.C.S. Medical Referee under the Workmen's
Compensation Act 1925 for the Deal Dover Folkestone and
Hythe County Court Districts (Current No 49)
WELSH National School of Medicine Cardiff - Lecturer in
Anaesthetics J. Hardstaff West M.R.C.S. L.R.C.P. D.A.
Lecturer in Mental Diseases T. J. Hennelly M.D. D.J. I.
Lecturer in Dermatology and Lecturer in Venereal Diseases
(Male) F. R. Betty M.D.
COURTNEY FACTORY SURGEONS - A. C. Edwards M.B. Ch.B. for
the Lilleshall District (Warwickshire) J. V. Mansprie M.B.
Ch.B. for the Lilleshall District (Worcestershire) I. C. Hittler
M.R.C.S. L.R.C.P. for the St. Ives District (Cornwall) H. B.
Muir M.B. Ch.B. for the Auchtermuchty District (Dundee)
J. G. Ward M.B. Ch.B. for the Stairford District (Durham)
P. Campbell M.B. Ch.B. for the Laxi Kilbride District (Lancashire)
J. M. F. Cumming M.B. Ch.B. D.P.H. for the Gb...

was particularly obvious in studying physical development that the original degree of dwarfing was unimportant if a ready increase in height took place when therapy was instituted. The results of treatment over the whole period make it clear that the first two years of treatment were of critical importance, that the entire gain in developmental quotient was accomplished during that time and that the maximum quotient once reached could be maintained indefinitely on thyroid treatment. Although generalizations cannot be founded with confidence on six cases the authors have clearly made a contribution of real clinical value if only in indicating a line for further study and have properly emphasized the importance of a knowledge of behaviour patterns in infancy in the advance of paediatrics.

PREVENTION OF TUBERCULOSIS

King George VI has consented to become Patron and H.R.H. the Duke of Kent President of the National Association for the Prevention of Tuberculosis. It was in 1898 that King Edward VII as Prince of Wales, founded the Association and became its first President. On his accession to the throne he became Patron, and was followed by King George V and King Edward VIII. The Duke of Kent succeeds the Prince of Wales as President. The National Association for the Prevention of Tuberculosis has led and unified voluntary effort against tuberculosis in this country for thirty nine years, instructing public opinion and stimulating public interest in the means of prevention and cure. Its annual conferences are held alternately in London and other centres; it also initiates special inquiries for the study of vital problems. The chairman is Sir Robert Philip who fifty years ago established in Edinburgh the first tuberculosis dispensary in the world. This year's conference will take place from July 1 to 3 in Bristol; the chief subjects for discussion being propaganda and publicity methods, preventive institutions with particular reference to open air schools and equipment and activities of a tuberculosis dispensary. The names of delegates and of private individuals wishing to attend should be sent to the acting secretary-general N.A.P.T. Tavistock House North Tavistock Square W.C.1.

SIZE OF THE PROSTATE

The size, weight and shape of the prostate vary much. Atrophic glands in the adult may weigh as little as 10 grammes and the weight of large hypertrophied glands may be as much as 300. The average weight of the normal adult gland has been stated by various authorities to lie between 20 and 25 grammes. A recent study of the prostate by careful dissection of the specimens taken from 100 consecutive necropsies has been made by M. van Buren Teem¹ working as a Fellow in medicine at the Mayo Foundation at Rochester, Minnesota. The average weight in Teem's series accorded closely with the normal values of 20 to 25 grammes. As the prostates studied had not been a factor in the cause of death the series did not

contain many hypertrophied glands. It was found that in adults atrophic glands (those weighing for example 10 grammes which is the normal weight in a boy aged 12) are usually associated with atrophic testes such as are seen in association with hypopituitarism. An interesting point elicited was the fact that a large prostate may be symptomless; for instance one prostate weighed 139 grammes yet it came from a subject in whom there had been no history of significant genito-urinary symptoms and in whom at the necropsy there was no evidence of urethral obstruction. It would appear that urethral obstruction depends more upon the manner of the enlargement than upon its degree. The author points out that as the prostate enlarges it changes from a rather flattened chestnut shape to one which is more spherical and the chief dimensional alteration is in the antero-posterior measurement or depth of the organ. He has prepared tables by which the weight of the gland may be calculated from its measurement if the antero-posterior side to side and vertical measurements expressed in centimetres are multiplied together and by a factor 0.666 the weight of the gland is obtained with a reasonable degree of accuracy. This formula may prove useful in the post-mortem room since the requisite measurements can be readily made without dissecting out and weighing the gland.

ADVISORY COMMITTEE ON NUTRITION

The first report of the Ministry of Health's Advisory Committee on Nutrition is published to day (H.M. Stationery Office 1s net). The reference to the committee was 'to inquire into the facts quantitative and qualitative in relation to the diet of the people and to report as to any changes therein which appear desirable in the light of modern advances in the knowledge of nutrition'. The chairman is Lord Lute and the medical members are Dr G. F. Buehan, Professor E. P. Cathcart, Dr J. Alison Glover, Dr J. M. Hamill, Sir F. Gowland Hopkins, Dr Donald Hunter, Professor E. Mellanby, Sir John Boyd Orr. The late Mrs. Chalmers Watson M.D. was an original member of the committee and Dr T. W. Wade was added soon after its appointment in May 1935. The present report gives the results of a preliminary survey of the whole field. The committee is very far from having completed its investigations and in several directions has initiated large scale inquiries which are only just beginning. Its purpose now is to outline the nature of the problems and the general picture it has formed of the present position. The report is a document of over 50 pages that does not lend itself to brief summarization and we must therefore defer our descriptive account of it to a later issue merely noting meanwhile the emphasis laid in Part VI on the nutritive value of milk and milk products. 'From the health standpoint there is no other single measure which would do more to improve the health, development and resistance to disease of the rising generation than a largely increased consumption of milk especially by mothers, children and adolescent.'

We deplore the fact that there is a deficiency of milk in the diet of large sections of the population.

ENDOCRINES IN THEORY AND PRACTICE

This article is one of a series on Endocrinology contributed by invitation

THE HORMONE TREATMENT OF SOME DISORDERS OF PREGNANCY

BY

T. N. A. JEFFCOATE, M.D., F.R.C.S. ED.

PART II

Missed Abortion, Carneous Mole, and Intra uterine
Death of the Foetus

These interesting conditions are essentially the same in so far as the ovum or foetus dies but remains *in utero* because the normal stimulus to uterine action is lacking. Oftentimes evacuation of the uterus eventually takes place spontaneously but occasionally weeks or months elapse without there being any sign of the onset of expulsive uterine contractions. In such cases artificial evacuation of the uterus is indicated and it is for this purpose that oestrogenic hormone is useful. The ordinary mediocrinal induction generally fails because the uterus is not sufficiently sensitive to respond. The continued administration of oestrogenic hormone however increases uterine activity to such an extent that even if evacuation does not take place spontaneously the uterine contents are at once expelled when oxytocic drugs are given. The following technique is successful in at least 80 per cent of cases.

Oestradiol benzoate 40 000 international benzoate units (200 000 international units) should be injected intramuscularly every eight hours for eight days (unless evacuation takes place before the elapse of that time). On the fifth day quinine and pituitary induction using the technique outlined previously should be carried out. The administration of oestrus producing hormone should be continued throughout and if the first attempt at mediocrinal induction fails the quinine and pituitary should be repeated as before on the eighth or ninth day. Only on the rare occasions when the uterus fails to respond to this treatment is it necessary to institute operative measures. In actual practice the oestrogenic hormone frequently brings about the desired result without further uterine stimulants being necessary. This is especially true if the pregnancy is far advanced and the foetus has been dead for a relatively short period of time. This form of treatment is of no value for incomplete abortion. In this condition the residual fragments of placenta or membranes are usually adherent to the uterine wall.

Excessive Vomiting and Toxaemia of Pregnancy

For many years past one of the theories of the aetiology of hyperemesis gravidarum has depended upon a supposed defective function on the part of the corpus luteum and acting on this supposition many clinicians have prescribed corpus luteum tablets for this distressing complaint. The impotence of such tablets from the hormonal standpoint has already been emphasized. Since the theory on which the treatment is based has never been substantiated by pathological evidence the administration of even standardized preparations of progesterin is not recommended as a means of controlling pernicious vomiting.

It has recently been suggested that in cases of pregnancy toxaemia there is a relatively excessive amount of prolactin and a deficiency of oestrin in the urine. In view of this the administration of oestrogenic hormone for toxaemia of pregnancy is already advocated in commercial literature. The evidence upon which this view of the pathogenesis of toxaemia is based is flimsy and unconvincing and this form of organotherapy is not advised.

Uterine Inertia

USE OF OESTROGENIC HORMONES

Since the activity of a uterus is primarily dependent on the effect of oestrin many cases of uterine inertia in labour are probably due to a defective supply of this hormone. This suggestion is conjectural since it has never been confirmed or disproved by hormonal estimations. The deficiency in oestrogenic factors is not necessarily absolute but may be relative. In other words they may be present but in an inactive state in the blood stream. This theory has led to a trial of oestrogenic hormone therapy for uterine inertia. Most writers report poor results—on a very small series of cases. In my experience the results are variable some disappointing and others remarkably good. This is to be expected in view of the numerous and widely different possible causes of defective uterine action. No definite subdivision of cases is yet possible but it would appear that the results are poor if the inertia is due to emotional influences, local lesions of the uterus, disproportion or malpresentations. Moreover the injection of oestrogenic hormone rarely evokes a response in the presence of conditions such as occipito-posterior position in which slow dilatation of the cervix and weak contractions in the early stages of labour are beneficial to the patient and the inertia is physiological in type.

Primary inertia is more amenable to this treatment than is secondary and 50 per cent of all cases of uterine

size that this form of therapy is at present on trial only it has, however, the great advantage of being free from all the dangers that are associated with the administration of other oxytocic substances, and no harm to either mother or child can follow its use. The occasional good results justify its extended employment. Here again hormone therapy should not replace the more established methods of treatment; it should be regarded as additional treatment and should be given when the patient has been rested and refreshed by the use of morphine, which still remains the first and best line of attack in uterine inertia.

From what has been said it is clear that oestrogenic hormone therapy also opens up new possibilities with regard to prophylaxis against inertia. It may prove even more valuable in this respect. When the history of inertia in previous labours or the detection of an atonic uterus ante natus makes the expulsive capacity of a uterus suspect, 20,000 international benzoate units (100,000 international units) of oestrin should be injected intramuscularly twice daily for two or three weeks before the expected date of delivery.

USE OF POSTERIOR PITUITARY HORMONE

As prophylaxis against inertia 5 units of posterior pituitary should be injected twice daily for two weeks before the expected onset of labour, this treatment is attended with happy results and is devoid of risk. But when labour has started and inertia is established the administration of this hormone requires the utmost caution. The effect of even small doses may be so pronounced that the uterus cervix, or other soft maternal tissues may be ruptured; moreover the foetus is likely to die from interference to the placental circulation. Only when the position of the foetus is normal and when the presence of even mild disproportion is excluded should the use of posterior pituitary extract be contemplated. Its application is occasionally indicated for patients suffering from accidental ante partum haemorrhage complicated by defective uterine action. The dose should never exceed 2 units initially and after its injection the medical attendant should remain with the patient until delivery is complete.

Only rarely is the use of such a powerful oxytocic substance required and its margin of safety is so small that many obstetricians are coming to regard its employment during labour as unjustified in all circumstances. It is, however, stated that its dangers are somewhat decreased if it is applied intranasally rather than parenterally.

Post-partum Haemorrhage

During the third stage of labour the injection of pituitary extract is dangerous because of its propensity for producing hour glass contraction of the uterus; it should never be used for third stage haemorrhage nor to hasten placental separation. But for bleeding occurring after delivery of the placenta this hormone is a life saving principle and its administration should never be neglected. The intragluteal injection of 5 or 10 units is as a rule sufficient but 2 units intravenously or 5 units into the uterine muscle (via the abdominal wall) exert a more rapid and certain oxytocic effect and should be given when control of the haemorrhage is difficult or delayed.

Delayed Involution

When after abortion or labour involution is slow and the lochia profuse and particularly if there is reason to suspect the retention of blood clot or small pieces of membrane in the uterus 5 units of posterior pituitary extract should be injected intramuscularly twice daily for a few days.

Tonic Uterine Contraction

Tonic uterine contraction may involve the whole of the upper segment, as in obstructed labour or on the other hand, it may affect a strictly localized area of one or other segment of the uterus and appear in the form of a contraction ring. These serious obstetrical complications demand the immediate institution of measures designed to relieve spasm and to reduce uterine tone. Morphine and general anaesthesia do not always have the desired effect, and now that it is claimed that progesterin when given in large doses quickly exercises an inhibitory action upon the human uterus (puerperal), this hormone should be tried in such conditions. So far I have failed to influence the uterine contractions of normal parturition with large doses of progesterin (20 international units), but this does not necessarily mean that pathological uterine spasm will not respond favourably to such treatment.

Another endocrinous preparation sometimes advised for tonic uterine contraction is 5 minims of adrenaline hydrochloride 1 in 1,000. The internal secretion of the suprarenal has very varied effects on uterine muscle and whereas in some patients it temporarily suppresses contractions in others it produces an opposite response. This treatment is therefore of small value.

The Relief of "After-pains"

Uterine contractions during the first week after delivery are, on occasion so painful as to cause the patient considerable distress. It is reported that 1 rabbit unit of progesterin by inhibiting the uterus, relieves such pain within fifteen minutes in nearly 90 per cent of cases. It is, moreover, rarely necessary to repeat the injection. I have no personal experience of this use of progesterin, and it is extremely doubtful whether it is wise to allay muscle contractions whose purpose is to expel blood clot and necrotic shreds of decidua and membrane from the uterine cavity. Such contractions are essentially protective in character and should be encouraged rather than suppressed, the injection of 0.5 ccm of posterior pituitary extract frequently relieves after pains since it replaces irregular uterine spasm by rhythmical strong contractions.

Disorders of Lactation

Although breast development is brought about by oestrogenic and corpus luteum hormones the secretion of milk can only be effected through the agency of the anterior lobe of the pituitary—by a special hormone designated prolactin. This hormone has been given to patients in whom the supply of milk was deficient; the dose so far recommended on empirical grounds is 150 bird units followed by 100 bird units in twelve to twenty four hours. Although the rationale of this method is sound the reported results are so far discordant and the usefulness of the hormone in this sphere is at present unproved.

The oestrogenic hormone, while stimulating breast development inhibits the secretion of milk by its action on the pituitary gland. Hence in patients in whom lactation is not desirable the discomfort of engorged and painful breasts is theoretically avoidable by injections of oestrogenic hormone. The dose advised is 10,000 international benzoate units (50,000 international unit) of oestrogenic hormone on three successive days beginning as early as possible after delivery. Although good results are reported for this form of organotherapy I have failed to notice beneficial effects with this dosage. Possibly larger amounts of hormone continued for a longer period and followed eventually by a gradual reduction in the oestrin supply would be more efficacious. Such a technique has a more scientific basis. It is however of no

to question whether the discomfort of repeated intramuscular injections is preferable to the pain of engorged breasts especially since the latter is of short duration and may readily be relieved by other well recognized methods of treatment.

Dangers of Hormone Therapy

So far as is known at present the administration for short periods of time of the largest doses of oestrogenic, corpus luteum, and gonadotropic hormones is free from risk. But posterior pituitary extracts differ from preparations of the other hormones in that they are extremely dangerous unless prescribed with caution. The possibility of the production of ruptured uterus and tonic uterine contraction by means of these agents has already been discussed. In addition it should be remembered that most extracts contain a vasopressor factor and their employment is therefore contraindicated in patients suffering from cardiac disease or toxæmia of pregnancy. Cases are recorded in which the onset of eclamptic fits appears to have been due to such preparations. Moreover some patients show an idiosyncrasy to pituitary extract and after receiving it may collapse and present the signs of so-called 'pituitrin shock'. If this occurs in a patient already suffering from loss of blood the issue may be fatal. It is probable that many cases of obstetric shock would be more correctly diagnosed 'pituitrin shock'.

In view of the above disadvantages and dangers many authorities now advise the use of the isolated oxytocic fraction of the posterior pituitary lobe (for example pitocin Parke Davis and Co) rather than preparations containing both oxytocic and vasopressor factors. Pitocin possesses a further advantage since its administration does not produce a refractory phase in the uterus, whereas injections of extracts such as pituitrin render the uterus incapable of responding to a second application of the same substance until half to one hour has elapsed. Nevertheless pitocin is equally dangerous when given in labour although it has a less powerful oxytocic action than have the 'mixed' extracts of the posterior hypophysis.

Conclusion

The value and limitations of posterior pituitary hormone therapy are clearly defined, but it is difficult to assess the merit of other forms of organotherapy in the obscure functional disorders of gestation. Any experiments or results must of necessity be uncontrolled and only by the collection of large numbers of cases can an estimate of the worth of any particular method be made. Nevertheless progress is being made and already hormones are proving of definite clinical value in some of the conditions mentioned. Their use however is strictly limited and must always be guided by scientific principles: the prescription of hormones empirically or with a faulty technique merely brings organotherapy into disrepute. Moreover the therapeutic application of endocrinology is still handicapped by the expense of most preparations and by the lack of accurate knowledge regarding the absorption, utilization, inactivation, destruction and excretion of the hormones in question.

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SCIENTIFIC RESEARCH IN INDUSTRY A YEAR'S WORK

The Advisory Council of the Department of Scientific and Industrial Research, of which Lord Rutherford is chairman, directs attention in the Department's annual report (Cmd. 5350 H.M. Stationery Office 3s.) to important developments in the outlook of industry in this country. The last five years have witnessed the fruition of the policy adopted by several large industrial undertakings of setting well balanced teams of research workers including chemists, physicians, engineers, and where necessary biologists to solve a particular problem to develop a new product. The future the report continues, no longer lies with industries content to make sporadic advances at the call of the brilliant individualist; co-operation, team work, and an extensive organization on the technical side are essential for success. For this reason the Department attaches great importance to the development of the co-operative research associations formed under the scheme launched in the early days of its existence.

Savings in the Milk Industry

Valuable work is being done by the Department with its co-operation of the Milk Marketing Board on the purification of waste waters and effluents from milk depots, creameries, and condensed milk factories. Two different methods have been worked out and shown to be successful on a large scale by which the polluting character of milk washings can be reduced by 99 to 97 per cent respectively. Investigations have also drawn attention to the losses of milk, cream, whey, etc. carried away in the waste waters. It has been shown that the waste from this cause can be reduced by nearly three million gallons a year. At the low wholesale price of 5d a gallon for milk for manufacturing purposes this means a saving of about £50,000 a year to the industry. Five per cent of the total quantities of by-products—whey, skimmed milk, etc.—is frequently lost at present in the waste waters. This loss can be reduced to about 2 per cent. The suggestions put forward for reducing these wastes have already been adopted at several factories.

Storage of Food

At the Low Temperature Station, Cambridge, the effect of radiation from radio-active substances in destroying bacteria is being studied in connexion with the storage of meat. Methods of storing eggs in different concentrations of carbon dioxide are being tried out on a large scale. A high concentration of say 60 per cent prevents attack by mould and gives an excellent yolk but a very fluid white. Experiments have been made on the 'gas storage' of pears. British pears have been stored in refrigerated chambers with the atmosphere

the right amount (0.1 to 0.15 per cent) of sodium carbonate. The storage of flour is being studied by the Flour Millers Research Association. It has been found that during storage the bacteria content diminishes to a small value while the fungi content rises to very high values.

Better-fitting Boots and Shoes

The outstanding development in the work of the Boot and Shoe Research Association has been the start of what is called for brevity walking research. Most people have suffered from shoes which seemed to fit all right in the shop but after being worn some time have developed uncomfortable creases and folds which pressed on the foot and caused the growth of corns and other troubles. In order to present manufacturers with the means for designing better fitting shoes the Research Association is making careful records of the way in which people walk. A moving platform or treadmill is used on which a person can walk without moving away from a particular point. While walking thus a cinematograph record is made of the movements of the foot and this is afterwards analysed. Records are also being made by electrical thermometers of the skin temperature of the feet when wearing different types of shoes. The gaits of various individuals and the effect of different kinds of shoe upon them are also being investigated and records are being obtained which show the period of contact with the ground of the several parts of the foot. The results suggest that some shoes are much more likely to interfere with the normal gait than others and this is throwing light upon correct shoe design and construction.

Health and Hospitals

Many of the activities of the Department have a more or less direct connexion with public health. Besides an investigation on the problems of sound proof buildings tests have been carried out at the National Physical Laboratory with a view to the reduction of noise from aircraft engines, large electrical transformers, road drills and traffic. An investigation has also been begun on the production of static electrification in operating theatres of hospitals. Some of the anaesthetics in common use are of an explosive character and the possibility of the production of electrostatic charges and the risk of their ignition by sparking is one which cannot be neglected. At the request of the Home Office a preliminary examination has also been undertaken of the risk of ignition of sparks due to static electrification in dry-cleaning works. Methods for detecting in the atmosphere small quantities of poisonous gases commonly occurring in certain industrial processes have been worked out.

Researches for the Dental Board on dental amalgams have been completed during the year. The results show that the composition of the alloy used in making the amalgam must lie within very narrow limits if the dentist is to produce fillings which will continue to fill cavities without contraction. The precautions which must be observed by the dentist in preparing the amalgam have also been established. The conditions both of manufacture and use of materials for amalgam fillings have been determined as the result of an extended series of experiments in which the changes of volume at mouth temperatures have been measured sometimes over long periods.

Interesting physical work has been carried out in connexion with radium treatment of diseases under the auspices of the Radium Beam Therapy Research Board. The strength of the radiations from a specially designed radium unit with which various radium "skin distances" can be obtained have been measured in a water phantom, a celluloid vessel containing water and giving the same scattering and absorption effects as a human body. By co-operation between the medical staff and physicists means have been developed for accurately measuring and controlling tissue dosage. Another investigation is in progress on the weak radiations which may reach distant parts of a patient's body during treatment. These radiations it is believed may be of importance in constitutional effects of radium treatment—for example blood changes and general health. The method used is to measure the electricity produced (ionization) in air gaps in a laminated celluloid model of the body.

HEARING AND SPEECH IN DEAF CHILDREN

Dr Phyllis Kerridge's Report

The Medical Research Council has just issued a report on the hearing and speech in deaf children which is without doubt one of the most important and valuable contributions on the subject yet made in this country. The author is Dr Phyllis M. T. Kerridge of the physiological department of University College London. Dr Kerridge, in co-operation with Dr A. G. Wells has conducted investigations in the special schools for children with defective hearing in London at which between 500 and 600 day and residential pupils are educated. With a school population of this size consisting of children with a wide variety of hearing defects unusual facilities are offered for an investigation of this kind and Dr Kerridge has made the most of her opportunities. Nearly half the children were born deaf. Roughly two thirds of the cases of acquired deafness—usually incurred before school age—were due to middle-ear disease, which in about half the cases was a complication of a specific fever, generally measles or scarlet fever.

Methods of Testing

In an exhaustive account of the various methods of testing hearing Dr Kerridge shows that there is a difference of about 20 db (decibels) between the zero of the pure-tone and gramophone audiometers over the speech area—that is a reading of 30 db loss of hearing when tested with the gramophone audiometer is equivalent to one of 50 db with the pure tone audiometer. She disposes of the objection put forward that in testing by air conduction with the pure tone audiometer the sound is conveyed to the inner ear partly by bone by using a cap of spongy rubber to cover the periphery of the receiver so that no transfer of sound by bone could occur, further by testing with and without the rubber cap there was no difference in the results. Attention is drawn to the fact that a pure tone audiometric test gives a very good indication of the type and the cause of the deafness. Four main types of audiometric curve are considered. That one pathological process can be associated with more than one type of curve is proved by the study of those children with different types of curve for the two ears. Measurements of hearing in normal children with the pure tone audiometer gave no indication that the zero lines of the audiometer for either air or bone conduction were inapplicable to children. These results showed the limits of individual variation as 20 db for air conduction, and 20-40 db according to pitch for bone conduction. The relationship of speech to deafness and other factors is dealt with. Dr Kerridge found only 3 per cent of the children with no detectable hearing at any pitch.

The Use of Magnified Sound

Part II of the report deals with an experiment with magnified sounds carried out in co-operation with Dr A. G. Wells. Magnified sound has been employed both in this country and abroad for some years in the education of the deaf but the important thing in this experiment was that an attempt was made to assess the benefit obtained by a certain number of children, particularly in the production of normal sounding speech. Accordingly an experimental class was arranged in each of the special schools. Each class was divided into two groups of children, one being referred to as experimental (those children using sound magnification), and the other as control (those not using sound magnification). Each experimental child was matched as nearly as possible with a control child. The teachers were told that the method of education of the class for a year was to differ from the usual only in that

Hearing and Speech in Deaf Children. By Phyllis M. T. Kerridge. Med. Res. Coun. Spec. Rep. No. 221. H.M. Stationery Office. (2s.)

the experimental children should be allowed to hear as far as they were able to do so with the instrument provided while the control children should not. No special tuition was to be given to the experimental children either in speech training or in interpretation of what was heard. The experimental children would doubtless have profited much more had they had the help of special tuition especially as to many the experience of hearing was almost or entirely new but the benefit would then have been impossible to assess for special tuition alone even by ordinary methods would have produced a benefit against which there would have been no standard.

Since under the rules of the experiment little or no individual work was done by any child of either group any resulting benefit from the experiment has been a minimal one because of the restrictions. The experimental period was one year and the instrument used was the group hearing aid made by the Multitone Electric Company. Gramophone recordings were taken of each child's speech at the beginning and at the end of the year by the Marguerite Sound Studios using the cellulose acetate process. The results of the experiment showed that (1) twenty-one children (44 per cent) had profited from the use of the amplifier considerably and in many ways (2) nine children (19 per cent) had gained some benefit mainly in improved speech (3) twelve children (24.5 per cent) had been able to appreciate rhythm in speech but nothing else (4) six children (12.5 per cent) had not benefited at all. The improvements in speech were confirmed by the gramophone records.

While nearly half the experimental and control children made equal progress in general school subjects during the year about three times as many of the experimental children made more educational progress than their control partners. Further it was estimated that about three-quarters of the children in the London schools for the deaf would benefit at least in speech from the educational use of sound amplifiers and many of them in several other ways as well.

WORLD CONGRESS ON MENTAL HYGIENE

We are asked to announce that the second World Congress on Mental Hygiene will take place in Paris from Monday July 19 to Friday July 23 1937 under the auspices of the French League for Mental Hygiene. Scientific sessions will be held in the morning and afternoon and a number of visits to mental institutions clinics etc. are being organized as well as tours before and after the meeting. The first World Congress took place at Washington in 1930 and the date for the second has been fixed so as to coincide with the Paris International Exhibition.

As attendance is not limited to members of particular organizations or official delegates but is open to all interested in mental hygiene it is earnestly hoped that members of the medical profession in this country will participate in a congress at which a large number of subjects within the wide field of mental hygiene will be discussed. The enrolment fee for medical members is 125 fr (25s). Copies of the preliminary programme and all particulars may be obtained on application to the Secretary the National Council for Mental Hygiene 76-77 Chandos House Palmer Street London S.W.1 with whom registrations for the Congress should be placed as early as possible.

In view of the attention which is being devoted by local authorities to the education of the blind from London the Council of the Royal Sanitary Institute has arranged courses of training in the work of disinfection. These courses are intended more particularly for sanitary inspectors and for men employed at disinfection centres. They will be on May 18 and June 7 respectively. Full particulars can be obtained from the Secretary Royal Sanitary Institute 90 Buckingham Palace Road S.W.1.

Reports of Societies

ORAL INFECTIONS

At a meeting of the Section of Odontology of the Royal Society of Medicine on March 19 Mr WARWICK JAMES presiding Dr E. WILFRED FISH discussed the clinical significance of oral infection the situation and spread of the infecting organisms and of their toxic products in pyorrhoea ulcerative stomatitis and caries in relation to the effect of these diseases on the general health. Owing to the wide nature of the subject and the fact that at the same meeting three cases of osteomyelitis of the jaw were brought forward he confined himself mainly to osteomyelitis.

Dr Fish said that his purpose was to review in the light of recent findings the immediate effect of the organisms which inhabited the paradental sulcus. Pyorrhoea as the name suggested was a chronic suppurative inflammation of the marginal tissues of the gum and in an established case was characterized by a paradental surface ulcerated and lined with granulation tissue on which a degenerated epithelium grew or wilted as a scanty remnant. He drew attention to the tendency of the horny epithelium to split at the point where it was joined by Nasmith's membrane the cleft of the unmineralized nail of the monkey showed exactly the same splitting with the invagination of keratin between the point where the horny layer of the skin joined the horny layer of the nail. Sometimes two teeth seemed to share the Nasmith membrane between them but the interdental space between the two was entirely filled with tissue which precluded both pyorrhoea and caries from developing in that area. There was always however some indication of the constant trauma to which the gum margin was subjected. If the pocket was shallow abrasion often amounting to actual ulceration was produced at the edge of the gum on the spot where the masticatory stress fell. As time went on the surface of dead cementum inside the pocket became covered with fibrin and bled in a serous exudate in which organisms lived and multiplied so that there was a continuous toxic irritation of the ulcerated surface inside the pocket which prevented healing. The organisms were prevented from actually growing into the tissue by the leucocytes but there was a necrotic refractory mass of which the tissues could not rid themselves and this mass formed a refuge for germ. Dr Fish compared the pathology of pyorrhoea with that of bone necrosis and sequestration. In each case an infected sequestrum was surrounded by a non-infected area of bone absorption which was caused by toxic diffusion.

Bone Absorption and Fibrous Tissue Organization

Perhaps the best way to appreciate the condition of the bone was to consider the sequence of events when the bone itself was actually infected by the organism. The sequestrum infected with organisms formed the centre of an area of widespread bone absorption. When a tooth was extracted organisms might be propelled into the vessels of the bone forming the socket. The trauma of extraction broke the bone and in so doing excluded the vessels and imprisoned the organisms. The organisms made the best of this piece of good fortune and they were no longer in danger of attack from the leucocytes and they increased enormously eating every fibre of tissue and from this focus they spread in all directions. The leucocytes hurried to the spot the polymorphs never being able to gain their first and foremost objective a cell actively as possible. The leucocytes at first delayed the spreading of the organism which was imprisoned for the moment but the stream of new tissue from the sequestrum according to the

books there were two ways in which bone could be absorbed, one by the action of osteoclasts and the other by what was called vascular absorption, but there did not appear to be any evidence of this latter, and, the theory was perhaps devised because it was not often that osteoclasts were seen at work.

Bone in a chronically irritated condition could show a large number of Howship's lacunae. If the irritation became too severe the osteoclasts broke up and were replaced by round cells. Observations on chronic inflammatory reactions in connective tissue suggested the following course of events during the invasion streptococci attempting to enter the tissues were met by a wall of polymorphonuclear leucocytes, while the toxic matter diffusing into the surrounding tissues was countered by a round-celled infiltration. When repair set in wandering cells ate the soft tissue debris and the fibroblasts were stimulated to produce scar tissue. In the same way osteoclasts which were formed in response to toxic irritation ate the contaminated bone, while, if the irritant became diluted, osteoblasts were stimulated to lay down new bone and produce sclerosis. The sequence of events in osteomyelitis was therefore fairly clear. The organisms being trapped in the damaged bone in the socket the surrounding matrix became contaminated by the soluble toxic products of those organisms which diffused into it along the lymphatics. The presence of these toxic products which diffused out from the sequestrum into the surrounding bone stimulated the production of osteoclasts at an appropriate distance from the infection and these immediately started to eat away a certain amount of the bone surrounding the sequestrum. It became a question whether the osteoclasts could eat away the bone around the sequestrum before the infection reached the same point. If the osteoclasts succeeded, then they formed a gap between the infected and uninfected bone, which gap would be filled with leucocytes, though the toxic products of the organisms continued to spread. It was important to remember that though the infecting organisms became localized toxic material still diffused from them into the surrounding tissues.

Effect on General Health

The danger to the patient's health was first from the bacteria showered into the blood stream on, for example, extraction of teeth. Normally this transient bacteraemia disappeared very rapidly and did no harm, but there were exceptions. The organisms might become implanted on the heart valve, causing an infective endocarditis. If possible no tooth should be extracted while fibrinous vegetations were still present. The extraction of any dead tooth was still a grave danger even if the pocket had been cauterized. It should only be removed if an acute abscess formed causing severe pain. If a patient with acute non-infective endocarditis had advanced pyorrhoea with sloughing granulations around the gum margin he was in very grave danger even if no surgical interference took place. It was really a choice of evils.

Gingivectomy followed by sound keratinization limited the infection and prevented toxic absorption as effectively as extraction. But gingivectomy, while curing the pyorrhoea, might cause a bacterial shower, in one case out of four that had been found to occur. Another danger from a bacterial shower was that during the few minutes or possibly hours that the organisms were circulating in the blood the individual might bruise a bone and imprison some bacteria in the clot. If this happened there was nothing to prevent them from growing and setting up an osteomyelitis. Apparently the only other possible danger was that these organisms temporarily in the blood stream might find a home in the joints and ends of the bones, thereby producing an arthritis. Theoretically the bacteraemia of pyorrhoea was only a danger in the case of subacute or acute infective endocarditis or in the case of a healthy person who happened

to bruise a bone when the organisms were present in the vessels at the point of such injury. The clinical instance of 'dry socket' was evidence of this, since it occurred only when the bone was badly bruised. The chronic toxic absorption into the tissues was however a much more constant menace. The radiographic demonstration of local tissue destruction was a useful indication that absorption was taking place. Patients varied in their sensitivity to such toxic matter. Certain obvious indications for thorough eradication of doubtful or possible sources of toxic absorption were afforded of which derangement of liver or kidney was perhaps the most certain. In pharyngitis and gastro-intestinal disease the danger of swallowing irritating discharges must not be overlooked. It was very important when called upon to eliminate toxic absorption in the tissues to eradicate it completely, and not merely carry out an isolated dramatic operation.

Dr J WALLACE GRAHAM gave a preliminary report on the toxicity of sterile filtrate from paradontal pockets: the effect of immediate injection into experimental animals of the contents of such pockets having been investigated, and Professor H F HUMPHREYS discussed three contrasting cases of osteomyelitis in the jaw, all of which happened to be under treatment at about the same time. One was a very chronic osteomyelitis in the edentulous upper jaw of a middle aged woman, another a subacute osteomyelitis of the mandible in a boy of 12, and the third an acute osteomyelitis of the mandible following extraction under local anaesthesia of the first lower molar in which intense suppuration spread along the outer surface of the mandible from angle to to angle, followed by death in three weeks from septic pneumonia and cavernous sinus thrombosis.

SPA TREATMENT IN GYNAECOLOGY

The Section of Physical Medicine and the Section of Obstetrics and Gynaecology of the Royal Society of Medicine combined on March 19, with Dr GEOFFREY HOLMES in the chair for a discussion on physical treatment of pelvic disorders in women. Electrotherapy was expressly excluded.

Dr MURIEL KEYES of Harrogate opened with a description of general and local treatment at a spa, and gave a long list of ailments which benefited more or less from spa treatment sometimes in association with other measures. She insisted on the need for care in the selection of cases, especially with a view to excluding early malignancy. It was better to refer many cases back for independent examination by a surgeon or gynaecologist than to overlook one such case and accept it for spa treatment. In spa gynaecology a wide clinical experience kept continually alive by special hospital experience, combined with an honest mind and meticulous care in examination was absolutely necessary. Spa therapy in gynaecology was made much use of on the Continent. British spas were inadequate for this purpose but the fact needed wider announcement.

Dr LEONARD BOYES of Woodhall Spa said that in functional cases the giving of bromo-iodine baths and waters such as Woodhall possessed with dietetic control should prove helpful. Conditions successfully treated had included pelvic cellulitis, subinvolution and sterility due to congestion of the uterus. Spa treatment was useful as a preparation for operative measures. Many a case of fibroids, toxic from constipation and exhausted from haemorrhage, had been made a far better operative risk and given an easier recovery from operation as the result of a course of spa treatment.

Physical Treatments

Professor DANIEL DOUGAL said that physical treatment had been an accepted method in gynaecology right up to

the beginning of the modern surgical era. Since then its popularity had declined. This was not due to bias on the part of those who practised gynaecology but rather to the fact that it failed to produce results in any way comparable to those obtained to-day by surgical methods. That being so, it would be a retrograde step to recommend physical treatment for conditions which they knew could better be treated by surgical operation. There were however many conditions for which surgery was unsuitable or insufficient and in many of these physical treatment gave excellent results and should be employed as a routine whenever possible. The physiotherapist should realize that his position was ancillary and should only treat those cases referred to him by a gynaecologist and that rule should be applied not only to the physiotherapist who specialized in gynaecology but to the gynaecologist who specialized in physiotherapy. Physical treatment might operate by stimulating metabolism or by acting directly on diseased structures, the former method was much more valuable in gynaecology, the latter had a very limited application. He agreed that in every case of disturbed function the general health should be the first consideration and all possible measures be taken to restore it to normal. Although the reproductive function was controlled by the anterior pituitary and ovarian hormones it was still true that the general health was all important. Again gymnastic exercises which strengthened the muscles of the pelvic floor were a useful prophylactic measure in reducing the incidence of prolapse. Uncomplicated backward displacements of the uterus generally produced no symptoms whatever, but when they did he thought it a better and quicker method of treatment to operate on them. In the field of infection physical methods might be most usefully employed. Acute and subacute infections of the lower genital tract could be treated expectantly. On the other hand, pelvic infections required more active treatment. Acute salpingitis was now treated expectantly. As active surgical treatment resulted in a very much higher mortality and also interfered with the complete recovery of the diseased structures which might be expected to occur in a large percentage of these cases. Physical methods were of no value as a curative measure in the treatment of uterine fibroids and might even be harmful in delaying necessary surgical treatment. The surgical treatment of these tumours was so successful that it was a great mistake to depart from present practice and adopt methods which it best were only palliative. As for physical treatment before and after operation no doubt many patients would be better surgical risks if they received a course of spa treatment before operation but it was doubtful whether the slight improvement in the results would compensate for the delay. The average patient who had undergone a major operation returned home at the end of three weeks and was then placed under the care of the family doctor and instructed to take things easily for another month or so. He was sure that in intermediate period if a spa hospital would be beneficial if treatment were so planned that it hastened the patient's convalescence and did not actually prolong it.

Benefits and Dangers of Spa Treatment

Dr J D BARRIS said that obstetricians and gynaecologists did appreciate the value of spa treatment in certain of their cases. They advised many patients suffering from minor pelvic disorders to take a course of treatment at a spa, preferably British. But the object in sending them there was on account of the beneficial effects upon their general health rather than the specific effect upon their local condition. Co-operation between the physiotherapist and the gynaecologist was essential. All patients should first be seen by a gynaecologist in order to establish the diagnosis, to make sure that no serious pelvic lesion had been overlooked and no need for surgical treatment delayed. He considered that the functional side of dysmenorrhoea was quite unexplored. The patient was usually

a young woman who was perfectly well between her periods. It was essential to her recovery that she should be encouraged to lead a normal life that her mind should be taken away from her pelvis and that she should not regard herself as an invalid whereas the atmosphere of a spa would tend to suggest to her that she was. Nor was all dysmenorrhoea functional. It might be due to tumours of the uterus or other causes for which surgical or radio logical treatment gave the best results. Patients undergoing the menopause again were unsuitable for spa treatment for they, too were best helped by being encouraged to live a normal life. In cases of pelvic inflammation, not of an acute nature with no pus present local heat or spa treatment did good. In cases showing pelvic pain and no definite physical signs the type of patient must be chosen carefully for physical methods. Sometimes the pain in these patients was nothing but a psychological barrier raised by them to escape their duties and to send them for spa treatment did not really help them in the long run.

General Discussion

A French visitor Dr MOURGOT gave some account of the virtues of French spa waters, and in particular of a device for facilitating the absorption of natural gases through the skin a method he had used for the treatment of circulatory disorders and which he thought applicable to some gynaecological conditions. Dr CLIFFORD WHITT agreed that spa treatment did seem to stimulate the hormone secretion and alter the menstrual rhythm. But when Dr KEVES spoke about endometritis as suitable for spa treatment he was completely lost because endometritis could not be diagnosed until a section was taken. He would never think of advising surgery for a patient who merely complained of odd pains in the pelvis but with a definitely enlarged tender ovary, he was inclined to suspect some pathological condition which could be demonstrated under the microscope and one not likely to be benefited by general methods.

Dr S K. WESTMANN said that in addition to the use of spas and waters there was another more recently applied form of physiotherapy—namely physical exercises with or without spa treatment—which was worthy of consideration. This helped to conserve the elasticity of the muscles of the pelvic floor. But before any physical treatment was recommended a most careful gynaecological examination must be carried out for both spa treatment and physical exercises were strong stimulants which might rightly be compared with a dangerous drug. Sir COMYN BELLER said that on hearing the long list of diseased conditions which the opener had said could be alleviated by spa treatment he rather felt that he must have done great numbers of operations unnecessarily.

Dr GEOFFREY HOLMES said that as a spa practitioner he was interested in what was evidently a general impression amongst gynaecologists as to the danger of the spa complex. But the whole of the psychological atmosphere of a spa was designed to counteract the adverse influences and dangers mentioned. As to the possibility of serious pelvic disease being overlooked he could assure them that many people went to spas without seeing a gynaecologist and it was at the spa that it was discovered that they had serious pelvic disorders. He saw many women with commencing arthritis in the decade of the menopause and he was personally satisfied that there was a clinical entity which might be described as menopausal arthritis and that of all the forms of arthritis at spas none responded better to spa treatment. Dr MURIEL KEVES in replying to the discussion, said that it was quite a wrong impression that people at spas were taught how to be ill. On the contrary they got a little holiday and were taught how to live and how to rest. It had been said that the young dysmenorrhoeic patient should not be sent to a spa. If she was toxic and constipated and spa treatment did her good perhaps best of all it got her away from her mother.

PATHOLOGY OF CRIMINAL ABORTION

At a meeting of the Liverpool Medical Institution on March 11, with Mr R KENNON in the chair Dr W H GRACE read a paper on the pathological aspects of criminal abortion

After briefly reviewing the historical references to the subject, Dr Grace quoted the sections of the Offences Against the Person Act which were involved and noted that only the word miscarriage was used meaning the emptying of the uterus at any stage of the pregnancy that there was no attempt to define the word unlawfully or to define lawful emptying of the uterus and that there was no difference in the nature of the crime if the uterus did not contain the products of conception. Death due to criminal abortion was usually one of two types (1) a quick death—usually occurring within half an hour of the abortion and caused often by shock, and more rarely by air embolism, and (2) a lingering process varying from a matter of days to weeks or more in which death was due to sepsis

Methods of Procuring Abortion

The methods of procuring criminal abortion were next considered under the following headings (1) violence applied generally—including rolling downstairs kneading or compressing the abdomen, etc., (2) internal administration of drugs—here the speaker made the following observation: There is no drug and no combination of drugs which, when taken by the mouth will cause a healthy uterus to empty itself unless it be given in doses sufficiently large to endanger seriously, by poisoning, the life of the woman who takes it, (3) mechanical injuries to the uterus and its contents—this section was subdivided into (a) direct violence, including the use of uterine sounds, catheters, wire, pieces of wood, umbrella ribs, hairpins, penholders, etc., and (b) injection of fluids—soap solutions and sodium bicarbonate, for example. Dr Grace described his method of examination in cases of suspected criminal abortion, emphasizing the importance of keeping all objects and organs which might be used as evidence, and concluded his paper by referring to the subject of dying declarations and the method of ensuring their legality

General Discussion

In the discussion which followed, Dr E CRONIN LOWE mentioned the difficulty often met with in those cases in which death had ensued from self attempted abortion. Often there was no evidence of damage to uterus cervix or vagina and death had apparently resulted from shock associated with the psychological disturbances of apprehension and fear. The need to follow Dr Grace's advice as to collecting any fluid in the vagina was important, as this might in certain cases give the only evidence available of attempted interference. He asked Dr Grace if he had observed the tendency to septic infection to occur more often in the right broad ligament in those cases of death from sepsis, even although little or no evidence of damage to the uterus itself was found. He quoted two recent cases in which these findings were present and although in neither of them could criminal interference be proved yet in both suspicion was very strong and he suggested that it was a point worth remembering that right sided pelvic infection in such cases suggested interference by some mechanical means and probably carried out by someone other than the deceased

Dr W A MACRAY, referring to the possible association of right sided lesions with interference said that this had been suggested by the occurrence of two somewhat similar cases where there had been a lesion in the right broad ligament and where attempted abortion had been suspected. In the first, the occurrence of a rigor soon after bimanual examination led to surgical exploration. Removal of a great part of the thrombosed broad ligament and drainage was followed by recovery. In

the second case the patient was too ill for operation when she came under observation. There was a very obvious affection of the right side. Although after death and after hardening of the parts no evidence of interference could be found some time later rumour which was probably well informed insisted that abortion had been procured. With regard to reporting cases to the police, doctors were in no sense criminal detectives and usually nothing should be done. In case of death communication with the police became a duty

Mr M DATNOW agreed that the causes of miscarriage should come under three main headings. General violence, Mr Datnow thought should include shock and fright as he had come across a number of such cases although quite often severe physical injury did not result in any disturbance of the pregnancy. In connexion with drugs Mr Datnow referred to certain animal experiments which he had carried out, using many of the well known abortifacients but he had never succeeded in bringing about abortion with them—in fact some actually tended to prolong the period of pregnancy, lead, on the other hand almost invariably produced abortion. He did not agree that local injury by the injection of fluids would bring about abortion unless the fluid was injected into the uterine cavity. He drew attention to certain soap pastes which were being extensively used on the Continent to bring about abortion therapeutically. In conclusion the speaker concurred with Dr Grace's views on the importance of keeping all material that was removed from cases of criminal abortion so that it would be available for inspection and examination by all concerned

Mr C H WALSH stated that in his opinion criminal abortion was on the increase. A favourite method was by intra-uterine injections, which left little or no trace of trauma, and rarely any incriminating material, making it difficult to detect the evildoer. He agreed with Dr Grace that there was no known drug taken by mouth which would procure abortion without disabling or killing the mother, and instanced a recent fatality which had occurred in a patient admitted to hospital moribund as the result of taking an overdose of female pills so consistently and largely advertised in the daily press

Pathological Specimens

At the same meeting a series of pathological specimens taken at operation or necropsy were shown. Dr W E COOKE and Dr G RONALD ELLIS demonstrated post-mortem specimens from two cases of congenital microcolon. Dr Ellis at the same time described a case of multiple cerebral abscesses secondary to bronchiectasis. Professor R E KELLY, Mr A S KERR and Mr R KENNON showed two post anal dermoids which had been removed at operation, and Mr Kerr and Mr Kennon described also a suprasternal dermoid and a case of tuberculous kidney with giant ureter. After some discussion on this last case Dr T F HEWER and Dr A DOUGLAS BIGLAND gave an account of a case of subarachnoid haemorrhage from an aneurysm of the circle of Willis

The sixth general meeting of the Midland Mental Pathological Society was held at the Anatomy Theatre of Birmingham University on March 18 with the president Sir GILBERT BARLING in the chair. Sir ARTHUR J HALL gave a lecture on Some Features of Chronic Epidemic Encephalitis (Lethargica). This was illustrated by many lantern slides and a cinematograph demonstration of the characteristic poise and gait the kiresia paradoxa and the lid movements associated with efforts to overcome oculogyric crises. Dr STANLEY BARNES in proposing a vote of thanks remarked on his association with the lecturer and his special study of the disease. Dr B H SHAW seconded the vote which was carried with enthusiasm. Dr J H MALLOY contributed to the discussion, and Sir ARTHUR HALL replied

Local News

ENGLAND AND WALES

Merseyside Hospitals Council

At the annual general meeting of the Merseyside Hospitals Council held at the Liverpool Town Hall on March 24, Mr W Sutcliffe Rhodes chairman of the David Lewis Northern Hospital since 1934 was elected to succeed Lord Cozens Hardy as chairman of the Council. In 1935 Mr Sutcliffe Rhodes was invited by Lord Derby and Sir Benjamin Johnson to join the newly formed Associated Voluntary Hospitals Board and he has been nominated a member of the committee of the proposed Royal Liverpool United Hospital whose Bill is now before Parliament. He has taken an active interest in the voluntary hospitals for many years and was first elected to the committee of the David Lewis Northern Hospital 13 years ago and has represented that institution on the Merseyside Hospitals Council since 1934. In 1936 he was invited to become chairman of the Medical Charities Committee of the Liverpool Council of Social Service.

Hospital Libraries

A meeting to further the hospital library movement was held under the auspices of the British Red Cross and Order of St John at County Hall London on March 17. The values attaching to a hospital library might be supposed to be the same whatever the character of the hospital but there are differences as were shown by speakers representing successively the voluntary hospitals, the general municipal hospitals and the mental hospitals. Sir Alfred Webb Johnson after referring to the value of books as an aid to recovery during the period following operation mentioned that the Middlesex Hospital was fortunate in having a well-equipped patients' library and a good nurses' library in addition. But without an efficient librarian such as they had at the Middlesex, half the value of book collections for patients was lost. His view was that the book depot should be entirely in the librarian's charge and that patients who remained in hospital a long time should have the facility for obtaining books on request for which purpose the hospital would need the backing of a public library. It was important to provide light and illustrated periodical literature for patients in capable of continuous mental effort. Dr Letitia Fairfield who spoke from the point of view of the London County Council hospitals said that these hospitals contained a large proportion of chronic patients. Such patients often tended to exhaust the sympathy and patience of their friends and their need for sustaining literature was more serious than that of the acute patients. It might be thought that people confined for long periods to bed could undertake definite courses of study but actually their disability was apt to cause mental stagnation. One of the aims of the hospital librarian therefore must be to rouse such patients to a belief in their own capacity to inspire them with the delights of literature and to bring into the sick room the past as well as the present. Reading had not only a mental but a physical effect and a ward was a better and happier place if the patients had something to think about besides their own unfortunate condition. Sir Laurence Brock chairman of the Board of Control spoke of the special position of patients in mental hospitals. It was no always realized how many patients in such hospitals were capable of reading and enjoying books. Reading was not merely a harmless sedative but often had definite therapeutic value in that it helped patients to get rid of imaginary troubles. He reminded the audience that the tastes of mental patients were not altered as a result of their mental instability and the librarian to example still had to select on a therapeutic basis. The Red Cross effort to

encourage hospital libraries was the more necessary because of the limit set to the efforts of local authorities. It would of course never be possible to allow outside voluntary workers the same liberty of access to mental as to other types of hospitals but there were many ways in which the advice and assistance of the British Red Cross and Order of St John Library could be of value in this special field. The meeting was also addressed by two librarians the borough librarian of Watford Mr George Bolton, and the head librarian of the Lewisham Hospital Miss Kellaway. It was mentioned that the hospital library movement was a "war baby"—one of the very few beneficial outcomes of the great war.

Attack on Maternal Mortality in Birmingham

As one line of attack on maternal mortality in Birmingham a 'flying squad' service has been established with the object of bringing the best medical and nursing aid to the bedside of the patient in cases of severe obstetrical shock, haemorrhage etc. This flying squad operates from the Birmingham Maternity Hospital and consists of a complete emergency outfit equipped to deal with every obstetrical emergency and under the charge of a staff nurse who is a trained midwife of the hospital. The scheme is worked in connexion with the Birmingham Health Centre and the St John Ambulance Brigade and arrangements have been made with the latter for an ambulance to be available within a few minutes of receiving a call to take the equipment and the nurse to the patient's home, the surgeon going independently. At the annual meeting of the governors of the Birmingham and Midland Hospitals for Women it was stated that the 'flying squad' had been called out five times so far and in three of these it had been the means of saving a woman's life. This is a highly commendable scheme and it is to be hoped that hospital authorities in other areas will not be slow in following the example of Birmingham.

SCOTLAND

Vacation Courses for Students

Professor T K Monro formerly of the chair of practice of medicine at Glasgow University addressing the students at St Mungo's College Glasgow at the prize giving ceremony on March 18 said that great progress had been made of recent years in the prevention, diagnosis and treatment of disease by public health authorities and laboratory workers. The general practitioner however was the first line of defence against disease and it was essential that his training should be as thorough as possible. He believed that before long medical students would be required to devote part of the long summer vacation to hospital work. There was a general feeling even among students that the July to October holiday was unnecessarily long and that instruction which was clinical and practical might be instituted during this period. Professor Monro thought that the great reputation of Scotland as a training ground for good general practitioners was due to the high quality of the teaching which had been available in its medical schools for a long time.

Elsie Inglis Memorial Maternity Hospital

At the annual meeting of the Elsie Inglis Memorial Maternity Hospital Edinburgh on March 18 Lady Ruth Balfour M.B. presiding stated that the death rate in the hospital during the past year had been only 4 per 1000. In moving the adoption of the annual report of the combined women's hospitals she said that in the Bristlefield Hospital 555 in patients and 2000 out-patients had been treated during 1936 while at the Elsie Inglis Hospital 1255 in patients and 2000 out-patients had been treated. It was proposed to open a new out-patient department at the Bristlefield Hospital and a new out-patient department at the Elsie Inglis Hospital.

accounts of income and expenditure showed a deficit of £3 204 but legacies amounting to £6,575 have been received

Edinburgh Dental Hospital

At the forty-fifth annual general meeting of the Incorporated Edinburgh Dental Hospital and School Professor Sydney Smith who took the chair, announced that the governors proposed to extend the hospital buildings at a cost of about £35 000. Towards this sum the Dental Board of the United Kingdom had promised a donation of £5 000. At the present time this was the largest dental school in Scotland and the second largest in Great Britain, with 250 students in 1936. The premises had therefore become inadequate and the equipment was not sufficiently up to date, so that a large addition to the accommodation equipment, and staff must soon be made. The annual report shows a great advance in the work done by the hospital during 1936. The total number of conservation cases was 19,395 compared with 13,313 in 1935. In the prosthetic department the number of dentures, repairs etc. was 1,978 compared with 1 766 and the number of extractions increased from 17 708 to 22,742. The number of new patients during 1936 was 9 921 compared with 8,299, and the total attendances 29,369 against 22 194. With regard to finance the report shows a surplus of £684 but although this is regarded as satisfactory all the money available will be needed for extension and equipment of the buildings, and it is proposed shortly to issue an appeal to the public for funds.

IRELAND

Crown Nominee on GMC

The *London Gazette* of March 19 announces that the King with the advice of his Privy Council under the provisions contained in the Medical Acts has renominated Colonel Thomas Sinclair CB FRCS MP, to be, for a period of five years from May 13, 1937 a member of the General Council of Medical Education and Registration of the United Kingdom, for Ireland. Colonel Sinclair has served on the Council since 1927 when he was nominated to succeed Sir Edward Coey Bigger.

The Belfast Meeting Accommodation

Dr F P Montgomery chairman of the Housing and Lodgings Committee for the 105th Annual Meeting of the British Medical Association at Belfast next July informs us that hotel accommodation in particular and other accommodation in general is being rapidly booked up for the period of the meeting. All officers of Sections and all speakers who have undertaken to take part in the Sectional proceedings should arrange accommodation as soon as possible if they have not already done so. Requests for hotel accommodation should be sent direct to Thos Cook and Son Ltd 27 Royal Avenue Belfast and requests for all other types of accommodation should be sent to the office of the Annual Meeting Whitla Medical Institute, College Square North Belfast.

Royal Maternity Hospital, Belfast

The registrar's report of the Royal Maternity Hospital, Grosvenor Road Belfast covers the period from January, 1932 to December 1935. It deals with the work of the Belfast Maternity Hospital until July 31, 1933 and after that date of the Royal Maternity Hospital which was opened on August 1 1933. The latter hospital contains a unit for the treatment of all forms of potential and established sepsis. To this unit are admitted many emergency or unbooked cases often frankly septic on admission. For the year 1935 the maternal mortality rate was 1.6 per cent for all admissions 0.6 per cent for ante natal admissions and 4.4 per cent for emergencies. Owing to a rise in the rate for the last-named category these figures are slightly less satisfactory than those of the

preceding years. Concise summaries are given of the seventy-five cases involving maternal death which occurred during the whole period under review. The series includes four cases of acute yellow atrophy of the liver. The statistics for maternal morbidity show a gradual improvement. The rate for 1935 was 4.9 per cent. Analysis shows a high incidence of infection of the urinary tract with thirty-nine cases comparing with forty one cases of puerperal sepsis during the whole period. The total number of patients admitted in 1935 was 1 413. Triplets were born on two occasions in the course of that year, and two cases of triplets are also recorded for 1932.

Correspondence

Combined Universities Election

SIR—May I, through your columns thank all those who gave me their support at the recent election and especially those who at headquarters or in certain Divisions (particularly in Birmingham) put themselves to considerable trouble by taking very active steps in this direction?

I should like it to be known that I undertook this candidature, against my own inclination, in pursuance of the definite resolutions of the Representative Body of the British Medical Association. (1) That with a view to ensuring the presentation to Parliament of expert medical opinion on matters relating to the health of the community or involving the welfare of the medical profession the Representative Body approve the principle of securing the services of a Member of Parliament intimately acquainted with the aims and policy of the British Medical Association. (2) That steps be taken forthwith to make preliminary inquiries for the selection of a medical practitioner intimately acquainted with the aims and policy of the Association with a view to his election to Parliament through one of the University seats. The Committee of the Association charged with the duty of implementing these resolutions urged me when the parliamentary vacancy occurred, to become a candidate and I did not feel at liberty to refuse.

The expectation of success in such a candidature even in what appeared to be favourable circumstances was perhaps never very high but the actual figures of the result were disappointing. What conclusions the Council may draw from them or what action may follow upon such conclusions, I do not of course, know. The result however, appears to indicate that even in a University constituency and with a candidature genuinely independent of all party considerations common action among doctors as such or teachers as such, or between the two professions, is not to be expected. Divided loyalties combined with a considerable measure of complete indifference, produces curious outcomes which can be tested only by experiment—I am, etc.

London NW 11 March 24 HENRY B BRACKENBURY

SIR—Those who made some effort to promote the success of Sir Henry Brackenbury's candidature in the recent election contest must feel greatly disappointed at the result. The election followed on usual party lines and the reasoned argument in Sir Henry's election address on complete independence seemed to carry little weight with that portion of the constituency which included medical graduates. When the very small number of medical men now in Parliament is considered surely it must have occurred to the medical portion of the constituency that the addition of a member of his calibre experience and past record of work for the profession

would have been alike an asset to the profession and to the House of Commons itself. The past and passing generation of medical men are generally aware of this but it is likely that the younger generation are completely ignorant of the efforts which have brought them a heritage of a better professional life than that extant thirty years ago and it is probably the younger generation which has swayed this election.

It is not only on questions of intrinsic interest to the profession—national health insurance hospitals organization of public health services—that medical influence should be exercised in Parliament but the great problem of number and quality of the population now looming in the near distance involving such human biological problems as sterilization of the unfit, birth control reform of the abortion laws and maternal mortality will need adequate medical representation if legislation is to be effective and just. Again there have been repeated attempts to foist an absurd system of medicine into official recognition and it was chiefly due to Sir Henry's evidence before the committee of inquiry that the last attempt failed completely. It is said that public memories are notoriously short but surely this shallow pated amnesia should not afflict the medical profession—I am, etc.,

Warrington March 28

J. S. MANSON

The Value of Liver Extracts

SIR—We wish to draw attention to the report of the meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine in your issue of March 20 (p. 629). Dr Janet Vaughan is reported as having made the following remarkable statement—namely that if she suffered from pernicious anaemia nothing would induce her to be treated with anhaemin. Ungley Davidson and Waine (*Lancet* 1936 1 349) published full details of a most carefully controlled series of thirty-six cases of pernicious anaemia treated with anhaemin which clearly demonstrated that anhaemin is one of the most potent preparations of the anti-anemic principle available anywhere in the world. Since the publication of this paper we have treated many more cases of pernicious anaemia with anhaemin with the same results. We find that an initial injection of 4 c.cm. will produce a maximal reticulocyte response, a satisfactory red cell increase and a rapid improvement in the clinical condition. Thereafter 2 c.cm. given at ten-day intervals soon brings the blood count up to normal. So satisfied are we with the activity of anhaemin that when assessing the potency of new experimental liver fractions we use this substance for choice for control purposes. For maintenance treatment we have kept twenty cases of pernicious anaemia for a period of one year at a normal blood level by the injection of 5 c.cm. of anhaemin at two-monthly intervals.

It is for these reasons that we are at a loss to understand the statement attributed to Dr Vaughan quoted above. The fact that Dr Lucy Wills obtained responses in monkeys with crude preparations of liver extract and not with anhaemin is of scientific interest but since the monkeys were suffering from an anaemia produced by dietary deficiencies and were certainly not suffering from Addisonian pernicious anaemia her results do not indicate in any way whether or not anhaemin is of value in the disease occurring in human beings. Lastly we are at a loss to understand Dr Vaughan's calculation that it would have cost her £7 to cure her first patient with anhaemin. We are, etc.,

STANLEY DAVIDSON
HAROLD W. TULLYTON

SIR—In your issue of March 20 you publish an abbreviated report of some remarks I made at a meeting of the Section of Therapeutics and Pharmacology at the Royal Society of Medicine. I feel that as they stand the statements are open to misinterpretation and I should like to amplify them and to correct one misstatement of mine. I emphasized that my experience of treating patients with Addisonian pernicious anaemia in relapse with anhaemin had been limited and that my objections to the pure preparations were theoretical. The work of Subbarow, Jacobson and Prochownik (*J. Amer. chem. Soc.* 1936 58, 2234) shows that there are at least three chemical substances which can be isolated from crude liver extract and which have varying haemopoietic activity but appear to be complementary to one another in their effect on Addisonian pernicious anaemia. These observations together with those described by Dr Lucy Wills suggest that possibly the purer fractions like anhaemin do not contain all the haemopoietic factors. Until more is known of the relationship of these factors I feel I would prefer for myself to play for safety and use a crude extract which contains them all rather than a pure preparation which possibly may lack one or other of them in adequate concentration. I admitted, however, that this was a purely theoretical objection.

The practical experience of Professor Davidson and Dr Ungley all emphasize the value of anhaemin. I stated that all the pedigree cases of pernicious anaemia I have had the opportunity to treat have maintained a completely satisfactory count on 1 c.cm. of anhaemin once a month. This statement was not reported. Owing to the complex chemical procedures involved in their preparation the purified extracts are necessarily more expensive than the less pure and in patients of the hospital class even the difference of a few pence must often be considered. A monthly maintenance dose of 4 c.cm. of less pure preparations costs less than 1 c.cm. of anhaemin. My calculation of the cost of £7 to produce a normal blood count was based on what I am now told is an out of date price. I apologize for my error. The patient required 28 c.cm. to raise her red cell count from 1,700,000 per c.mm. to 4,700,000 per c.mm. which at the present quoted retail price would mean £4.4s. Of course patients vary considerably in the amount of extract required and therefore in the cost of treatment.

It is only however by the further preparation and clinical trial of such pure preparations that we can hope to solve the problem of the nature of the haemopoietic fractions in liver and as a step to the solution of this problem the importance of anhaemin cannot be over-emphasized—I am, etc.,

London W.12 March 23

JANET VAUGHAN

SIR—In your report of the meeting of the Section of Therapeutics and Pharmacology (*Journal* March 20 p. 629) Dr Janet Vaughan is quoted as saying that personally if she suffered from pernicious anaemia nothing would induce her to be treated with anhaemin. She spoke of the danger of treating patients with these highly clarified fractions apparently on the assumption that the purer extracts did not contain all the haemopoietic factors. That monkeys rendered anaemic by dietary deficiency respond to a haemopoietic factor present in camponon but absent from Dalin and West's fraction is not a sufficient reason for treating Addisonian pernicious anaemia with crude extracts unless it can be shown that the latter will produce in human subjects beneficial effects differing from or greater than those which are obtained with a purified product. No satisfactory laboratory test for activity is available and to assess the value of a

product for use in pernicious anaemia one must observe its effect under controlled conditions in a series of cases of the disease as it occurs in man

The original Dakin and West's fraction was tested in this way in thirty six cases of pernicious anaemia,¹ and a more purified product in twenty cases.² These and subsequent experiences have demonstrated the consistently high efficacy of this fraction for restoring and maintaining a normal blood status. The clinical effects are not less striking than those which follow the use of crude extracts, and there is in fact no evidence that Dakin and West's fraction lacks any element necessary for inducing complete remission of all those manifestations of pernicious anaemia which are susceptible to the influence of liver treatment.—J am, etc,

Newcastle-on Tyne March 24

C C UNGLEY

Gas-and-air Analgesia

SIR,—An article entitled 'Gas-and-air Analgesia in Labour,' appearing in your issue of March 20, contains the statement that 'gas-and-air analgesia was first tried in October, 1933, by Dr Minnitt of Liverpool, who adapted for his use an American nitrous oxide apparatus. May I point out that the latter half of this sentence is incorrect. If reference is made to the *Lancet* of June 16, 1934 (p 1278, and to the *Proceedings of the Royal Society of Medicine* August, 1934, vol 27, Section of Anaesthetics, pages 33 to 38) it is there recorded that the apparatus devised for the purpose of giving gas and air was an adaptation of a McKesson oxygen therapy apparatus.—I am, etc,

Liverpool March 27

R J MINNITT

Terminal Caseating Tuberculous Bronchopneumonia

SIR,—I was very interested and gratified to read the article by Dr C E H Turner in the *Journal* of March 20 (p 604) on the secondary infection of the lungs from caseating bronchial glands. Hilus tuberculosis is comparatively easy to diagnose by clinical signs in the adult. It is by no means uncommon in children, and though clinical signs are not nearly so definite when combined with a persistent irritating cough it is usually possible to make at least a provisional diagnosis. Clinical research, extending over a period of many years, forced me to the conclusion that secondary, or endogenous, infection from the bronchial glands was a common cause of pulmonary tuberculosis in the adult, and the results of my observations were published in the *British Medical Journal* in 1929 (August 24, p 335). Experience has strengthened this view, and Dr Turner's case is a further confirmation. Three cases which were under my observation as probably hilus tuberculosis suddenly in a matter of hours, showed clear clinical evidence of extensive involvement of a lung obviously of a tuberculous pneumonic type. In one case not only were tubercle bacilli found in the sputum but the radiograph showed clear evidence of spread from the root glands. It frequently happens that a latent tuberculous gland is suddenly reinfected from a bronchial catarrh, such as accompanies measles or influenza, which leads to a lowering of the focal and general resistance. Such glands are almost certainly adherent to the adjacent bronchus, and if the infection is acute the chances of a break through are far from negligible, the final result depending on the number and virulence of the tubercle bacilli present. The difficulty of finding tubercle bacilli in

caseous material is well known, so that complete apparent recovery is not impossible. One such case was recently examined by x rays after an interval of seven years, and the lungs were reported normal, yet this same case shows periodic evidence of tuberculous toxæmia and physical signs in the lungs of a suggestive character whenever she catches cold, as she frequently does. I do not consider the prognosis good, and would hesitate to certify her as a normal insurance risk.

As often happens all three cases were under observation at the same time including one diagnosed as acute tuberculous infection of the bronchial glands which did not break down and led to pulmonary invasion. He has remained perfectly fit and free of any suspicion of pulmonary tuberculosis after a period of about ten years. Other cases have been observed, but none was quite so definite or dramatic in the sudden onset, yet there is every reason to believe that others arose in the same way, although more slowly and insidiously.—I am, etc

Birkenhead, March 22

D I GARR JOUNSTON

Radiograph or Skiagram

SIR,—With reference to Mr Lawson's letter (*Journal* March 20, p 641) I hasten to disclaim responsibility for any launching of a crusade for a more elegant term. My previous letter (*Journal* March 6, p 530) was essentially a protest against the suggested employment of the word 'radiogram,' on the reasoning that in the absence of a freshly coined and more acceptable one it is unwise to desert the word radiograph, which is in more general use among radiologists in this country.

In the correspondence to which I referred the words radiograph, skiagraph, roentgenograph, and their corresponding -grams were all discussed, and as etymological probing into their lineage appeared to have brought little credit to any of them my arguments were restricted to the question of usage, with special reference to the fact that radiogram has several generally accepted meanings.

Mr Lawson's letter suggests that there would be no such potential confusion if the word skiagram were adopted, but reference to the nearest dictionary produces the following information:

SKIAGRAPHY (or SKIA-) Art of shading in drawing etc. photography by roentgen rays. vertical section showing interior of house etc. finding of time by shadow as in sundial. So SKIAGRAPH etc.

As skiagram in its application to an x ray photograph entered the lists in the same few weeks of 1896 as did radiograph and radiogram—and skiagraph also—it had an equal chance of survival, but I venture to submit that it has no case.—I am, etc

Worthing March 20

R BOULTON MILES

The Medical Illustrator

SIR,—May I, as an artist who is now attached to a medical school after spending five years at an art school and the greater part of three years at a medical school with the intention of becoming a medical illustrator, be allowed to write a few words.

I was deeply interested to find in your issue of February 13 an article on medical illustration from a fellow artist who has a true understanding of the ideals of what medical illustration should be and what the carrying out of these ideals involves. It certainly means long and arduous training—hence the personal details at the beginning of this letter—but this has yet to be appreciated by the majority of the British medical profession. The lack of under-

¹ Ungley C C Davidson L S P and Wayne E J *Lancet* 1936 1 349
² Ungley C C *Lancet* 1936 2 1513

standing that medical illustration is a 'specialists' job which cannot be executed by people who merely 'draw and paint a little, is responsible for the low standard prevalent in this country. We are far behind America and Germany in this respect.

The medical profession ought to realize that this specialized ancillary service must be given proper surroundings much of the free lance work is poor indeed many good artists who undertake it are eventually forced into commercial draughtsmanship because they cannot sacrifice themselves to the cheap production demanded of them.

The ideal solution to this problem is for each medical school hospital or clinic to employ an artist on the staff and the artist should be prepared to be vitally interested in all stages of the research work and (because of the previous training) should guide all the illustrative work of the department which should include photography. I emphasize photography because these two branches are closely united. Good photography as an illustrative agent cannot be ignored it is for the artist to combine the two and decide whether a specimen should be drawn or photographed. I know many artists will disagree with me but I have found this essential and I think medical illustrators should hold a broad minded view when remembering the purpose of their work in medical research. Therefore the artist should be familiar with all branches of scientific photography thus knowing the capacities and limitations of both sides—I am etc.

London March 11

Z S

Medical Aid in Southern Spain

SIR—Since the fall of Malaga the plight of the wounded and the refugees in Southern Spain is very serious. My husband has taken a British University Ambulance Unit to Almeria and has succeeded in establishing a hospital, two front casualty clearing stations, a food station and a children's hospital outside the town on the road to Lorca. He hopes to establish several more at intervals of twenty miles to the point where the railway begins to run again. The unit at present consists of Sir George Young, Miss Thurstan (the commandant), two nurses, three drivers, two cars and an ambulance.

A woman doctor and two more nurses went out last week. There has been a wide response to appeals for supplies for the unit but its work is severely hampered for lack of surgeons and staff. If any fully qualified doctors or surgeons were willing and able to go out it is certain that many more lives could be saved. Expenses out and back will be paid and kept out there. If such there are I should be most grateful if they would get in touch with me in the first place stating for how long they would be able to stay out—I am etc.,

30 Lower Berkeley Street, S.W.1
March 29

J. HELEN YOUNG

The Old English Inn

SIR—I notice that Lord Horder in his address to the British Health Resorts Association at Bournemouth (*Journal* March 20 p. 626) asked: "Where was the old English inn, the inn of Dickens and Fielding and Smollett and Charles Lamb? If we may judge by Dr. Tobias Smollett's description of his journey to the south of France in 1767 it is probable a good thing that the old inn in England and in France have disappeared and given place to the clean and comfortable hotels that we all know. Writing from Bournemouth, Smollett himself ex-

Though I was well acquainted with the road to Dover and made allowances accordingly I could not help being chagrined at the bad accommodation and invidious imposition to which I was exposed. I need not tell you that this is the worst road in England with respect to the conveniences of travelling and must certainly impress foreigners with an unfavourable opinion of the nation in general. The chambers are in general cold and comfortless, the beds paltry, the cookery execrable, the wine poison, the attendance bad, the publicans insolent and the bills extortion. There is not a drop of tolerable malt liquor to be had from London to Dover. Dover is commonly termed a den of thieves and I am afraid it is not altogether without reason that it has acquired this appellation. The people are said to live by piracy in time of war and by smuggling and fleeing strangers in time of peace but I will do them the justice to say they make no distinction between foreigners and natives.

Poor Smollett, his complaints of conditions in the French inns are even more severe but he hints that he was sometimes "more than usually peevish from the bad weather as well as from the dread of a fit of asthma with which I was threatened. One cannot accompany him on his journey from Boulogne to Nice by way of Paris, Fontainebleau, Dijon, Lyons and Montpellier without sympathy in all his discomforts and grumbles.

The whole volume of his *Travels* made up as it is of letters to friends is full of interest and entertainment—I am etc.

Cannes March 20

A. A. WARDEN

Obituary

ALEXANDER CORSAR STURROCK, M.D.

Consulting Physician, Salford Royal Hospital

Dr. Alexander Corsar Sturrock died at his home in Eccles near Manchester on March 27 at the age of 65. He was born at Linlithgow and studied at Edinburgh University taking the Master of Arts degree in 1892. Afterwards he went on to the medical school and took the M.B., Ch.B. with first class honours some four years later. In 1898 he gained the M.D. with a gold medal. For a short time he acted as an assistant in the physiological department at Edinburgh before being appointed house-surgeon to the Grimsby Hospital. In 1900 he was appointed resident medical officer to the Manchester Royal Infirmary for a period of two years after which he began a busy and successful life in Eccles as a general practitioner. In 1906 he took the M.R.C.P. (Lond). He served for two years in the Royal Army Medical Corps in Salonica and in France and was mentioned in dispatches. Returning home after the war with the rank of major he took up consultant work in Manchester being appointed to the honorary medical staff of the Salford Royal Hospital. He was at the same time an honorary physician to the Eccles and Patricroft hospitals. Dr. Corsar Sturrock was a member of the Manchester Medical and Pathological Societies and was honorary secretary of the Lancashire and Cheshire Branch of the British Medical Association for the years 1923-7. About this time he developed a special interest in nervous and mental diseases and took charge of an out-patient department at the Salford Royal Hospital which was organized in association with the County Mental Hospital at Prestwich and it was at that time a new departure in general hospital practice. In collaboration with Dr. Orr he wrote a paper on the "Influence of the Sympathetic on Infection of the Central Nervous System."

Dr. Corsar Sturrock's opinion was often sought at the University of Manchester and he was a frequent speaker at the

The reports he gave on these occasions were fully and carefully made, and his evidence was always very clear-cut and difficult to shake in cross examination. He was a keen politician, and had long been an active member of the Eccles and Swinton Parliamentary Division Conservative Association, of which he was president for ten years. He had been a county magistrate since 1930. He was a well known figure in Manchester and was always in demand as an after dinner speaker. There is no doubt that his loss will be keenly felt by many of his friends in Manchester and Eccles.

JOHN D MALCOLM, M.B. F.R.C.S. Ed
Consulting Surgeon Samaritan Free Hospital

Mr John David Malcolm, who was in former years well known in gynaecological circles died suddenly on March 20 at his home near Petersfield Hampshire where he had lived since retirement from active work. He was born on June 30, 1857, the son of John Malcolm, M.D., of Dundee and received his medical education at Edinburgh and Guy's Hospital, graduating M.B., C.M.E.D. in 1881, and obtaining the M.R.C.S. Eng. diploma in 1883 and the F.R.C.S. Ed. in 1884. After serving in turn as resident house-physician and resident surgeon at the Edinburgh Royal Infirmary he came to London and secured appointment to the staff of the Samaritan Free Hospital and after forty years service was elected consulting surgeon.

Mr Malcolm joined the British Medical Association in 1884, and was honorary secretary of the Section of Obstetrics and Gynaecology at the Annual Meeting of 1900 at Ipswich. He had held office as president of the Section of Obstetrics and Gynaecology of the Royal Society of Medicine, and in 1913 was awarded the Liston Victoria jubilee prize by the Royal College of Surgeons of Edinburgh. He published in 1893 a small book on the physiology of death from traumatic fever, and had written a study in abdominal surgery.

A. H. T. ANDREW, M.B.

That corner of Suffolk between the Stour and the Orwell has been robbed by death of a devoted doctor and a great gentleman. Herbert Andrew was born in Northampton in 1883, educated at Bedford Modern School and St Edward's School, Oxford, and subsequently pursued his medical studies at Edinburgh University, where he graduated M.B., Ch.B. in 1910. Although a good footballer, holding a regular place in the Edinburgh University Rugby football fifteen, he was even in his undergraduate days a student of Nature and much of his spare time was spent as befits a student of bird life in collecting, photographing and stuffing ornithological specimens, he already loved his gun, rod, and artists' brush.

After qualification Andrew held various resident hospital appointments in Edinburgh, in Dublin, and at Northampton General Hospital, and finally settled in practice in Leiston, Suffolk where he remained for fifteen years. He held a commission in the Territorial Army, and on the outbreak of war was attached to the 1st East Anglian Field Ambulance, serving through the Gallipoli campaign in the famous 29th Division. He was subsequently transferred with that division to France, where he belonged to the 88th Field Ambulance and was also for a time attached to the 1st Royal Inniskilling Fusiliers. In 1917 and 1918 he worked in the casualty clearing zone first as an anaesthetist but finally realizing his laudable ambition of being appointed a surgeon he served in that capacity in the 53rd Casualty Clearing Hospital till the armistice.

In 1927 he relinquished his practice at Leiston but remaining faithful to the county of his adoption transferred to Holbrook, where in addition to his ordinary work he became medical officer to the Royal Hospital Naval School in that village, an appointment which he held till his death. He was a member of the Suffolk Branch of the British Medical Association.

Two years of almost constant association as a tent fellow during war-time cemented a friendship that death alone can destroy, and although the mileage may have precluded frequent meetings in the years of peace the writer retains a vivid memory of a debonair officer no matter how deplete of sleep and rest indefatigable self-sacrificing and the most charming companion in a surgical team that any surgeon could desire. His affability and charm enhanced our popularity as a visiting team to other clearing stations in times of battle. At the service at the graveside last week we were reminded by the clergy who knew him in private life of his kindness and of his fortitude, and the huge concourse which came to his funeral would have surprised one who was himself so modest, but the tribute nevertheless convinced the mourner of the matchless worth of our British general practitioner. His fortitude was perhaps best shown in his final illness for such were his sufferings that those who ministered to him can but rejoice that after his Calvary there his succeeded his Eastertide of peace.

G. GORDON TAYLOR

ROBERT GORDON MCKERRON, M.D.

Emeritus Professor of Midwifery University of Aberdeen

It is with deep regret that we record the death in his seventy fifth year, of Professor Robert Gordon McKerron at Edinburgh on March 21, after a brief illness. Born in Moray, he was educated in the University of Aberdeen graduating with honours both in arts and medicine later proceeding to the degree of M.D. After a short period as assistant to Dr Bruce of Dingwall he returned to Aberdeen and commenced general practice. At the same time he was appointed assistant to the professor of physiology in the University. Even at that time his chief interest lay in midwifery and he gave up the appointment in physiology to become assistant to the late Professor Stephenson who occupied the chair of midwifery. Until 1912 he conducted a strenuous general practice with specialization in midwifery and diseases of children, and held the posts of senior physician to the Sick Children's Hospital and physician to the Maternity Hospital.

In 1912 he was appointed to the Regius chair of midwifery in the University of Aberdeen and held this post until he resigned in 1936. In spite of his many duties he was able to carry a heavy share of the burden during the great war as a major in the Scottish General Hospital in Aberdeen. Until 1936 he was gynaecologist to the Royal Infirmary. He was the pioneer of ante-natal clinics in the North and served for many years on the Central Midwives Board for Scotland. In addition, he was a member of the British Medical Association for forty years, was a vice-president of the Section of Obstetrics and Gynaecology at the Annual Meeting in Aberdeen in 1914, and was president of the Aberdeen Branch from 1927 to 1929.

Robert Gordon McKerron will be remembered for many qualities. As a man he was sincere and direct to a degree. His vitality was amazing and in his younger days fatigue was unknown to him. The best of company he was the life and soul of any gathering, and no senior students' dinner was complete without his genial presence. As a teacher his lectures were dogmatic and practical leavened with a lively wit and he was adored by his

The Services

INDIAN MEDICAL SERVICE

REORGANIZATION UNDER NEW CONSTITUTION

The following statement received for publication from the India Office announces a reorganization of the Military Medical Services in India, which takes effect from April 1, 1937, the date on which Provincial Autonomy came into operation under the new Constitution

The changes in the organization distribution and terms of service which will be introduced are the result of a prolonged investigation extending over more than three years into the whole military medical organization both for peace and war. The main features are as follows

ESTABLISHMENTS

The strengths of the three military medical services in India—the R.A.M.C. borne on the Indian Establishment and the military branches of the I.M.S. and the I.M.D.—will be fixed so as to provide for the minimum medical requirements of British and Indian troops in peace

For the purposes of maintaining a War Reserve on which the Army in India must rely for its increased requirements in an emergency providing for attendance on British members of the superior Civil Services and their families and filling posts under the Central Government and the Crown Representative there will continue to be a Civil Branch of the I.M.S. recruited as hitherto from the military branch. It will consist of no fewer than 220 officers of whom 166 will be British

A new list of posts reserved for I.M.S. officers in civil employment has been adopted involving a net reduction in the number of posts so reserved for British and Indian officers from 207 to 172 but the existing rights of officers already in civil employment will be fully preserved and prospects equivalent to those afforded at present will be retained for them

RECRUITMENT

Recruitment for the I.M.S. will continue as at present to be conducted by nomination on the recommendation of a Selection Board. Indian members will be recruited in India and will normally be given short service commissions for five years after which selection will be made for permanent commissions from among those who desire to continue in the Service. British doctors will continue to be recruited in London and will be appointed to permanent commissions to all European vacancies. Selections will be held four times a year, as hitherto in April July October and December

PAY PROMOTION AND PENSION

Revised rates of pay for future entrants have been introduced so as to bring basic pay more into accord with Indian standards without materially altering the total emoluments which will be admissible to British members of the Service who draw sterling overseas pay. At the same time the time-scale of promotion to major has been accelerated by two years both for existing incumbents and new entrants. Improvements have also been made in the rates of pay drawn in the second, third, eleventh and twelfth years of service

An increased outfit allowance of £75 will be granted to new entrants and the maximum period of antedate for high qualifications and special experience is raised from one year to eighteen months

Six additional colonelcies will be provided on the military side of the I.M.S. and a suitable number of enhanced pension—equal to colonels' pensions will eventually be provided and awarded to officers on the civil side

CONDITIONS OF SERVICE IN CIVIL EMPLOYMENT

An officer transferred to civil employment will be on probation for two years. If continued in civil employ thereafter

he will retain a right to revert to military employment under certain conditions until he has spent seven years in civil employment or has had seventeen years total service after this period he will if it is agreed that he shall remain in civil employment be transferred to a special supplementary list and will not normally be eligible for military promotion above the rank of lieutenant colonel. This system follows that in vogue for other military officers in civil employ—for example, in the Indian Political Department

India Office March 24 1937

ROYAL NAVY MEDICAL CLUB

The twenty third annual dinner of the Royal Navy Medical Club will be held at the Trocadero Restaurant W. on Friday April 16 at 8 p.m. preceded by a general meeting at 7.30 p.m. Information can be obtained from the honorary secretary Surgeon Commander M. B. Macleod R.N. Medical Department Admiralty S.W.1

COMMISSIONS IN THE R.A.M.C.

The War Office announces that applications are invited from medical men for appointment to commissions in the Royal Army Medical Corps. Candidates will be selected for commissions without competitive examination and will be required to present themselves in London for interview and physical examination on or about April 22 1937. They must be registered under the Medical Acts and normally must not be over the age of 28 years

Successful candidates will in the first instance be given short service commissions for five years. During the fourth year of this period they will be given the opportunity of applying for a permanent commission. Those not selected will retire on completion of five years service with a gratuity of £1,000

Full particulars of the conditions of service and emoluments also forms of application may be obtained on application either by letter or in person to the Assistant Director General Army Medical Services, The War Office London S.W.1

KEOGH BARRACKS

The Army Council has decided to name the new barracks about to be built for the Royal Army Medical Corps Depot and Army School of Hygiene at Aldershot the Keogh Barracks in memory of the late Lieutenant General Sir Alfred Keogh G.C.B., G.C.V.O., C.H. That very distinguished officer was Director General Army Medical Services from 1905 to 1910 and again during the Great War from 1914 to 1918.

Medical Notes in Parliament

On March 25 before Parliament rose for the Easter Recess, the Royal Assent was given to the Consolidated Fund Act the East Hertfordshire Joint Hospital District Act the Waltham Joint Hospital District Act and the Wisbech Joint Isolation Hospital District Act. The House of Commons adjourned till April 6 and the House of Lords till April 7

The Public Health (Drainage of Trade Premises) Bill was read the third time and passed by the House of Lords on March 23. On the same day the Marquess of Dufferin and Ava introduced a Bill to provide for the regulation of the fumigation of premises and articles by hydrogen cyanide. The Bill was read a first time

In the House of Commons on March 23 Mr. Baldwin introduced the Ministers of the Crown Bill. The object of the Bill is to regulate the salaries payable in respect of certain administrative offices of State to provide for the payment of additional salaries to members of the Cabinet holding offices at salaries less than £5,000 a year, of a salary to any person being Prime

Minister of pensions to persons who have been Prime Minister and of a salary to any person being Leader of the Opposition and to simplify the law as to the capacity of persons holding offices of profit to sit and vote in Parliament. On the same day the National Health Insurance Act (Amendment) Bill was read a third time in the Commons. It had been read a second time on March 22.

The annual report of the Department of Health for Scotland (1936) was presented to Parliament on March 23.

The Conservative Committee on Nutrition was addressed at the House of Commons on March 24 by Lord Astor on the examination of nutrition problems abroad and at the League of Nations.

An Order for Alteration of Coroners Districts in the County of Denbigh was laid on the table on March 24.

On March 24 the Northern Group of M.P.s received a deputation about the report of the Select Committee on the Medicine Stamp Duties. The deputation which was from the Newcastle and Northumberland Branch of the Pharmaceutical Society of Great Britain argued that it was unfair for everyday medicines and medicaments to be taxed because advisory directions were printed on the labels. The committee promised consideration of the matter.

Housing in Scotland

On March 23 Mr Elliot told Mr Mathers that he had conferred with employers and operatives representing practically all the organizations in the building industry in Scotland. Information had been placed before the building industry showing the public work (including houses, schools and hospitals) that it is desired to carry out within the next few years. It was his intention to submit proposals to Parliament at the appropriate time for the continuance of the present rates of Exchequer contributions under the Housing (Scotland) Act 1930 and the Housing (Scotland) Act 1935 for the three years beginning on April 1 1938, that was to March 1941. He was arranging for meetings with the Association of Local Authorities to discuss the question of planning their building programme so as to ensure the maximum degree of continuity of progress. A preliminary meeting was held in Edinburgh that morning. A further meeting with the representatives of the building industry was being held in Glasgow that day. He had every reason to think that when the negotiations were concluded there would be made possible a marked improvement in the recent rates of house building.

Extension of Subsidies for Slum Clearance

Pepping on March 23 to Mr Wilfrid Roberts Sir Kingsley Wood said that under Section 102 of the Housing Act 1936 he was empowered to review after October 1 1937 in consultation with the local authorities the Exchequer contributions payable for clearance and the abatement of overcrowding. The Act provided that contribution at the existing rate would be payable for houses completed by March 31 1938. The completion of the clearance and the abatement of overcrowding are vital elements in the health crises of the country. He was anxious to preserve the continuity in the housing programme. What subtle and error it was to mention a change in the provision under which the Exchequer contribution would continue without referring to the houses built in replacement of the cleared ones for the abatement of overcrowding which were completed. December 31 1938.

inquiries about the date on which the National Health Insurance scheme would be amended to bring in young persons on entry into employment.

Mr DAVIS: Are we right in assuming that the medical profession's objections to the fee that has to be paid in the case of these boys and girls are holding up the Government's legislation?

Mr HUDSON: No Sir. I said in my reply that the matter had been connected with the larger question of fees and that my right hon. friend had agreed to the suggestion that the whole matter should be referred to an independent court of inquiry.

Mr DAVIS: Is it not a fact that the medical profession declined to accept the offer of the panel fee suggested and because of that the medical profession is holding up the Government's legislation?

Mr HUDSON: That is not altogether a complete description.

Report on Medicine Stamp Duties

On March 25 Mr I. C. HANNAH asked the Chancellor of the Exchequer before deciding to adopt the duties recommended by the Select Committee on Medicine Stamp Duties to consider that the comprehensive taxes on medicines proposed by the Committee would affect the poorer classes while hardly touching the rich and that the small chemists took objection. Col COLVILLE replied that before Mr Chamberlain reached a decision on the Committee's report due weight would be given to all relevant considerations.

Midwives Act: Qualifications of Midwives

On March 25 Mr VINEY asked whether the Minister of Health in issuing regulations in connexion with the Midwives Act instructed medical officers of health when making appointments to confine such appointments to those who possessed a certificate in midwifery and also the certificate of a State registered nurse. Sir KINGSLEY WOOD answered that the Midwives Act 1936 did not empower him to issue regulations with regard to the qualifications of midwives to be appointed under the Act. In the circular which he addressed to local supervising authorities on September 18 1936 he drew attention to the importance of absorbing into the new service as many as possible of the independent midwives at present in practice. The circular made no suggestion that appointments should be confined to midwives who were State registered nurses. He added that he deprecated any such limitation in the appointments first made by local supervising authorities under the Act.

Insured Persons Not Choosing a Panel Doctor

In each of the five years 1932 to 1936 the number of insured persons in England and Wales who, although entitled to medical benefit, had not chosen an insurance doctor, was on the average about 495,000. Sir KINGSLEY WOOD cannot give a similar figure of the number of persons who have chosen a doctor but have not used his service.

Cord Room Workers' Committee on Compensation

Sir JOHN SIMON has appointed a committee to consider and report with regard to an equitable and workable scheme to be devised for providing compensation in the case of persons who after employment for a substantial period in cord room work suffer from a disability as part of cotton spinning mill disease. He had been directed by the respiratory illness as indicated in the report of the Departmental Committee on Cough and Cord room workers and if it is made detailed recommendations for provision to be included in the scheme more extensive provision to be made for persons to whom benefit should be payable.

Dispensing Under National Health Insurance Act—In the House of Commons on March 23 Sir KINGSLEY WOOD moved the Second Reading of the National Health Insurance Act (Amendment) Bill. He said that the Bill was virtually a drafting amendment to a section of the National Health Insurance Act 1936 which prescribed the class of persons entitled to undertake the dispensing of medicine under that Act. Section 41 of the Act described these persons by a reference to their rights under the Pharmacy and Poisons Act to use the title of chemists and druggists. It had been found that these words did not meet the case of corporate bodies, and to enable these corporate bodies, employing qualified chemists, to participate in the insurance scheme the Bill had been introduced. The Bill was read a second time.

Model Diets in Mental Hospitals—Sir KINGSLEY WOOD on March 23 informed Mrs Tate that a number of mental hospitals had adopted a dietary for a four week period though he was not aware of the exact number. The matter was determined by the visiting committee of the local authority generally on the advice of the medical superintendent. The standards recommended by the Committee on Diets had been generally adopted.

Salary Limit for Unemployment Insurance—Mr ERNEST BROWN told Mr Dingle Foot on March 24 that he had taken note of the request from the National Federation of Professional Workers for the raising of the salary limit in unemployment insurance to £500 a year. The Secretary of the Federation Mr Brown added had been informed that the question was under consideration.

Alleged Infection in Imported Eggs—Sir JOHN WARDLAW-MILNE declared on March 25 that the superintendent of one of the Japanese Government hygienic institutions reported that Chinese eggs had been found in certain instances to contain the bacilli of tuberculosis, of syphilis and of typhoid fever. Sir John asked what action had been taken in this country to ensure that eggs of this kind imported here were not so infected. Sir KINGSLEY WOOD did not know of this report but promised to have inquiries made. He added that examinations of Chinese eggs made in the laboratory of the Ministry of Health had not revealed the presence of any disease producing organisms.

Spirochaetal Jaundice—Sir JOHN SIMON told Mr Windsor on March 25 that the drafting of the Order scheduling spirochaetal jaundice as an industrial disease, as recommended by a Home Office Committee had been found to raise points of difficulty. These were being gone into and he hoped the matter would be settled at an early date.

The Case for Quinquennial Census—With regard to representations made to the Ministry of Health by a scientific deputation by the Royal Statistical Society and by the Association of Medical Officers of Health in favour of a quinquennial census, Mr CECIL WILSON asked how far these representations had received favourable consideration and whether in view of the rapidity with which changes in the location and occupation of the population were taking place and the necessity for accurate information the Minister of Health would consider the desirability of taking the census quinquennially. Sir KINGSLEY WOOD said he had received no representations on this subject recently. A census was due to be taken in 1941. After that date the question of a quinquennial series will be reviewed.

Notes in Brief

Draft regulations under the Petroleum (Consolidation) Act 1928 to control the conveyance by road of a number of dangerous substances including sulphuric acid have been prepared in consultation with the interests affected and will soon be issued.

The report on home-work set in schools is now in the hands of the printers but is unlikely to be published before the end of May.

Medical News

It is officially announced that H.M. the Queen Com-mandant-in-Chief of the Nursing Corps and Divisions of the St John Ambulance Brigade has appointed H.R.H. the Duchess of Gloucester as her Deputy. Her Royal Highness is a Dame Grand Cross of the Order of St John and is the third member of the Royal Family to hold an official and active appointment in the Brigade.

A ball in aid of St Bartholomew's Hospital will be held at the Dorchester Hotel, Park Lane, W.1, on Tuesday April 20. There will be dancing from 10 p.m. till 3 a.m. with cabarets, sideshows, etc. Tickets (inclusive of dinner with champagne and buffet) are two guineas each obtainable from St Bartholomew's Hospital, or the Dorchester Hotel, or the organizer of the ball (Mrs Madge Clarke 20, Bruton Street, W.1).

The annual oration before the London Jewish Hospital Medical Society will be given by Professor Simson Wright, M.D., on Thursday April 8, at 4 p.m. at the London Jewish Hospital. His subject is Social Organization in the Living Body.

A meeting of the Listerian Society of King's College Hospital will be held in the lecture theatre at the hospital Denmark Hill S.E., on Wednesday April 7 at 8.15 p.m. when Sir Walter Langdon Brown will give an address on The Integration of the Endocrine System. Medical students and practitioners are invited to attend.

A meeting of the Committee for the Study and Investigation of Rheumatism will be held at the Red Cross Clinic Peto Place, W.1, on Tuesday, April 6, at 5.30 p.m. Cases will be shown, and an invitation to be present is extended to medical practitioners interested in the subject.

A course in laryngology and phonetics will be held in the Bellan Hospital Rue de Tével 7 Paris from Monday May 31, to Saturday, June 5, by Dr J. Tarneaud (oto-rhino-laryngologist to the hospital), with the assistance of Drs R. Husson, P. Kucharski and Mme Borel Maisonnay. The course will comprise clinical and cinematographic demonstrations, in addition to lectures on the associated pathological, therapeutic, and educational considerations. The fee is 200 francs and fuller information may be obtained from Dr Tarneaud, Avenue de la Grand Armée 27 Paris XVI.

A practical and theoretical course in broncho-oesophagoscopy will be held at the Hôpital Lariboisière, Paris from May 10 to 15 under the direction of Dr André Aubin. The fee is 500 francs. Further information can be obtained from 17 Rue du Fer à Moulin Paris.

The new building for the Helen Chambers Research Laboratories, which Queen Mary opened on March 19 at the Marie Curie Hospital (see *Journal* March 27 p. 678) is situated between the two existing blocks of the hospital to which it has direct access by means of covered ways. The laboratories which occupy its upper story have been planned to afford facilities for carrying out the routine pathology of the hospital, as well as for the development of work in cancer research with particular regard to the experimental approach. One laboratory is equipped for routine clinical pathology and histology. Separate rooms are provided for bacteriology and for biochemistry. Two rooms are equipped to house animals for work in experimental pathology and the pathologist's private room is also fitted as a research laboratory. A sterilization room and a room for the preparation of media and a mess room for the technical assistants complete the unit which is in charge of Dr Mary Gilmour under the general direction of Dr Elizabeth Hurdon.

The chairman and treasurer of the General Infirmary at Leeds stated at the annual meeting of the Governors that for the first time in twenty five years the Infirmary had been able to balance its budget.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

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QUERIES AND ANSWERS

Broken Sleep in Middle Age

NORTHERN IRELAND, in reply to SUSSEX (*Journal* March 20 p. 649) writes: "I would not advise sedatives on account of his debility and low blood pressure. Many professional men and especially Stock Exchange brokers suffer from an inability to banish work and prices from their minds on retiring with the result that the first exhaustion over their brains brings them to the surface again in the small hours. I should advise a light meal not later than two hours before retiring and a cutting down to the minimum of alcohol and tobacco. Deep breathing exercises with complete muscular relaxation should be begun and then a few simple raising and bending exercises for trunk and legs should be introduced. If the heart is sound these should be performed vigorously until the patient is slightly out of breath and in a week the gain in vitality will be amazing. The whole thing should not take more than ten minutes in the bedroom and afterwards sleep should be continuous till 7 a.m. If however the patient still wakes at 3 a.m., I should instruct him to get up and walk round the room in night attire breathing deeply until he begins to feel chilly. He should then get into his warm bed and the grateful heat should soon settle him off. I would also suggest warm bed socks and two anti-stasis pills on retiring."

Painful Feet

PERPLEXED would welcome suggestions in the following case. A lady aged 69 had typhoid fifty years ago. Since then she has suffered from painful feet. Locomotion is only possible by walking on the heels. In the right foot the third metatarsophalangeal joint which protruded into the sole was treated operatively and the nerves sectioned but the pain persists. Both arches are flattened. All varieties of shoes with special insoles have been tried without avail. Callusities are present especially on the pads and the large toe joint. Chiropody is invoked periodically and various orthopaedic surgeons have been consulted. Are there such aids as pneumatic soles available?

Income Tax

Proportion of General Expenses

"G" occupies a house which has six rooms and a garage on the ground floor and eight rooms up stairs. The garage and four downstairs rooms are used for patients. The Inspector of taxes refuses to continue the previous allowance of one-half the rent rates etc. as applicable to the practice. "G" keeps a cook and two maids and a regular refusal has been met to the claim for one-half the cost as Luther's.

As regards the rent, a man cannot tax his rooming board in the ground floor of a house if all his services are

to have a higher letting value than the upper floors and advise "G" to adhere to his claim and press it to appeal if necessary. With regard to the domestic service, however, one maid is normally considered adequate for looking after the professional use of the premises and "G" may be wise to compromise on a deduction of one third instead of the former one half.

LETTERS, NOTES, ETC

Herpes Zoster and Varicella

Dr J. G. BENNETT (Hyde, Cheshire) writes: "The following case of coincident herpes zoster and varicella will possibly interest readers of the notes in the *Journal* in the past few months. Although the conditions are closely connected it has not up to the present been established how this correlation works. We have proof that an epidemic of chicken pox is frequently present when herpes zoster is prevalent but it has not been my lot to see the two lesions occur in one person at the same time. A chemist aged 36 consulted me in regard to severe neuralgia in the right side of his head. There was no apparent cause for his neuralgia and I prescribed an aconite and gelsemin mixture. He returned in a few days no better and was then given luminal sodium grain 1/2 t.i.d. which seemed to afford some relief. A week later he developed a severe attack of right-sided herpes zoster of the fifth nerve and became very ill with vesicles all over the right side of his forehead and cheek which rapidly involved the eyelids and caused a keratitis of the globe of the eye. He was given 1 ccm of pituitrin. On the following day he taxed me with having caused a rash to break out on his body as a result of my injection. The rash proved to be a typical papular varicella which later developed true pustules. There were a few pustules on the hard palate and quite a number have left pitted scars on the chest. Coincidentally the herpes zoster is clearing up rapidly and the keratitis is also resolving. It seems to me to be very interesting to find the two conditions occurring practically *pari passu* although I am at a loss to understand the connexion between them."

What About Ourselves?

Dr C. J. HILL (Aitken, Kollerhahn) writes: "Lord Horder asked 'And what about ourselves?' in his Hunterian Oration (*Journal* February 27 p. 462). Some years ago I was told by a doctor as an example of how the South African native believed in magic that following the examination of a child's throat with a tongue spatula the father of the child told his friends how the doctor had cured the child's sore throat by looking inside the mouth of the child. Thought of this came to me as I examined a quinsy and noticed pus oozing from the supratonsillar fossa above the right tonsil side of the quinsy. The light was good the patient opened his mouth satisfactorily and the tonsil had been clean when I started the examination with a spoon. Evidently depressing the tongue caused the opening into the fossa to gape and so pus could escape. The patient volunteered the information that the spoon examination gave him relief on each occasion. What I observed in this case would account for a patient who tells me he cured his quinsy by swallowing half an orange. The bulk of the half orange presumably would depress the tongue and so open the mouth of the fossa and allow the pus to escape."

Late Menopause

Dr D. J. CONOLLY writes: "The following menstrual history may be of interest to the profession. A woman now 74 years old started to menstruate at or about the age of 11. The menopause finally ended when she was 72. She married when 15 years of age and had had four children by the time she completed her twenty-fifth year. Three of these are still living the fourth died in infancy. Her husband died a teen years ago. There was no further issue of the marriage. She menstruated regularly up to her sixtieth year and during the last twelve months of the menopause the menses were irregular until their final cessation. She breast fed her children well after the first child's lactation the last increased in size very much and have remained large to the present day. There was no artificial method for married life or contraceptive method tried. The point to be noted are (1) that the sudden cessation of reproduction (2) the hypertrophy of the mammae and (3) the late age of the menopause."

G BASSI (*Pohclunco*, Sez. Med., February 1, 1937, p. 87) records his observations on 750 cases of heart diseases which were found on examination of 15,000 soldiers, aged from 20 to 25, during the period May, 1935, to September, 1936. In a large proportion of cases a rheumatic origin could be found, though the exact figures are not given. Infection of the tonsils was also an important causal factor, and a considerable number of patients attributed their disease to an acute respiratory infection. In the remainder there was no history of any disease likely to be a factor in the production of the cardiac condition. Lesions of the mitral valve were most frequent, insufficiency being commoner than stenosis, while the incidence of aortic disease was low, and only a few examples of combined mitral and aortic disease were found.

I. HOLMGREN and B. LINDSTRÖM (*Hvgiea*, Stockh., January 31, 1937, p. 48) have studied the reactions to vaccination of 513 adults, only fifty of whom had been vaccinated recently. They classified the reactions in three groups according to their severity, the third group including the cases in which pustules formed, while the two first groups included the comparatively mild reactions indicative of some pre-existing degree of immunity. A classification of the persons vaccinated according to the length of the interval between the present and the last vaccination brought out the fact that the longer this interval the greater the proportion of cases in which the reaction was pustular and the temperature was raised over 100° F. But even when this interval was longer than forty years only 54 per cent of 208 men and 62 per cent of 225 women responded with pustular reactions. The percentage of adults vaccinated for the first time responding with a pustular reaction was considerably higher (74 per cent of the men and 81.5 per cent of the women). This suggests that in a high proportion of cases the benefits of vaccination still exist more than two score years later. Another of the authors' conclusions based on their statistical study is that the younger the person vaccinated the more complete and lasting is the immunity he enjoys. They also find that vaccination does no harm to persons suffering from various diseases, and one of the authors (I. H.) refers to his experiences during the small-pox epidemic in Stockholm in 1913 when he vaccinated without ill effects some 200 patients suffering from advanced tuberculosis. He argues that acceptance of the doctrine that only the well should be vaccinated is dangerous as it entails the provision of a group of susceptible persons calculated to promote the spread of small pox in time of epidemics.

N. DUNGA (*Ukrskr. Læge*, February 4, 1937, p. 134) gives an account of immunization against diphtheria in Iceland where its almost complete disappearance since 1926 has bred a generation of children susceptible to this disease. Schick tests conducted in 1932 and again in 1935 among school children showed that between these two dates the percentage of negative reactors already remarkably low in 1932 had declined still further. At the age of 8 years only 14 per cent of the children tested in 1932 were Schick negative and this figure for the 8-year-old children was reduced to about 10 per cent in 1935. It was therefore feared that with such a high proportion of Schick positive children the next epidemic of diphtheria would be very dangerous. A case of

diphtheria which occurred in December 1934 and which proved fatal within twenty-four hours gave the signal for wholesale immunization of children which was partially effected with Ramon's anatoxin from the Pasteur Institute and partly with preparations of anatoxin from the State Serum Institute in Copenhagen. During 1935 there were forty-one cases of diphtheria, the epidemic culminating in April with twenty cases. By the end of April some 5,000 persons had each been given one or two injections and the author claims that the almost complete cessation of the epidemic at the end of April must largely be attributed to this prophylactic treatment. During the fourteen months dating from May 1935 only three cases of diphtheria occurred among artificially immunized persons, whereas there were eighteen cases among persons not thus immunized. As 65.5 per cent of all the children under the age of 13 had been treated with anatoxin the author concludes that its prophylactic action was considerable.

S. STAHL (*Nord med. Tidsskr.* January 23, 1937, p. 121) gives an account of an outbreak of tuberculosis in human beings in Sweden traced to a cow suffering from tuberculous mastitis. The outbreak began at the end of August 1936, when several children developed fever and such signs as enlargement of the cervical glands, erythema nodosum, phlyctenules, etc. Altogether there were twenty-five who showed definite evidence of infection and twenty-five others whose development of a positive tuberculin reaction was indicative of a recent infection. A search for human sources of infection proved negative but the fact that most of the positive tuberculin reactors and the children with signs of active tuberculosis had been supplied with milk from one and the same herd led to a careful examination of its cows and of the persons in attendance on them. This herd had previously been examined by a veterinary surgeon, who had found all the twenty-two cows clinically healthy. But when they were re-examined one was slaughtered as the milk from it contained tubercle bacilli. Post mortem examination revealed tuberculous mastitis as well as tuberculous foci in the lungs. The lesson the author extracts from this outbreak of tuberculosis and from the investigations to which it led is that the so-called clinical examination of cattle by veterinary surgeons is no effective guarantee against infection of the milk from a tuberculous focus in an udder. Such a focus may develop suddenly and be very difficult to detect by clinical examination. Only the cows found to be definitely free from tuberculosis by such tests as the tuberculin reaction can be relied on to supply tubercle-free milk.

L. FRANKENTHAL (*Zbl. Chir.* January 23, 1937, p. 211) reports a case of severe Dupuytren's contracture treated with a skin graft borrowed from the little finger. The whole of the palmar aponeurosis with its extensions was excised, the bones of the little finger disarticulated and the skin flap less the nail used to cover the extensive skin defect. The result proved satisfactory.

G. MONTENAPPI (*Pohclunco*, Sez. Chir. January 15, 1937, p. 12) reports a case in a girl aged 10 years who in that while traction combined with massage and active and passive movements, tenotomy and neurolysis did not succeed in correcting the deformity and still less in restoring normal function, resection of 2 cm. of the radius and ulna at different levels produced a remarkable im-

provement. The writer maintains that though non surgical methods may succeed in mild cases and periarthral sympathectomy may suffice in cases of spasm which are not true contractures in true and inveterate cases of Volkmann's contracture resection as above can yield good results.

255 Scalenotomy for Cervical Rib

G WILBERG (*Nord med Tidskr* January 9 1937 p 58) confirms the favourable impressions of Adson and Coffey of the operation devised by them and consisting of division of the scalenus anticus at its attachment to the first thoracic rib. This enables the surgeon to dispense with resection of the offending cervical rib. The author gives an account of a telephone operator on whom he performed this operation. In January 1936 a cervical rib on the left side was resected with considerable relief of the symptoms on this side. She returned in July of the same year with symptoms of cervical rib on the right side the pain in her right arm being such that sleep was disturbed and she had to cease work. The radiological and clinical examinations indicating a cervical rib on the right side scalenotomy was performed on this side under local anaesthesia. The lower end of the scalenus anticus was remarkably large and its division made a 4 cm wide gap between bone and muscle. The patient was able to resume work between two and three weeks after the operation and it was only after exceptionally tiring work that she was subject to slight aches and pains on both sides. There were no symptoms when she attended to ordinary domestic duties on holidays. This case suggests that neither resection of a cervical rib nor scalenotomy by itself is capable of completely relieving the pressure on the brachial plexus

256 Sterilization of the Male

BOEMINGHAUS (*Z Urol Bd 31, Hft 2 1937, p 84*) points out that for eugenic purposes in sterilization of the male efficiency must be combined with the minimum disturbance. Almost all incisions giving access to the vas deferens are equally good. The litter must be freed from its coverings. The author fixes the vas with a special clamp percutaneously before incising the skin. 1 to 2 cm of the vas must be resected. The ends may be ligated or left free. Simple vasotomy is not a safe method. The author advises that the resected piece should be bottled and labelled for reference. In rare instances histological examination may be required to prove that vasectomy has indeed been performed. Patients are kept in hospital for four to five days. In fourteen days the scar can hardly be seen. Boeminghaus draws attention to the fact that the length of life of spermatozoa is unknown and that it is difficult to keep patients in hospital for a long period after sterilization to express sperm digitally per rectum or to demand two or more voluntary ejaculations before discharge. He advises the injection of 1 in 1000 solution of rivanol through the vas. Rivanol kills the spermatozoa immediately and washes them away if sufficient solution is used to fill the seminal vesicles and overcome the valvular mechanism of the ejaculatory duct. Malformations of the parts must be borne in mind so that success may be assured. The operation may be reversed at a later date by removing the fibrosed ends of the vas and suturing them end-to-end over a catgut thread to ensure patency. In dogs this operation is successful in 50 per cent of cases and the author believes that owing to better anatomical conditions in man the prognosis is even better.

257 Breast Tuberculosis

J KEELEY (*Br Med J* February 1937 p 164) presents four cases of tuberculosis of the breast and points out that this lesion constitutes about 1 per cent of all the breast tumours. Cases are classified as primary or secondary and in the former group the disease is attributed to infection entering through the ducts skin abrasions or blood stream while secondary cases are said to derive from a focus of lymphatic

or contiguous structures. Trauma probably plays a part in so far as damaged tissue constitutes an area of lessened resistance. The disease is most common in females and half the cases occur between the ages of 20 and 40. The lesion is usually unilateral and in most cases the discovery of a lump in the breast is the earliest symptom. Pain is seldom noticed. The nodular type of growth tends to remain localized the confluent type is seen in cases where coalescence of involved areas has occurred whilst the intraglandular cold abscess is a variation of the latter type and represents a more effectively walled-off process. The sclerosing type is rare and occurs in older patients and may cause deformity of the breast. Early invasion of the axillary nodes is characteristic of the disease, as is also the presence of a fistula discharging a gritty caseous material. In the four cases reported a correct diagnosis was made in only one case, the other cases being diagnosed as chronic mastitis carcinoma and adenofibroma. Treatment should be surgical and consists of removing the local process. If multiple sinuses are present and there is invasion of the axillary nodes a radical mastectomy may be necessary. Early operation is advisable as in these cases local excision will suffice. In the four cases described operation was successful and the patients recovered satisfactorily. Recurrence after operation in cases of tuberculosis of the breast is uncommon.

Therapeutics

258 Insulin Shock in Bronchial Asthma

J WEGIERKO (*Wien klin Wschr*, February 12 1937 p 195) describes a series of cases of bronchial asthma treated with insulin shock. He finds that insulin shock interrupts dyspnoea in bronchial asthma and that after a series of shocks the asthmatic type is changed and the attacks become less frequent and in many cases disappear altogether. In certain severe cases shock has to be administered daily. Neither exhaustion of the patient nor complications following the frequent administration of insulin were noted. The shock induced by the author is mild. Hypoglycaemic coma does not result. Fasting patients receive 40 units of insulin but 80 to 100 units may be required after meals. Wegierko states that the pyrexial treatment of asthma with injections of milk or colloidal sulphur is a far more serious undertaking than his method of insulin shock. He is unable to state exactly why cessation of dyspnoea occurs but he believes that the insulin shock increases the tonus of the parasympathetic nervous system so that it gets the upper hand over the sympathetic nervous system. It is at this point that clinically the bronchial spasm is eased. The antispasmodic action of insulin is probably cumulative which accounts for the cessation of attacks altogether in a number of cases.

259 Serum Treatment of Whooping-cough

J M DA ROCHA and J A B N DE GAMA (*J Pediatr* December 1936 p 558) state that the best modern works on paediatrics and infectious diseases contain only a few references to the serum therapy of whooping-cough apart from convalescent serum and express a negative opinion as to its value. Klemento was one of the first to inject horses with cultures of *H. pertussis* sterilized at 56°C. The results obtained by injection of doses ranging from 30 to 50 c.c. in 35 cases were encouraging as the number of attacks diminished especially at night there was an improvement in the general condition complications were fewer and the duration of the disease was shortened. Favourable results were also obtained in over 150 cases by Duthoit with a serum prepared by Bordet and Gengou. These results have been confirmed by subsequent observers. The writer's own record their observations on five cases of whooping-cough in children aged from 6 months to 5 years have been treated by injections of a serum of equine origin obtained from animals immunized against pertussis. The results were encouraging but on only one child of 18 months

the number varying from three to six. Diminution of the attacks occurred immediately in each case. Further observations are required to determine the value of the treatment and especially control observations in cases treated by normal serum only.

260 Pernaemon in Melancholia

J. A. T. LIGTERINK, C. SIMONS and N. SPEIJER (*Nederl Tijdschr Geneesk*, February 20, 1937, p. 768) state that in view of the fact that in melancholia, especially of the involuntional type, the cholesterol content of the serum is increased, Georgi used injections of the suprarenal preparation suprascortine in cases of melancholia, with the result that he obtained not only a reduction of the amount of cholesterol but also an improvement in the physical condition. The present writers, however, who used the liver extract pernaemon which has a similar action to suprascortine, obtained a reduction of the cholesterol in nine cases of involuntional melancholia but without any effect on the mental condition. The therapeutic results therefore, obtained by Georgi cannot be attributed solely to alterations of the blood cholesterol.

Neurology

261 Cerebro-spinal Fluid in Epilepsy

Continuing their investigations into the pathology of 'essential' or idiopathic epilepsy, W. G. LENNOX and H. H. MERRITT (*J. Neurol. Psychopath.* October 1936, p. 97) have investigated the changes in the cerebro-spinal fluid in this condition. They studied over 800 patients, in whom a rigorous neurological and physical examination together with x-ray and laboratory investigations had excluded as far as is possible an organic cause for the fits. The authors state that they realize that it is impossible on the basis of an examination short of the post-mortem table to exclude with accuracy all such cases. Taking a pressure of 70 to 180 mm. of cerebro-spinal fluid as normal they found that 10 per cent of their cases had an abnormally high pressure, although only 1 per cent had a pressure of over 250 mm. Similarly accepting 45 mg. of protein per 100 c.c. as the upper limit of normality when the Denis-Ayer method is used they found that 10 per cent of cases of essential epilepsy had a cerebro-spinal fluid protein content above that in normals. There was a slight pleocytosis (6 to 10 lymphocytes) in 4 per cent of the cases. The concentrations of sugar, chlorides, calcium and non-protein nitrogen were within normal limits. As the only abnormalities found were a slight increase in the pressure and in the protein content in 10 per cent of cases it follows that any marked abnormality in the pressure or the contents of the fluid makes the diagnosis of essential epilepsy hazardous.

262 Acetylcholine in Anxiety States

M. S. SHAW (*J. ment. Sci.* November 1936, p. 785) has administered carbaminacetylcholine chloride (dorvil) to six patients suffering from acute attacks of anxiety. He reports a diminution in their subjective and objective symptoms during the administration of the drug, with a relapse on its cessation. He states that evidences of sympathetic overactivity elicited before administration of dorvil were diminished during its exhibition. He concludes that his work offers further evidence in support of the hypothesis that the somatic symptoms found in anxiety states are referable mainly to imbalance of the autonomic nervous system.

263 The Premotor Syndrome

A. T. ROSS (*J. nerv. ment. Dis.*, January, 1937, p. 1) has reviewed the problem of the premotor syndrome. This name has been given to the association of spastic hemiplegia with increased reflexes, disturbance of skilled movements, forced grasping, and transient vasomotor disturbances. The experimental work of Fulton in extirpating different combinations

of Brodman's areas 4 and 6 on both sides in anthropoids has led to the attribution to the premotor cortex (area 6) of many functions involving the use of extrapyramidal and autonomic pathways. It has been difficult to dissociate the effects of damage to the motor cortex from those due to experimental removal of the premotor cortex and there are many who agree with Walshe that practically everything in Fulton's syndrome can be explained on the basis of lesions in the true motor cortex. The distinction of flaccid and spastic paralysis with the help of which Fulton differentiates lesions of the premotor from lesions of the motor area is held by Walshe to depend on the age and severity of the lesion and not on its anatomical site. Thus acute lesions of the motor cortex result in a flaccid paresis which in time changes into a true spasticity with hyperreflexion in the absence of any involvement of the premotor cortex. There remains however the grasp reflex and the motor apraxia which are seen in patients suffering from lesions of the premotor cortex and which do not appear to arise after lesions of the motor cortex. The problem of the premotor cortex must still be openly discussed until more facts are known which will bring clinical experience into line with experimental findings.

264 Treatment of Cerebral Abscess

EDGAR A. KAHN (*J. Amer. med. Ass.* January 9, 1937, p. 87) has reported four cases of intracerebral abscess which have been successfully treated by a conservative surgical technique. The primary septic focus having been treated and the abscess localized clinically, a small trephine opening is made over the suspected area and the abscess sought for by exploration with a blunt cannula. Some pus is removed and the cannula withdrawn. Then the author enlarges the trephine opening to about 4 cm., opens the dura with a stellate incision and coagulates the cortical vessels which are visible. He then inserts a light iodoform pack to encourage arachnoid adhesions. This operation is performed under local anesthesia. Three to four days later the superficial or dementous cortex which has herniated through the trephine hole is sucked away and it is found that the abscess which was several centimetres below the cortical surface is presenting at the trephine hole. The choice of drainage of the superficial abscess or complete removal of its capsule can then be made. To prevent excessive herniation lumbar punctures and dehydration therapy are used. If the abscess has not presented sufficiently at the trephine opening a few more days may be given before it is opened or removed. The advantage of the method is that deep abscesses can be removed with little interference to the surrounding brain tissue.

265 Inheritance of Epilepsy

H. A. PASKIND and M. BROWN (*Arch. Neurol. Psychiat.*, Chicago, November 1936, p. 1045) have investigated the incidence of epilepsy in the offspring of epileptic parents who have not required institutional treatment. They point out that most of the statistical reviews of the incidence of epilepsy in the children of epileptics have come from patients massed together in institutions. Here there is a highly selected group of patients in whom mental change has often taken place and in many of whom there is a neuropathic stock. There is however a much greater number of epileptics who do not require institutional care but who live a normal life and beget normal children. Paskind has previously shown that only 6.5 per cent of these patients show any mental deterioration. A review of the literature shows wide variations in the numbers of affected children of epileptic parents; the authors quote percentages varying from 1 to 25. It would appear however that between 5 and 8 per cent of the children of parents who have required institutional treatment for epilepsy eventually develop epileptic manifestations. In the present investigation 370 children of 162 epileptic parents receiving treatment in private practice were followed up. The great majority were between 5 and 25 years of age. Of the 342 children living only one had epilepsy and six had

had infantile convulsions. None of the twenty-eight children who had died had manifested signs of epilepsy. This low incidence (0.3 per cent) of epilepsy occurring in the offspring of otherwise normal epileptic parents makes the hereditary prognosis much better than one has been led to believe from a study of statistics based on the institutional class of patient.

Obstetrics and Gynaecology

266 Postmenopausal Bleeding from a Theca-cell Tumour

H. HUBER (*Zbl. Gynäk.*, January 2, 1937, p. 14) adds one more to the list of theca interna cell connective tissue ovarian tumours of which Loeffler and Priesel (the original reporters) have now described ten and American writers seven. His patient, a woman aged 67 had had irregular metrorrhagia for three months and showed recent growth of a beard and general cutaneous pigmentation. For those reasons and because the urine contained follicular hormone and the endometrium showed glandulo-cystic hypertrophy the conclusion is drawn that the tumour was the site of active hormone production. It contained a large solid part as well as a pseudo-serous cyst and the cytological characters of the former pointed to its malignancy. The patient was free from recurrence after nine months. Microscopically the solid portion consisted of a richly cellular tissue containing giant cells and an abundant connective tissue network. Lipoids were present in the cytoplasm. A functional resemblance to granulosa-cell tumours is obvious. Of these about one-half occur after the menopause and of theca-cell tumours about 86 per cent. No theca-cell tumour has yet been reported in childhood.

267 Utero-placental Apoplexy

According to A. VAN CAUWENBERGHE (*Brux. med.*, January 31, 1937, p. 516) utero-placental apoplexy (accidental haemorrhage) may almost exactly mimic placenta praevia by causing profuse issue of red not black blood during sleep without foregoing trauma towards term. The woody hardness of the uterus which has been regarded as a sign of accidental haemorrhage may be absent especially in the earliest stages. Albuminuria is usually present but increased blood pressure and oedema are often absent. In France and Belgium voices have been recently raised in praise of conservative treatment. Brault has reported twenty-two cases of which four were very severe without a death after treatment by rupture of the membranes and Frulinsholz had three deaths only in forty-eight cases treated obstetrically. To van Cauwenbergh, however, in serious cases surgical intervention seems preferable and indeed indispensable when the os is not dilated. Only by abdominal operation can an exact idea be gained of the condition of the uterus. Neither the presence which is constant of free blood stained fluid in the abdomen nor a violent congestion of the uterus necessarily calls for hysterectomy. This is indicated when the uterus or neighbouring organs are the site of extravasations of blood when the uterus after being emptied does not contract well on stimulation or when signs of intense intoxication are present. Foetal survival is very exceptional but occurred in a case here described after Caesarean section done an hour and a half after the first symptom. The writer mentions seven cases of abdominal operation with no maternal death and six foetal deaths. Five had hysterectomies performed and two

hormone (prolan) contents in the blood—an average of 23,000 units as compared with 9,000 for normal pregnancy. A primary organic factor may be suggested by an abnormal degree of activity of the plasmoidal elements of the placenta. Their exuberance of the syncytial cells is associated with increased hormone production as shown by the authors' finding that in hydatidiform mole notable increases of urinary and blood hormone may be associated with histological signs of increased activity of the ectodermal plasmodium.

Pathology

269 Weltmann's Serum Coagulation Test

R. TEUFEL (*Med. Klinik*, February 12, 1937, p. 237) has simplified Weltmann's serum coagulation test and overcome its disadvantages—namely, the length of time taken (25 minutes), the large quantity of blood required to give 1 l.c.m. serum and the large amount of electrolytic solution needed. A test tube made of special glass with a bulb 8 cm. from the end (to prevent the expulsion of boiling fluid) is used. 0.1 c.m. non-haemolytic serum free of blood corpuscles in 4.9 c.m. of distilled water is introduced into the test tube. Then two drops of the electrolytic solution (0.5 per cent crystalline CaCl₂) are put into the tube held vertically. Each drop must contain exactly 0.05 c.m. of the electrolytic solution. The solution is boiled and then held to the light for examination of flocculation. If no coagulation has occurred two more drops are introduced and the solution boiled again. (Care must be taken owing to the great heat of the solution.) The procedure is repeated until flocculation is observed. The test is performed in three minutes. Flocculation with two drops of the electrolytic solution indicates a coagulation value of X. Four drops a coagulation value of IX, etc. The coagulation band is shortened in exudative and necrotic lesions and the nephroses. It is lengthened in lesions involving the hepatic parenchyma and in haemolysis. Abnormal values always indicate a pathological condition as the test is unaffected by pregnancy, menstruation or slight disturbances of health.

270 Aetiology of Influenza

F. WOLTER (*Med. Welt*, February 20, 1937, p. 241) differentiates between endemic and epidemic influenza. The aetiology is, according to him, not quite the same. In the former contact, droplet infection and a multiplicity of organisms can be cited as aetiological factors. Hygienic measures may be adequate prophylaxis in individual cases but they will not prevent pandemics or epidemics. The theory that influenza spreads along trade routes by contact alone can no longer be held in view of the fact that epidemics arise simultaneously in places widely separated from one another and that the severity of the epidemic varies in different places. In epidemics telluric and meteorological factors play the leading aetiological part. It is known that owing to climatic changes the rise and fall of the surface and underground waters affect the humidity of the soil. Various authors have shown that epidemics of influenza occur in places widely separated from one another in which the necessary humidity is to be found and that the peak of the epidemic occurs at the maximum point of humidity. This would account for the seasonal occurrence of influenza for in spring the surface water level is at its highest. It has further been shown that influenza epidemics occur at periods of high atmospheric pressure and some authorities believe that changes in atmospheric pressure over different

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Lancet p. 999 May 2, 1936. A Report on 25 treated cases

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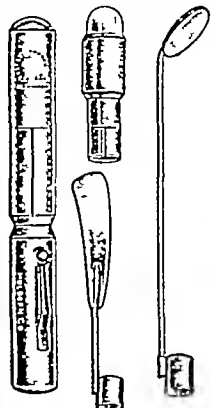
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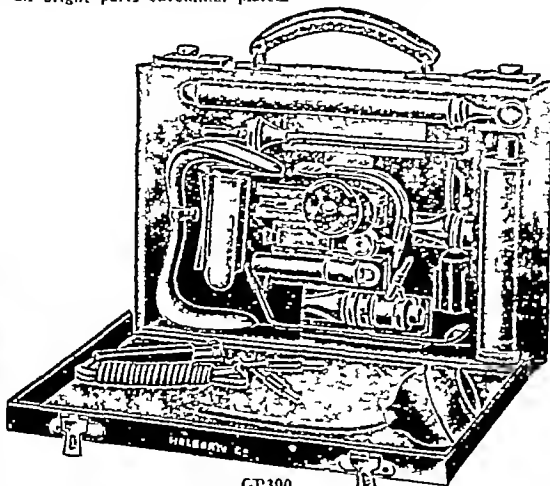
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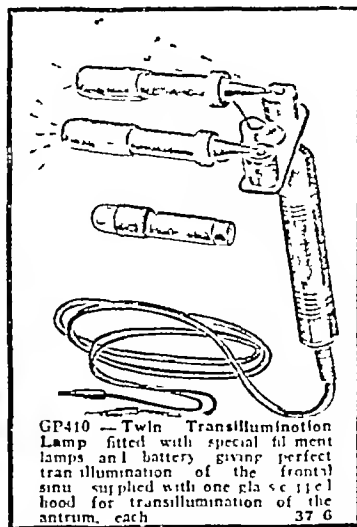


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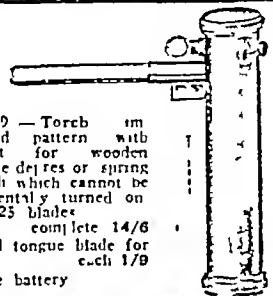
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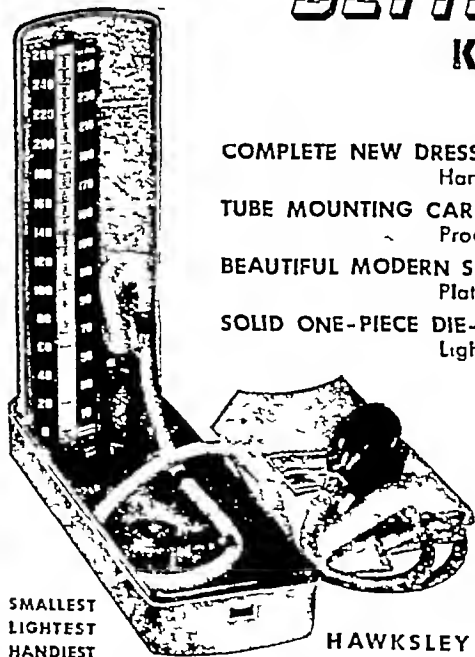
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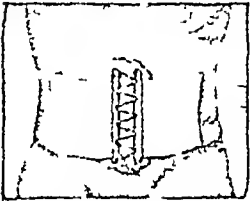
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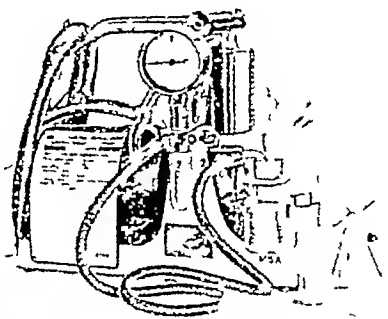
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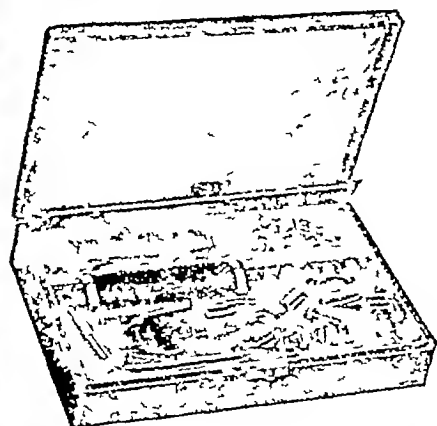
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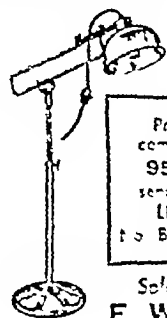
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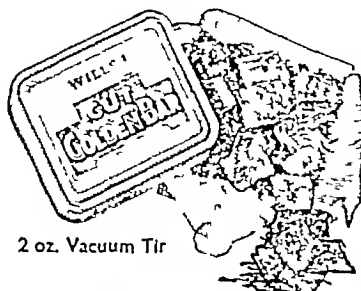
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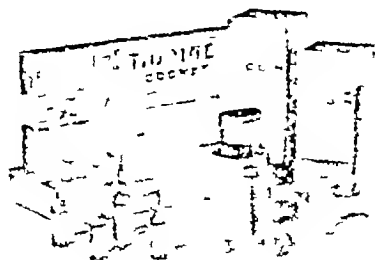


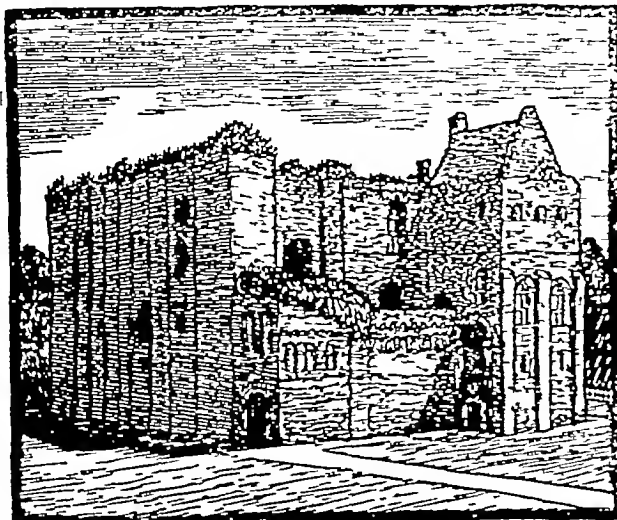
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tion. He will be required to pass satisfactorily a
medical examination and to be subject to the pro-
visions of the Asylums Officers Superannuation
Act 1929 as modified by the Asylums and Gen-
eral Institutions (Officers' Pensions) Act 1919. If
not already subject to that Act the candidate will
be required to serve a probationary period of twelve
months. The appointment will be subject to one
or both of the following conditions:

The commencing salary is £1 a since man will
be £140 per annum rising to a maximum of £180
per annum subject to satisfactory service plus
pensionable contributions of board, lodging, and
laundry valued for superannuation purposes at £10
per annum. If married the commencing salary
will be £150 per annum rising to a maximum of
£200 per annum plus emoluments exclusive of
uniform and laundry fuel, light and laundry
valued for superannuation purposes at £10 per
annum. An additional £50 per annum will be
granted if the candidate is a married man with
a wife and dependent children. All fees
for medical and dental treatment are free. All fees
for medical and dental treatment are free. All fees
for medical and dental treatment are free.

Applications may be obtained from the
Medical Officer, Colleshill Hall, C. O. G. DOUIE
Secretary, University College London (Gower St.
W.C.1).

COUNTY BOROUGH OF DERBY ASSISTANT MEDICAL OFFICER

Applications are invited for the post of
ASSISTANT MEDICAL OFFICER in the Public
Health Department. Salary £500 per annum rising
by annual increments of £25 to £750 per annum.
Applicants must be duly qualified registered
Medical Practitioners and should possess the
Diploma of Public Health.

The duties of the post will include work in
connection with Child Welfare, the School Medical
Services and such other duties as may be required
by the Council.

The officer appointed will be required to devote
his or her whole time to the duties of the post to
act under the supervision and control of the
Medical Officer of Health and to reside within the
Borough.

The successful candidate will be required to con-
tribute to the Council's Superannuation Fund and for
this purpose must pass the necessary medical
examination. Age of applicants must not exceed
40 years.

The appointment will be held during the pleasure
of the Council and is terminable by one month's
notice on either side.

Applications stating age, qualifications and pre-
vious experience together with copies of not more
than three recent testimonials must be received by
the undersigned not later than April 15th 1937.
Application forms are not provided. Envelopes
must be endorsed Assistant Medical Officer.

Canvassing directly or indirectly will be a dis-
qualification.

GORDON LILICO

Medical Officer of Health

Public Health Department
1 Derwent Street Derby

COUNTY BOROUGH OF DERBY DERBY CITY HOSPITAL

ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited for the post of Assistant
Resident Medical Officer (Male) at the above
Hospital of 300 beds. This Hospital provides
treatment for acute medical and surgical cases
tuberculosis, obstetrics, and children's diseases etc.
Candidates must be registered in Medicine and
Surgery.

The appointment is for a period of six months
two months notice of termination of duties may
be given on either side. The successful applicant
will be required to commence duties early in May.
Salary at the rate of £700 per annum with
board and residence.

Applications stating age, experience and
accompanied by three recent testimonials should
be sent to the undersigned as soon as possible.

GORDON LILICO

Medical Officer of Health

Public Health Department
1 Derwent Street Derby

LANCASHIRE COUNTY COUNCIL COUNTY BOROUGH OF BLACKBURN BOROUGH OF DARWEN BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY

APPOINTMENT OF CONSULTANT OBSTETRICIAN

Applications are invited from registered medical
practitioners with recent experience in obstetrics for
the appointment of CONSULTANT OBSTET-
RICIAN at a salary of £1000 per annum. The
Gentleman appointed will be allowed to engage in
private and consultant practice subject to certain
conditions.

The successful candidate will be appointed to the
Honorary Staff of the Blackburn and East Lancashire
Royal Infirmary and will be required to
reside within the County Borough of Blackburn.

Conditions of appointment and terms of appli-
cation may be obtained from the Medical Officer of
Health, Victoria Street, Blackburn, to whom com-
pleted applications should be sent not later
than April 15th 1937.

CHAS. S. ROBINSON

Town Clerk, County Borough of Blackburn

CITY OF NORWICH RESIDENT MEDICAL OFFICER, ISOLATION HOSPITAL ASSISTANT MEDICAL OFFICER

SOMERSET COUNTY COUNCIL COUNTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified
Medical Practitioners registered in the Medical
Register as holders of Diplomas in Sanitary
Science, Public Health or State Medicine for the
appointment of County Medical Officer of Health
and School Medical Officer.

The person appointed will be required to per-
form all the duties prescribed by statute or regu-
lation and such other duties as may from time
to time be assigned to him by the County Council.
He will be required to devote his whole time to
the duties of his appointment.

The salary will be £1500 a year together with
travelling allowance in accordance with the scale
prescribed by the County Council.

The provisions of the Local Government and
Other Officers Superannuation Act 1919 will
apply to the post and successful candidates
will be required to pass satisfactory medical
examination.

The appointment will be determinable by three-
months notice on either side.

Applications stating age, qualifications and
experience must be accompanied by copies of not
more than three recent testimonials and must
reach the undersigned not later than April 15th in each
year. Appointment of County Medical Officer of
Health.

Further particulars of the conditions of the
appointment may be obtained from me on receipt
of a stamped and addressed foolscap envelope.

Canvassing directly or indirectly will be deemed
a disqualification.

HAROLD KING

Clerk of the County Council

County Hall Taunton

March 19th 1937

NOTTINGHAMSHIRE COUNTY COUNCIL PUBLIC HEALTH DEPARTMENT

ASSISTANT SCHOOL MEDICAL OFFICER (Male)

Applications are invited from duly qualified and
registered Medical Practitioners for the post of
Assistant School Medical Officer.

Candidates must possess a Diploma in Public
Health and must have had at least three years
experience since qualification.

The salary will be at the rate of £700 per annum
rising by annual increments of £25 to £750 with
travelling allowances in accordance with the County
Council's Scale.

Forms of application and condition of the
appointment may be obtained from me and
applications accompanied by copies of not more
than three recent testimonials should be for-
warded in the County Medical Officer, Shire Hall,
Nottingham not later than April 15th 1937.

K. TWIFFDALE M.B.A.

Clerk of the County Council

Shire Hall Nottingham

March 23rd 1937

COUNTY COUNCIL OF DURHAM EDUCATION DEPARTMENT

ASSISTANT SCHOOL MEDICAL OFFICER

The County Education Committee invite ap-
plications for the post of ASSISTANT SCHOOL
MEDICAL OFFICER (Male) to act as the School
Medical Officer in connection with the medical
care of school children and such other duties as may
be required by the Education Committee.

The salary is £700 per annum (provided the candidate
had not less than three years' post-graduate ex-
perience) rising by annual increments of £25 to
£750 per annum together with travelling etc. ex-
penses according to the County Scale.

The successful candidate will be required to devote his
whole time to the duties of the office and to re-
side near the district to which he will be ap-
pointed. The appointment will be subject to a
probationary period of one year on either side.

Applications should be sent to the Education Com-
mittee, County Council Offices, Durham, not later
than the last day of any calendar month. Applica-
tions must have had experience in the work of a
School Medical Officer and preference will be given
to candidates who have had experience in the work of a
School Medical Officer.

Applications may be obtained from the County
Education Committee, County Council Offices, Durham,
on condition of depositing the fee of 10s. 6d. in
advance. The fee will be refunded if the candidate
is not appointed. The fee will be refunded if the
candidate is not appointed. The fee will be refunded
if the candidate is not appointed.

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy and applications are invited for entry in July, 1937

Candidates must not be above the age of 26 years and must be registered under the Medical Act. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board.

Selected Candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty.

At the end of three years' service officers may retire with a gratuity of \$400, but those who serve for five years will receive £1,000.

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career.

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate Study.

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than May 31st 1937.

CITY OF BIRMINGHAM

COUNTY BOROUGH OF WEST BROMWICH
HALLAM HOSPITAL (472 Beds)

COUNTY BOROUGH OF DAVENPORT
EDUCATION COMMITTEE

BOROUGH OF CAMBRIDGE.

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER.

The Council invite applications from duly qualified Medical Practitioners registered in the Medical Register as holders of a Diploma in Sanitary Science, Public Health or State Medicine and who are not over 45 years of age for the appointment of Medical Officer of Health and School Medical Officer of this Borough. The appointment is subject to the provisions of the Local Government Act 1933, the Sanitary Officers (Outside London) Regulations 1934 and the Local Government and Other Officers Superannuation Act 1922.

The person appointed will be required to perform all the duties imposed on a Medical Officer of Health under relevant Acts and Orders to undertake administration of the school medical service, maternity and child welfare service to act as medical superintendent and medical attendant of the Infectious Diseases Hospital and will also be required to carry out such other duties as the Council may with the consent of the Ministry of Health (where necessary) from time to time direct.

The person appointed must reside within the Borough, devote his whole time to the duties of the office and shall not hold any other appointment without the consent of the Council.

The successful candidate will be required to pass satisfactorily a medical examination.

The commencing salary will be £1,000 per annum rising by annual increments of £50 to £1,200 per annum with an allowance for the use of a motor car in accordance with the scale prescribed by the Council.

One month's annual holiday will be allowed. A list of the duties and form of application will be supplied on application to the undersigned.

Applications on the prescribed form accompanied by not more than three recent testimonials and endorsed Appointment of Medical Officer of Health must be delivered to the undersigned on or before April 1st.

Candidates either directly or indirectly will be disqualified.

The Guildhall Cambridge
C. H. KEMP Town Clerk
March 27th 1937

AMENDED ADVERTISEMENT

COUNTY COUNCIL OF ESSEX AND URBAN DISTRICT COUNCIL OF THURROCK.

Appointment of Lady Assistant County Medical Officer and Assistant Medical Officer of Health.

Applications are invited for the undermentioned appointments—

	Commencing Salary Per annum
Assistant County Medical Officer	£200
Assistant Medical Officer of Health for the Urban District of Thurrock	£300
	£500

Applicants who should not be over 45 years of age must be duly qualified Medical Practitioners with special experience in Obstetrics and hold a Diploma in Public Health.

The person appointed will be required to pass a medical examination and to contribute to the funds established by each authority under the Local Government and Other Officers Superannuation Act 1922.

The total salary of the person appointed will be subject to satisfactory service by annual increments of £25 to £700 per annum. If the person appointed undertakes on behalf of the Urban District Council of Thurrock attendance at a Women's Welfare Clinic an additional £12 per annum will be payable to her by the District Council. A travelling allowance of £15 per annum is payable by the Urban District Council of Thurrock.

The appointment to the Office of Assistant County Medical Officer will be subject to the Sick Pay Rules and Regulations of the County Council, a copy of which will be forwarded on request. Applications on the prescribed form (obtainable from the undersigned) should be delivered at the County Hall, Chelmsford not later than Monday April 19th 1937.

F. S. HOLCROFT
Clerk of the County Council
A. L. POOL
Clerk to the Urban District Council of Thurrock

County Hall
Chelmsford
Apr. 2nd 1937

ROYAL CORNWALL INFIRMARY, TRURO.

HOUSE SURGEON (Male) The Royal Cornwall Infirmary, Truro, is seeking a qualified and experienced House Surgeon to take up duties on May 1st next. Salary £120 per annum, board and lodging, and a motor car. Applications should be sent to the undersigned on or before April 15th 1937.

W. L. CORNFIELD, Secretary.

BOROUGH OF MORLEY.

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER.

Applications are invited from registered medical practitioners (male or female) for the above-named post. It is desirable that applicants should hold a Diploma in Public Health.

Applicants should have had at least three years experience in the practice of their own profession and have had special experience in Maternity Child and Infant Welfare work and in the administration of Dental and other Anaesthetics.

The person appointed will be required to work under the direction of the Medical Officer of Health and School Medical Officer and to devote the whole of his or her time to the duties of the office which will consist chiefly of School Medical Maternity and Child Welfare work together with such other duties in the Public Health Department as may be required.

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination.

Salary will be at the rate of £300 per annum rising subject to satisfactory service by annual increments of £25 to £700 per annum. The appointment will be determinable by one month's notice on either side.

Forms of application may be obtained from the undersigned to whom they should be returned completed in a sealed envelope endorsed Assistant Medical Officer together with copies of three recent testimonials on or before April 21st 1937.

E. V. FINNIGAN Town Clerk.
Town Hall
Morley
March 25th 1937

THE BRITISH PHOSPHATE COMMISSIONERS
BUSH HOUSE ALDWYCH
LONDON W.C.2.

Applications are invited from unmarried gentlemen for the post of ASSISTANT MEDICAL OFFICER at Ocean Island, Gilbert and Ellice Island Colony, Central Pacific. Candidates should be under thirty years of age and possess a British degree or diploma in medicine and surgery. It is very desirable that applicants have held general hospital appointments since qualification.

The climate of Ocean Island is very healthy. There is a fully equipped hospital and operating theatre. Salary is at the rate of £500 p.a. Australian currency with free board and lodging. The appointment is for a period of four years and is renewable. First-class ocean passages will be provided to and from the islands.

On completion of 2 years service at the Island 2 months leave on full pay is allowed in Australia or New Zealand. If after 4 years service the employee is re-engaged for a further four years he is allowed 3 months holiday on full pay in England. Applications with copies of three recent testimonials should be submitted not later than Wednesday April 7th 1937 to the London Manager British Phosphate Commissioners from whom full particulars of the appointment may be obtained.

CITY OF LEICESTER

RESIDENT MEDICAL OFFICER

The Health Committee of the City of Leicester invite applications for the position of a Resident Medical Officer (male) at their CITY GENERAL HOSPITAL for a period of six months renewable if satisfactory for a further six months.

The Hospital is a modern building with 450 beds and four Resident Medical Officers.

The work apart from the Orthopaedic Department is chiefly medical but there is however some general surgical work.

Salary £300 per annum together with full residential emoluments.

Further particulars of the appointment may be obtained from the undersigned and application forms to be supplied) accompanied by copies of three recent testimonials must be received not later than April 14th and marked "R.M.O." addressed to the undersigned.

Health Department, F. K. MACDONALD
City House Medical Officer of Health
Leicester April 1st

GENERAL INFIRMARY, SALISBURY.

(No. 1000 Hospital 191 New road to centre of city)

RESIDENT MEDICAL OFFICER (Male) required to commence duty June 1st 1937.

The appointment is for one year renewable at three months if satisfactory period with the post office.

Candidates must have held at least one appointment as a Resident Medical Officer at a General Hospital at Home or Abroad and must be a member of the Medical Council of the United Kingdom. Applications should be sent to the undersigned on or before April 15th 1937.

A. G. A. MAJOR, Secretary to the Health Committee, City of Salisbury, 1, The Arcade, Salisbury.

LONDON COUNTY COUNCIL.

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing to undermentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade I).—Salary £350—£450 with board, lodging and washing.

(a) PADDINGTON HOSPITAL, Harrow Road W.9.—Duties mainly medical. Experience of anaesthetics and paediatrics desirable.

(b) ST. ANDREW'S HOSPITAL, Devon Road Box E.3.—General duties and those of a casualty officer. Surgical experience desirable.

(c) ST. CLEMENT'S HOSPITAL, "a" Box Road E.3.—(A special allowance of £50 a year (subject to review) is attached to this position.) Officer appointed will act as deputy to Medical Superintendent. Duties mainly medical. Mental experience desirable.

(d) ST. GEORGE IN THE EAST HOSPITAL, Raine Street Wapping E.1.—(3 positions.) Duties of one position mainly medical and of other surgical, obstetrical and gynaecological.

ASSISTANT MEDICAL OFFICERS (Grade II).—Salary £40 a year together with board, lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(a) LEWISHAM HOSPITAL, Lewisham S.E.13.—(3 positions.) Duties of one position mainly surgical other two positions duties mainly medical including anaesthetics and of one obstetrical.

(b) PADDINGTON HOSPITAL, Harrow Road W.9.—Duties mainly medical including anaesthetics.

(c) ST. GEORGE IN THE EAST HOSPITAL, Raine Street Wapping E.1.—Duties mainly medical. Experience in anaesthetics desirable. No accommodation for a woman.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2A County Hall S.E.1 returnable by April 19th. Caravansing disqualified.

ROYAL NATIONAL SANATORIUM
BOURNBOUTH.

Applications are invited from male medical practitioners for the following appointments—

MEDICAL SUPERINTENDENT.

Applicants must have had practical experience in the treatment of Pulmonary Tuberculosis and done responsible sanatorium work.

The successful applicant will be required to reside in close proximity to the Sanatorium and must devote his whole time to the duties of his office and will not be allowed to engage in private practice. He will be required to pass a medical examination.

The salary is £100 per annum rising by annual increments of £5 to £900 per annum.

The appointment will be terminable by three months' notice on either side with not more than three recent testimonials (copies of qualifications and experience should reach the Secretary not later than April 2nd).

The Sanatorium has 95 beds for the treatment of pulmonary tuberculosis and is fully equipped in all methods of treatment.

RESIDENT ASSISTANT MEDICAL OFFICER.

Salary £100 per annum with board, residence and laundry.

Experience in pulmonary tuberculosis desirable.

The appointment will be for one year (renewable). Duties to commence on May 1st.

Applications with full particulars and copies of recent testimonials should be addressed to the Secretary.

A. G. A. MAJOR, Secretary.

COUNTY BOROUGH OF EAST HAM AND SOUTHWOLD SEA.

RUNWELL HOSPITAL.

St. Mary's Road, Essex (101 beds).

ASSISTANT RESIDENT PHYSICIAN.

Applicants are invited for the post of Assistant Physician in the above new 112-bed hospital for a term of one year.

Salary £300 rising by annual increments of £10 to £400 per annum plus furnished quarters, board, attendance and laundry valued for taxation at £100. An annual £100 will be paid on 1st January and 1st July. Applications should be sent to the undersigned on or before April 15th 1937 and must be accompanied by three recent testimonials (copies of qualifications and experience should reach the Secretary not later than April 2nd).

The Hospital is a modern building with 112 beds and is fully equipped in all methods of treatment.

Forms of application may be obtained from the undersigned and application forms to be supplied) accompanied by copies of three recent testimonials must be received not later than April 14th and marked "R.M.O." addressed to the undersigned.

Health Department, F. K. MACDONALD
City House Medical Officer of Health
Leicester April 1st

ROYAL BERKSHIRE HOSPITAL READING (338 beds)

Applications are invited for the following resident appointments:

One HOUSE SURGEON (male) Immediately
One CASUALTY OFFICER (male) Immediately
One HOUSE SURGEON TO THE SPECIAL DEPARTMENTS (Eye, Ear, Nose and Throat) (male) Vacant May 1st

Appointments are for six months, and candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum with board residence and laundry.

Applications stating age and experience with copies of testimonials, to be sent to the undersigned as soon as possible.

H. E. RYAN
Secretary and House Governor

ROYAL SUSSEX COUNTY HOSPITAL BRIGHTON

Applications are invited for the office of HONORARY CLINICAL ASSISTANT to the Early Venous Disorders Department from Ladies or Gentlemen who are Fellows Members or Licentiates of the Royal College of Physicians of London, Edinburgh or Ireland or Graduates in Medicine of one of the Universities of the British Empire and who are duly registered under the Medical Acts.

Further particulars of terms of appointment and duties may be obtained from the undersigned and applications must reach the undersigned at the Hospital before 12 noon on April 24th.

L. L. W. LANCASTER-GAYE, Sec. Supt.

THE GUEST HOSPITAL DUDLEY (General Hospital—107 Beds—shortly to be increased to 160 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

SECOND HOUSE SURGEON (Male) required to commence duty on 2nd May 1937. Salary at the rate of £120 per annum with furnished apartments, board and laundry. Duties are of a general nature, more especially Surgical and Ophthalmic work and administration of Anaesthetics. Applicants stating age, qualifications and experience accompanied by copies of testimonials to be sent to the undersigned.

H. RAYMOND HURST
House Governor and Secretary

24th March 1937

THE CORBETT HOSPITAL, STOURBRIDGE (94 Beds and Special Departments)

Applications are invited for the post of HOUSE SURGEON which will be vacant on May 1st next.

The appointment will be for a period of six months terminable by six weeks' notice carries a salary at the rate of £100 per annum with board and laundry etc.

The Hospital has a special Visiting Staff and Resident Surgical Officer.

Applications giving full details of qualifications and experience accompanied by three copies of testimonials, should be addressed to the undersigned forthwith.

W. C. H. WESTON, Secretary
The Corbett Hospital, Stourbridge

VICTORIA HOSPITAL ACCRINGTON

The Governing Body of this Hospital invites applications for the post of HOUSE SURGEON. Candidates must be fully qualified and registered. Number of beds 50. Salary £150 per annum with board and laundry.

Conditions of appointment and particulars of duties may be obtained from the undersigned to whom applications with copies of testimonials should be sent.

Victoria Hospital, Accrington. J. KENSON, Secretary

BRISTOL ROYAL INFIRMARY

Applications are invited for the post of CLINICAL ANAESTHETIST to the Dental Department. Remuneration £150 per annum. Candidates who must be registered Medical Practitioners to send in their applications together with copies of not more than three testimonials to the undersigned.

ELLIS C. SMITH, Secy.
Box 1, Hingry, Glos.

NIWAPKA GENERAL HOSPITAL

Wanted a fully qualified RESIDENT HOUSE SURGEON (male) and a RESIDENT HOUSE SURGEON (female) for board residence and laundry. Applications to be sent to the undersigned.

Applications for the post of HONORARY ANAESTHETIST to the FORTHAMPTON HOSPITAL—Applications to be sent to the undersigned.

Applications for the post of HONORARY ANAESTHETIST to the FORTHAMPTON HOSPITAL—Applications to be sent to the undersigned.

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Applications for the post of HONORARY ANAESTHETIST to the FORTHAMPTON HOSPITAL—Applications to be sent to the undersigned.

VICTORIA HOSPITAL FOR SICK CHILDREN (INCORPORATED) PARK STREET HILL

The Board of Management of the above Hospital requires a RESIDENT HOUSE PHYSICIAN (male) at a salary of £120 with board residence and laundry to take up duties on May 1st 1937.

Applications with copies of recent testimonials stating age and qualifications and other particulars to be sent to the secretary not later than April 14th.

The present House Surgeon may apply for the post of House Physician. Candidates should state whether they wish to apply for either post. March 23rd 1937.

WEST HERTS HEMSTEAD (114 Beds—24 miles from London.)

Applications are invited for the appointment of a MALE JUNIOR, RESIDENT MEDICAL OFFICER to commence duties on or about April 1st next. Salary £120 with rooms board and laundry.

Particulars may be obtained from and applications stating essential particulars and enclosing copies of recent testimonials should be sent to once to—

ROBT. L. BUTTERFIELD
Clerk to the Hospital

THE JESSOP HOSPITAL FOR WOMEN Sheffield

The Board of Management invite applications for the post of HOUSE SURGEON (male) unmarried for a period of six months commencing at once.

Salary £100 per annum together with board residence and laundry.

Applications and testimonials should be addressed to the undersigned immediately.

DAVID OSWALD
Superintendent and Secretary

THE MOUNT VERNON HOSPITAL, NORTHWOOD MIDDLESEX (For the Treatment of Cancer)

There will shortly be a vacancy for a HOUSE SURGEON (Male or Female). Candidates must be fully qualified and registered. Salary at the rate of £150 per annum with board residence etc. Six months appointment. Applications with copies of three testimonials, to be sent to the undersigned on or before April 17th.

W. J. MORTON, Secretary
37 Fitzroy Square, W. 1

SCARBOROUGH NEW HOSPITAL YORKSHIRE (140 Beds)

Wanted TWO FEMALE HOUSE SURGEONS. Salary at the rate of £130 per annum together with board residence laundry etc.

Appointment for six months from May 1st.

Applications together with copies of not more than three testimonials to be sent to the Hon. Secretaries not later than first post April 7th.

THE SHEFFIELD ROYAL HOSPITAL (340 beds)

Applications are invited for a post on the RESIDENT MEDICAL STAFF. This is a teaching Hospital with insufficient local graduates to fill all vacancies. Salary at the rate of £80 per annum rising to £100 per annum in six months with board residence and laundry. Applications should be sent to—

W. H. BOOTH, Superintendent and Secretary

WORTHING HOSPITAL

There is a vacancy for the appointment of an OPHTHALMIC SURGEON for which applications are invited accompanied by copies of not more than three testimonials to be received not later than April 16th. Further particulars with a copy of the Statute Order for Ophthalmic Surgeons may be obtained from the undersigned.

17th March 1937. A. V. OASTON, Secretary

NOTTINGHAM AND MIDLAND FIVE INFIRMARY

RESIDENT HOUSE SURGEON (male) required for the Large Out-patient Department. Salary £200 per annum with board and laundry. Post to be filled by 1st June.

Applications with copies of three recent testimonials to be sent to the Secretary, The Remondale, Nottingham.

BURTON INFIRMARY

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

MANCHESTER ROYAL INFIRMARY HOUSE SURGEON (GURAL, GYNÆ, COLOGICAL AND OPHTHALMIC DEPARTMENTS)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment vacant on May 15th 1937. Applicants must hold a Medical and Surgical Qualification and be registered.

The appointment is for six months subject to the By-laws as to notice etc. Salary at the rate of £50 per annum with board residence and allowance for laundry.

Applications stating age to be sent to the Chairman of the Medical Board not later than Thursday April 13th 1937.

BY ORDER
W. R. TINDALE
Gen. Supt. and Sec.

MANCHESTER ROYAL INFIRMARY HOUSE SURGEONS 4 VACANCIES

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointments vacant on May 15th 1937. Applicants must hold a Medical and Surgical Qualification and be registered.

The appointment is for nine months subject to the provisions of the By-laws as to notice etc. Salary at the rate of £50 per annum with board residence and allowance for laundry. Applications stating age to be sent to the Chairman of the Medical Board not later than Thursday April 13th 1937.

BY ORDER
W. R. TINDALE
Gen. Supt. and Sec.

ROYAL SOUTHERN HOSPITAL, LIVERPOOL 8

WANTED IMMEDIATELY

HOUSE SURGEON TO THE ORTHOPAEDIC DEPARTMENT

The salary for the above appointment is £60 per annum with board and residence.

The appointment will be for six months.

Applications and copies of testimonials to be sent to the undersigned as early as possible.

FRANK SOLMAN
Superintendent and Secretary

BURSLY HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL HIGH LANE TUNSTALL STOKES-ON-TRENT

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN. Salary £100 per annum with board residence and laundry.

The appointment is for six months in the first instance re-appointment may be applied for.

Applications stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

C. E. LOWNDIS, Secretary

LEEDS PUBLIC DISPENSARY AND HOSPITAL

Applications are invited for the posts of—
1 CASUALTY OFFICER and HOUSE SURGEON (male)
2 HOUSE PHYSICIAN (male)

Appointment for six months. Salary at the rate of £100 per annum with board residence and laundry. Applications with copies of three recent testimonials to be sent on or before Monday April 1st addressed to the undersigned, Furze D. primary and Hospital, North Street, Leeds 4.

CHARLES J. MAURY, Secretary and Superintendent

ANCOATS HOSPITAL MANCHESTER

Applications are invited for the post of 1st time RADIOLOGICAL OFFICER (non-resident) to commence duty on May 1st next. Salary £100 per annum with luncheon and tea. The appointment is for twelve months and is renewable. Candidates must hold a B.Sc. in Physics. Applications stating age and particulars of qualifications and experience to be forwarded to the undersigned on or before April 15th together with copies of three recent testimonials.

By Order of the Board
HUBERT J. DARTON, Secy.

LEIGH INFIRMARY

Wanted a JUNIOR RESIDENT HOUSE SURGEON (male) to commence duty on May 1st next. Salary £100 per annum with board and laundry. Good working hours. The post is a full-time one.

The appointment is for six months. Applications with copies of three recent testimonials to be sent to the undersigned on or before April 15th.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (female) to be sent to the undersigned.

Applications for the post of HOUSE SURGEON (male) to be sent to the undersigned.

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE (continued)	CONTRACT PRACTICE (continued)
ABERTYSWYG MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA CYNDACH VALL PENYGRAIG GLA IORCAN (Workmen's Medical Scheme)	D. MORE VALLTY CLAYTON (Workmen's Medical Scheme)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
GRANTHAM FRIENDLY SOCIETIES MEDICAL INSTITUTE (Medical Officer)	NEATH AND DISTRICT (Medical Aid Association)	CARMARTHENSHIRE COUNTY COUNCIL (Assistant County Medical Officer)
INVICTA MEDICAL BENEFIT SOCIETY CILLINGHAM (Union Medical Officer)	OAKDALE, MON. (Medical Officer for Medical Aid Association)	LEINSHIRE COUNTY COUNCIL (County Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Sq., W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (All Friendly Societies' Appointment)	The Medical Secretary New South Wales Branch, 13 th Macquarie St. Sydney N.S.W.	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victoria Branch British Medical Association Medical Society, 111 Albert St. La Trobe Victoria	WESTERN AUSTRALIA (Contract and Locum Tenens)	Hon. Sec. Western Australia Branch, 1 st St. Perth Western Australia
QUEENSLAND (All Friendly Societies' Institute)	The Hon. Sec. Queensland Branch Medical Association B.M.A. Building, Adelaide St. Brisbane				

March 31, 1937

By Order of the Council

G. C. ANDERSON, Medical Secretary

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£1,000 p.a. Panel over 400 Fees 2/6
to 10/6 Premium £1,400 Charming house
2 rec 6 bed surgery etc 1 ac. Price
£2,300—7
- LONDON W.—ABOUT £1,000 P.A. SMALL
selected panel Middle and better-class
Premium £1,250 2 recep 4 bed Coms
Wait c.c. large garden Rent £200 inclu on
lease—8
- SURREY—£1,500 P.A. PANEL 400 GOOD
class family PRACTICE. Fees 10/6 up
Premium 1 1/2 years purchase Charming house
(3 recep 6 bed) and good garden. For sale
freehold—9
- LONDON S.E. NEAR OVAL—CASH PRAC-
TICE. £500 p.a. Panel 500 increasing
rapidly Ample scope—rehousing area House
with 3 1/2 bedrooms, etc Rent £80 p.a.—10
- KENT—OVER £600 P.A. PANEL WORTH
£220 approx Fees 3/6 to 10/6 Several
appts House 3 recep 4 bed etc garden
Rent £70 p.a.—11
- EASTERN COUNTY—1/3 OF OVER £2,000
p.a. Panel nearly 1,800 Very old-estab
Practice Premium 2 years purchase or near
House £55 p.a. 4 bed 2 recep surgery etc
and large garden—12
- S COAST—£850 RAPIDLY INCREASING
Panel about 600 Club £100 p.a. Little
mildly Good accom on rental Premium
£1,000—13
- LONDON S.W. SUBURB—AVERAGE £1,600
p.a. Panel 700 Ample scope Visits
3/6 up Premium 2 years purchase or
offer—14
- ESSEX SUBURB—ABOUT £1,400 P.A.
Medium panel Fees 3/6 up Prem 2
years purchase Detached house (4 bed etc)
Sell or let—15
- OUTER S.W. SUBURB—£1,100 P.A. PANEL
Club £450/£500 p.a. and appts
Premium £5,000 Detached house 2 recep 4
bed surg etc garage and yard £2,000—16
- HANTS—COUNTRY PRACTICE ABOUT
£1,900 p.a. steadily increasing and scope
Old-estab. Panel 1,300 Clubs £110 Two
houses available. Would suit two friends in
partnership—17
- ESSEX SUBURB—AVERAGE £600 P.A. AND
E ample scope to young active man Panel
410 Visits 4 up House on arterial road
2 recep 4 bed etc Rent £90 p.a.—18
- LONDON S.E.—RAPIDLY INCREASING
PRACTICE in good position New £700
p.a. Panel £200 Easy worked Premium
£1,800 or near offer Freehold house av. etc
P.a. only £200—19

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FULL TERMS ON APPLICATION

Practices and Partnerships for Disposal

Full particulars sent free

1 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London. Panel 900. Well built house (5 bedrooms etc.) available for sale. One third or two fifths share at two years' purchase.

2 OXFORD—Small non dispensing PRACTICE Receipts 1916 £303 including Appointment worth about £10 p.a. and a panel of 100. Fee 5/ to £1 1s. Good detached house (4 bedrooms etc.) to rent on lease. Premium £303.

3 N MIDLANDS—Partnership in old-established country Practice averaging over £3,000 p.a. close to county town. Panel over 1,800. Visits 3 6 to 10 6 and a few at £1 1s. Medicine extra. Specially built house in very pleasant district (6 bedrooms) garage and quarter acre garden for sale or might be rented. Scope for increase as building is going on. Premium one third share two years' purchase to include share of drugs, etc.

4 HOME COUNTIES—Old established good class easily run PRACTICE in a beautifully situated country district. Cash receipts average over £1,570 p.a. Panel just over 500. Visits 3 6 to £1 1s. Medicine extra. Nice house (6 bedrooms) with main electric light gas and water 2 garages and 4 acre of garden for sale. Premium 2 years' purchase. Good Hospital in district.

5 MIDLANDS—Partnership in old established Practice averaging over £1,850 p.a. in manufacturing town. Panel 1,600. Visits 5/ to £1 1s. A suitable house could be obtained. A one third share would be sold at first at 2 years' purchase. In one partner must be experienced in general practice and surgery—one preferably holding the F.R.C.S.

6 SE COAST—Old-established middle and working-class non-dispensing PRACTICE averaging £1,800 p.a. in favourite summer resort. Panel 1,600. Visits 3 6 to 10 6. House (5 bedrooms etc.) good garage and small garden for sale. Scope for young energetic man. Premium 2 years' purchase.

7 S OF ENGLAND—Well established Practice averaging nearly £1,500 p.a. in a sea-side town. Panel over 700. Visits 3 6 to 10 6. Very little medicine. Good corner house (5 bedrooms) with central electric light gas and small garden for sale. Well equipped. Hospital at Good. One third share at two years' purchase.

8 DEATH VACANCY—LONDON SW 1—Old established PRACTICE Receipts 1914 £1,400. Panel 1,200. Visits 3 6 to 10 6. House (5 bedrooms etc.) good garage and small garden for sale. Scope for young energetic man. Premium 2 years' purchase.

9 N WALES WATERING PLACE—Partnership in old established Practice averaging over £1,500 p.a. in a sea-side town. Panel over 700. Visits 3 6 to 10 6. Very little medicine. Good corner house (5 bedrooms) with central electric light gas and small garden for sale. Well equipped. Hospital at Good. One third share at two years' purchase.

medicine—some £1 1s. Detached house (4 bedrooms etc.) with good garage and small garden to rent on lease. Scope Premium one half share £1,900 to include surgery fittings drugs and book debts. Hospital.

10 LONDON W 2—Practice averaging over £800 p.a., including panel 165. Consultants 5, upwards. Private residence to rent at £120 p.a. and surgery room at £60 p.a. Scope for increase. Premium two years' purchase.

11 S W OF ENGLAND—Partner required in well established good-class non-panel Practice in favourite Health Resort. Suitable house to rent. Must have experience in General Practice and Good Gynaecological knowledge is preferred. A share worth about £1,200 or £1,800 p.a. is for disposal at two years' purchase.

12 LONDON SW—Partnership in well established working-class Practice nearly £3,150 p.a. in favourite Suburban District. Panel 3,000. One fourth share would be sold at first at two years' purchase.

13 S W OF ENGLAND—Partnership in well established mixed Town Practice about £4,200 p.a. Panel 1,900. Visits 2 6 to £2 2s. Medicine extra. Detached house (5 bedrooms) with large garden garage etc. for sale. One fourth or one third share at first at two and a quarter years' purchase. Applicant who must be experienced in General Practice and major surgery—F.R.C.S. preferred—would be appointed to Staff of Hospital.

14 LONDON W—Practice of about £700 p.a. in residential district. Panel 500. Large corner house (7 bedrooms) with separate surgery, entrance and good garden. Price of lease £1,350. Scope. Premium £1,550.

15 MIDLANDS—Partnership in old-established increasing Practice in pleasantly situated Country Town. Good appointments and panel. Visits 3 6 to £1 11. Medicine extra. Suitable house obtainable. Income partner must be good Surgeon—F.R.C.S. or S.O.S. and 135 and preferably a F.R.C.S. Small well-equipped Hospital. 5/ worth £1,250 p.a. at first at two years' purchase.

16 S OF ENGLAND—Partnership in old established mixed Practice over £4,500 p.a. in beautiful town. Panel over 2,500. Visits 3 6 to £1 11. Medicine extra. Very attractive well built house with central heating, garage and well-kept garden. Price of lease £1,350. Scope. Premium £1,550.

17 MIDLANDS—Old-established Practice in clean town. Receipts 1914 £1,400. Panel 1,200. Visits 3 6 to 10 6. House (5 bedrooms etc.) good garage and small garden for sale. Scope for young energetic man. Premium 2 years' purchase.

18 S OF ENGLAND—Partnership in old established Practice averaging over £1,500 p.a. in a sea-side town. Panel over 700. Visits 3 6 to 10 6. Very little medicine. Good corner house (5 bedrooms) with central electric light gas and small garden for sale. Well equipped. Hospital at Good. One third share at two years' purchase.

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)
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TAVISTOCK SQUARE, WC1

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1645

Practices and Partnerships for Disposal (continued)

19 N DEVON—Old established Practice averaging over £1,050 p.a. in small Watering Place Panel about 400 Well built semi-detached house (3 bedrooms etc.) garden for sale Beautiful surrounding country All kinds of sport Scope Premium two years purchase

20 SW OF ENGLAND—Partnership in very old-established mixed Practice in flourishing Industrial District Cash receipts average over £3,200 p.a., including appointments and panel about 2,100 House, with 4/5 bedrooms garage and small garden for sale Good Hospital One third share at first with option of further shares later Premium two years purchase Short preliminary Assistantship

21 TASMANIA—Practice doing £1,500 a year, including good appointments Fees range from 10/6 to £1 1s House with 2 bedrooms etc., and garden for sale Purchaser should be able to do major surgery Premium £900

22 ESSEX—Old established Practice in outlying Suburban District Receipts average £2,125 p.a., including appointments worth about £260 p.a. and a panel of 1,784 Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance Garage and fair-size garden Rent £120 on lease Premium two and a quarter years pur Purchaser must be English Scottish or Irish

23 LONDON N—Well-established Practice averaging £450 p.a. in pleasant growing District Panel about 600 Well situated house on main road to rent at about £65 p.a. Good scope—building going on Premium £600 or offer to include surgery fittings and drugs

24 LONDON SE—Old-established Practice averaging over £850 p.a. in thickly populated district Panel 1,188 No midwifery House on main road (4 bedrooms) with separate entrance to surgery accommodation for sale or rent Good scope Premium £1,700

25 SURREY—Increasing middle and working-class PRACTICE in thickly populated Suburban District Receipts 1936 £1,720 Panel 660 Small house Rent £78 p.a. (branch £55 p.a.) Ample scope Premium £2,600

26 LANCS—Partnership in rapidly increasing mixed Practice about £3,200 in Manufacturing Town Panel over 2,700 Suitable house to rent One fourth or one-third share at first at two years purchase

27 ITALIAN RIVIERA—Small well established good-class non-dispensing Season PRACTICE Further particulars on application

28 SOUTH SUFFOLK—Partnership in sound old-established Practice over £6,000 p.a. in most desirable Country Town Good appointments and panel over 3,000 Not much midwifery Choice of suitable houses One sixth share at first at two years purchase

29 HOME COUNTY—Partnership in old-established non-dispensing Practice in good Residential District within 15 miles of London Suitable house to rent Share worth about £1,100 p.a. at two years purchase Scope for surgery if desired

30 SE COAST—Partnership in old-established country Practice within easy distance of a popular summer resort Cash receipts between £1,900/£2,000 p.a. including appointments and panel Large old historic corner house (6 bedrooms etc.) garage and garden for sale Scope district growing rapidly Premium one-half share two years purchase

31 LONDON, N—Medical Woman's Practice in populous district. Receipts average £560 p.a. including panel 470 House (4 bedrooms) to rent at £100 p.a. Premium £850

32 WITHIN 15 MILES (S) OF LONDON—Rapidly increasing PRACTICE in outlying suburban district. Cash receipts 1936 £2,100 including appointment and club worth over £500 p.a. and a panel of 2,400 Specially built house with 4 bedrooms, large garage and good garden for sale Branch surgery rented at 10/- weekly Ample scope Premium £5,000

33 ESSEX—Well established better working and middle-class PRACTICE averaging £600 p.a. in outlying Suburban District Panel 430 House on main road with small garden front and back Rent £90 p.a. on lease Good scope—building going on Premium £1,200 cash

34 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3,300 p.a. in Market Town No panel Fees 5/- to £1 1s Suitable house obtainable Premium one half share two years purchase

35 CO DURHAM—Well-established Practice about £1,100 p.a. in Residential Colliery District within easy distance of Newcastle Appointments worth £85 p.a. and panel 840 Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent Premium one and a half years purchase

36 N WALES WATERING PLACE—Good-class non-panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden Scope for panel work if desired Prem one year's purchase

37 HOME COUNTIES—Old-established Practice of £500 p.a. in first rate town 20 miles from London Panel over 500 Visits 5s No midwifery Modern nine roomed house with garage and attractive garden—about quarter of an acre Premium freehold house and Practice £2,000

38 ESSEX—Old established Practice in outlying suburban district run by two medical men averaging nearly £2,900 p.a. Panel 2,849 House (4 bedrooms etc.) for sale or rent Premium two and a quarter years purchase

39 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3,500 p.a. in an important town Appointments £250 Suitable house available to rent A one third share would be sold at two years purchase to a suitable man preferably one holding the MD or MRCP

40 LONDON SE—Old established Practice of about £1,000 p.a. in outlying residential district Panel 100 Detached house (4 bedrooms etc.) for sale Premium two years purchase

41 MIDLANDS—Old-established Practice of about £930 p.a. in country district Panel 530 House (7 bedrooms etc.) for sale Premium two years purchase

42 LONDON N—Old established Practice in suburban district Cash receipts 1936 (10 months) £1,450 Panel 1,240 increasing Fees 2/6 upwards Suitable house (9 rooms) to rent at £160 p.a. Premium £3,400

43 HOME COUNTIES—A small Practice about £400 p.a. in first rate town about 30 miles from London Panel 1-2 Visits mostly from 5/- House with small garden to rent 25s weekly Excellent scope Premium one and a half years purchase

Purchasers for cash are available for Practices with Incomes of £1,250 to £2,000 p.a.
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YORKSHIRE (W.)—Well-established mixed-class PRACTICE within easy reach of large city. Cash receipts last year £1 167 Panel 850 Good house 2 reception, 4 bedrooms, and maid's room, garage and garden Premium—Practice house and book debts—£3 000—No 934

LANCS TOWN—Very old-established mixed panel and private PRACTICE, partly in a semi-rural district. Average cash receipts £2,596 p.a. Panel nearly 2,000 Scope Nice modern house hall, 3 reception 5 bedrooms, 2 professional rooms garage and good garden Premium—Practice—1½ years purchase—No 925

SHEFFIELD—Old-established mixed-class PRACTICE. Cash receipts last year £1 112. Appointment (transferable) £100 p.a. plus bonus. Panel 600 Scope Detached house 2 reception 3 bedrooms, small garden Rent £52 p.a. Premium 1½ years purchase—No 940

MANCHESTER—Old established middle and better working class PRACTICE in present hands 34 years. Average cash receipts £1 082 p.a. Panel 470 Scope for energetic man Good house 2 reception 5 bedrooms, garage and large garden. Premium best offer Vendor retiring—No 875

EASTERN COUNTY—Partnership in old established Country PRACTICE with income of about £2,500 p.a. Panel 2,000 Excellent house 3 reception, 5 bedrooms, garage and good garden. Rent £60 p.a. Premium—half share—£2,200—No 933

LANCS TOWN—Old-established mixed Panel and Private PRACTICE. Cash receipts £1,200 p.a. Panel 900 Good house, 2 reception 4 bedrooms, 3 professional rooms garage Rent £70 p.a. Premium—best offer—No 910

CAMBRIDGESHIRE—Old-established PRACTICE in pleasant Country town. Cash receipts last year £817 Panel 450 Good house 3 reception, 3 large and 2 small bedrooms garage and garden of one acre Rent £60 p.a. Premium—£1,200 Vendor retiring—No 936

NEAR MANCHESTER—Old-established middle and better working-class PRACTICE in present hands 35 years. Cash receipts last year £1 851 Panel about 800 Good house 3 reception 4 bedrooms, garage and large garden Premium 1½ years purchase Vendor retiring—No 850

LIVERPOOL—Sound old-established mixed panel and private PRACTICE. Cash receipts about £2,800 p.a. Panel approx. 2,500 Scope Good house, 2 reception, 5 bedrooms, garage and small garden, to rent Premium best offer—No 927

NORTH WALES—PARTNERSHIP in old-established middle-class Practice in Seaside and Residential Town. Cash receipts £3 400 p.a. Panel 1 100 Good flat available for incoming Partner who should have had Hospital experience Local Hospital Short preliminary Assistantship Premium—one-third share—2 years' purchase Further share later—No 937

NORTH STAFFS—PARTNERSHIP in old-established mixed Panel and Private practice Cash receipts last year £5,521 Panel 7 500 Incoming partner may choose own residence.—Premium—2½th share—2 years purchase further share later—No 941

NEAR MANCHESTER—Old-established middle and better working-class PRACTICE in residential suburb at present held by Medical Woman but previously conducted by a man and suitable for either sex. Average cash receipts £1 600 p.a. Panel 400 Scope as district developing Good house 3 reception 5 bedrooms, garage for 2 cars and large garden Premium, best offer—No 923

DERBYSHIRE—Well-established Country PRACTICE. Cash receipts £600 p.a. including panel and transferable appointments £480 p.a. Good house 2 reception 5 bedrooms garage and garden. Electricity and water Rent £50 p.a. Premium £1 350—No 811

MANCHESTER—Middle and better-class PRACTICE in present hands 40 years. Cash receipts last year £2,151 Panel over 600 Good house 3 reception 6/7 bedrooms, garage, and garden Premium—Practice and house—£3 000 Long introduction if desired. Vendor retiring—No 838

LANCS TOWN—PARTNERSHIP in old-established mixed panel and private Practice in large town about 10 miles from Manchester. Gross earnings over £3 000 p.a. Panel over 2,000 Great scope House available Premium—½ share—2 years purchase Further share in 3½ years—No 931

YORKSHIRE (N.R.)—Old-established Country PRACTICE in beautiful district near to sea. Cash receipts last year £1,040 Panel 600 Commodious house 3 reception 6 bedrooms garage and large garden with tennis court Premium—Practice—1½ years purchase Vendor retiring—No 891

MANCHESTER—PRACTICE in industrial district in present hands 40 years. Cash receipts last year £840 Panel 904 Good corner house with ample accommodation to rent. Vendor retiring. Premium—1½ years purchase or near offer—No 855

NORTH WALES—Old-established PRACTICE offering scope. Cash receipts last year £843 Panel 761 Good surgery premises. Premium, best offer.—No 905

MANCHESTER—Well-established middle and working-class PRACTICE in suburban district. Cash receipts last year £1 630 Panel 1 100 Good house 2 reception 6 bedrooms 3 professional rooms (separate entrance) garden Rent £60 p.a. Premium—Practice—11 years purchase—No 911

DERBYSHIRE—PARTNERSHIP in old established Country Practice near to large town. Cash receipts last year £3 235 Panel 1 800 Scope as district developing. Attractive house specially built 2 reception 5 bedrooms, garage and large garden Electric light and main drainage Rent £80 p.a. Premium—one third share—2 years purchase—No 854

NORTH WALES—Old-established middle-class PRACTICE in beautiful Seaside and Country district. Average cash receipts £1 417 p.a. Panel 415 Well built house in good position, 3 reception 7 bedrooms, garage for 2 cars, and garden Good sport and educational facilities Premium—Practice—£2,100—No 929

AUSTRALIA—Four PRACTICES for sale all situated in Victoria. Cash takings from £1 100 to £2,500 p.a. with appointments Further particulars supplied on application

LANCS TOWN—PARTNERSHIP in old-established PRACTICE held by Indian Doctor. Cash receipts approx £3 350 Panel 2,770 Scope House available. Premium—1 or ½ share—best offer. Alternatively would sell separate Practice with income of £1 900 p.a. and a panel of 1 500—No 920

NEAR LIVERPOOL—Well-established middle-class PRACTICE in pleasant district. Ample scope as district developing. Cash receipts £800 p.a. Panel 650 Nice house 2 reception 5 bedrooms and garden. Premium 1 year 6 purchase Vendor retiring—No 928

MANCHESTER—Small PRACTICE capable of increase owing to area of illness of Vendor. Cash receipts about £600 p.a. Panel 600 House 2 reception, 4 bedrooms etc. Rent £39 p.a. Premium, best offer—No 912

NORTH WALES—Good-class PRACTICE in Seaside Town offering scope. Cash receipts £500 p.a. Excellent house 3 reception 4 bedrooms garage and nice garden. Premium 1 year's purchase—No 916

ASSISTANTS WANTED—OUTDOOR—YORKS (N.R.)—£450 p.a. plus car allowance 5 STAFFS—£450 p.a. plus car allowance for 2 and attendance MANCHESTER—£400 p.a. plus car allowance

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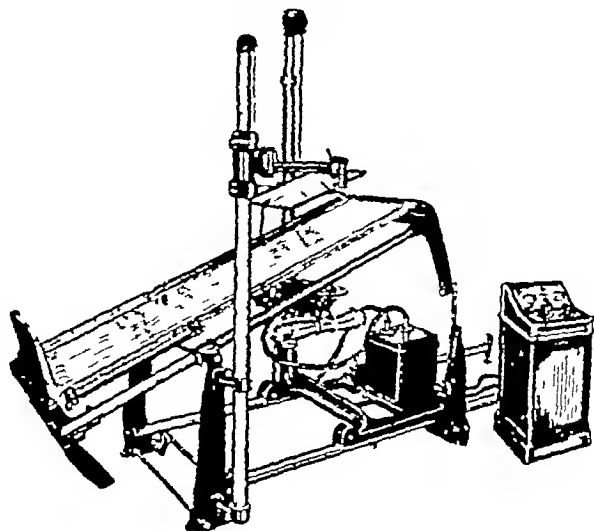
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BRITISH MEDICAL JOURNAL

APRIL 10 1937

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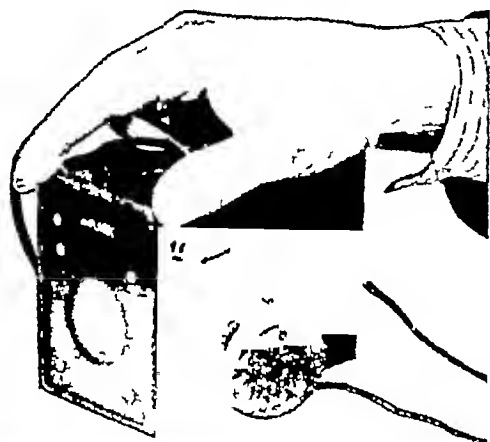
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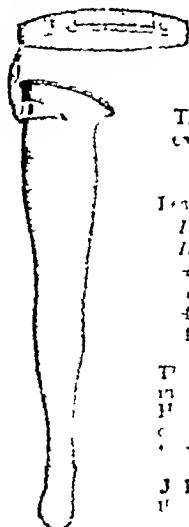
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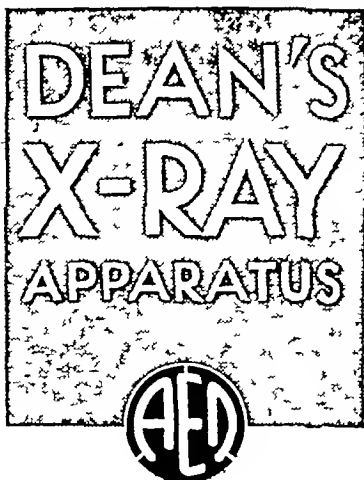
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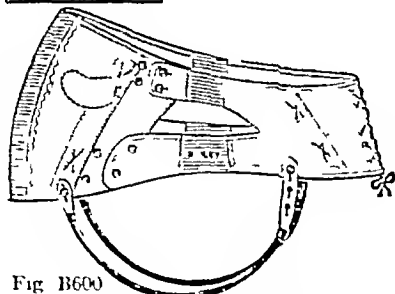


Fig B600

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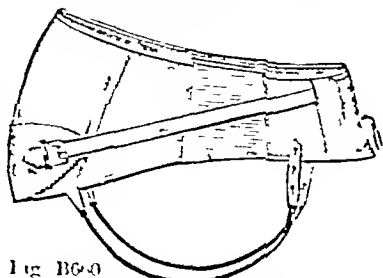


Fig B650

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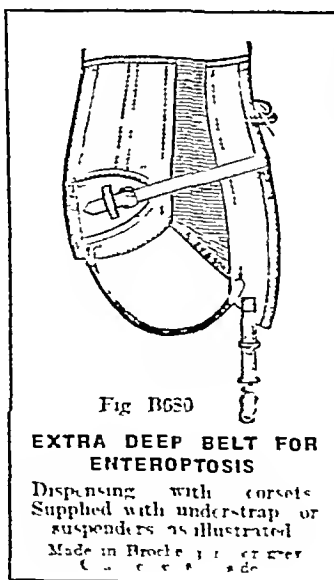


Fig B650

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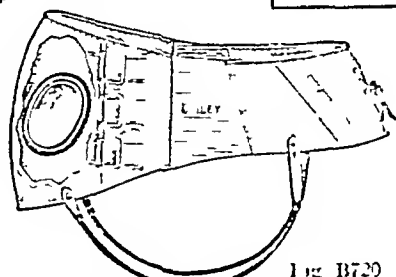


Fig B720

(Showing Interior of Cup)
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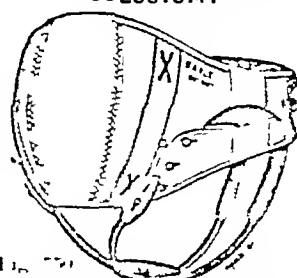


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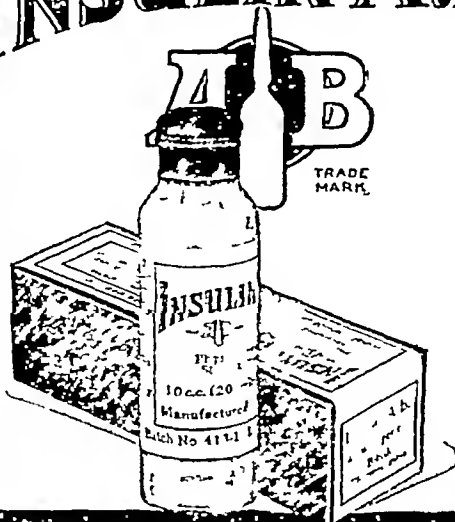
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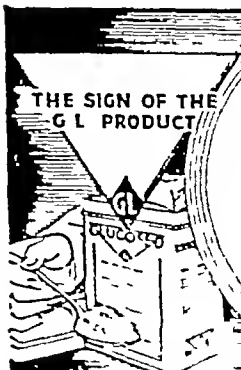
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Even the extremes meet in their need for (a) inward and accessible energy, i.e. glucose; (b) elements to nourish and control their nerve cell and reflexes, i.e. calcium and phosphorus; (c) vitamin D to ensure the assimilation of these elements. Glucose-D is richly supplied with all these components. Wherever glucose is prescribed, whether as a therapeutic agent or as a product for everyday use, Glucose-D is the preparation of choice.

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GLAXO

The digestive properties of **BREAD** are sometimes overlooked

It is well to remember these words of that great authority,
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"A diet of bread leads to the secretion of a smaller volume of gastric juice than a corresponding weight of meat produces, but the juice secreted under the influence of bread is richer in pepsin and acid, i.e., it has a greater digestive action than the juice produced by meat"

There is thus the digestive argument as well as the more usual recommendation of

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Mandelix is a concentrated elixir of ammonium mandelate in a highly palatable form, two fluid drachms of this elixir contain the equivalent of the full therapeutic dose of mandelic acid, its administration is now a standard method of practising mandelic therapy in urinary tract infections

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M. 157.



Radiostoleum provides an abundance of Vitamin A to ensure the correct functioning of the mucus-secreting elements and the maintenance of normal mucus membrane which thus presents 'a mechanical and chemical buffer against injurious agents'

(Can Med Assoc Journ, March, 1937, p 252)

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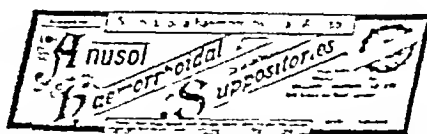
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'PANOPEPTON' is a food—agreeable—grateful, even to the very sick, requires no preparation

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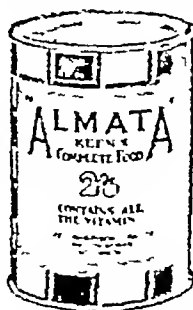
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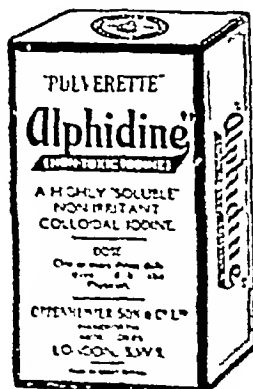
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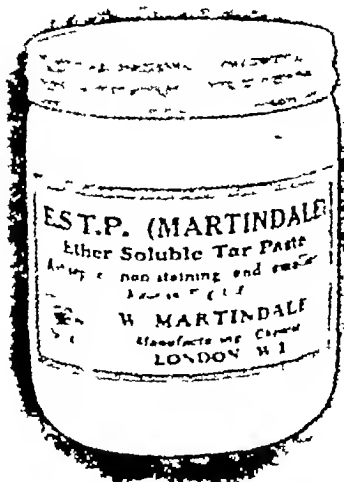
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New Cocoa Process means improved nutrition for the masses

THE desirability of increasing the nutritional value of the diet of the masses is too obvious to need emphasis here. Because it achieves this end without adding one penny to the cost of meals, we believe the new predigestion process now used in making Rowntree's Cocoa will be of real interest to every medical man.

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- ① Affords prompt relief from catarrh
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IN SICKNESS AND CONVALESCENCE

GODDESS
NEITH
Personifica-
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Power which
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M 278

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Ovaltine provides a satisfactory solution to the problem of alimentation in many cases of sickness and in the stage of convalescence after severe, prolonged and debilitating illnesses where an easily assimilable palatable and concentrated nutrient is required. It is always acceptable.

Ovaltine replaces with advantage the ordinary milk preparations which so often prove distasteful to the invalid. Prepared from full-cream milk, eggs and malt extract in carefully balanced proportions it provides complete nourishment in the most readily assimilable form.

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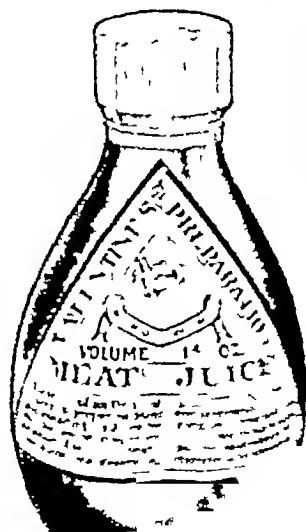
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Literature on request

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It is far from being a *hy* product. The juice is extracted from sun-ripened Dole-grown Hawaiian pineapples. The exclusive Dole Fast Seal Vacuum Packing Process brings it to you fresh, with no added sugar, no preservatives.

2 Where can I buy it?

At nearly all grocers.

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Yes, it is an item of infant diets in many hospitals. It is easily digested and assimilated. Here is a typical analysis of Dole Pineapple Juice.

Moisture	87.3%
Ash	0.4
Lat (ether extract)	0.3
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Titratable acidity (citric acid)	0.9
Reducing sugars (in 100 g)	1.1
Carbol. diastase (in 100 g)	0.38

(by difference)



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Only the purest and richest cows' milk, after special tests, is used in the preparation of Lactogen

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Thus Lactogen, which in proportions and in physical characteristics so closely resembles breast milk, is also the safest food that it is possible to obtain

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Please send Free Samples with detailed descriptive literature

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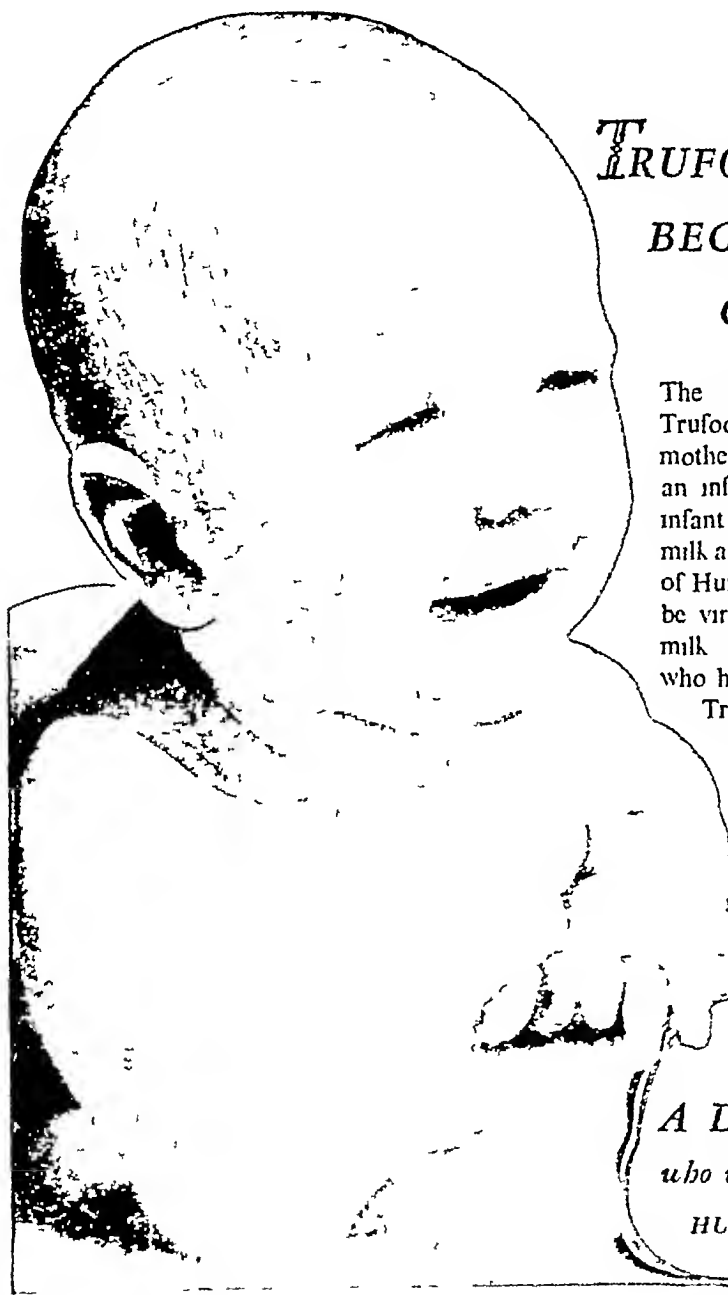
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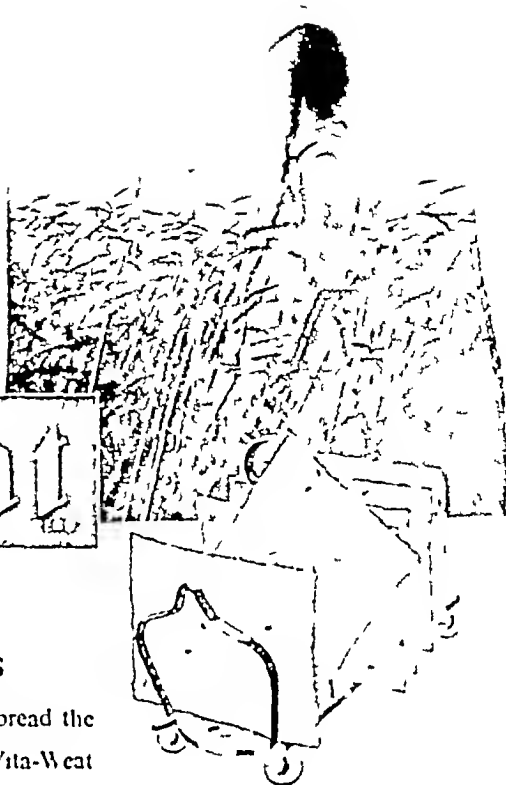
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Compound of Colloidal Phosphorus and Cod Liver Oil with 1/20 g C...

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An elegant and palatable general Aperient and Cholagogue specially recommended in cases of so-called Biliousness, Hepatitis and Chronic Gastritis.

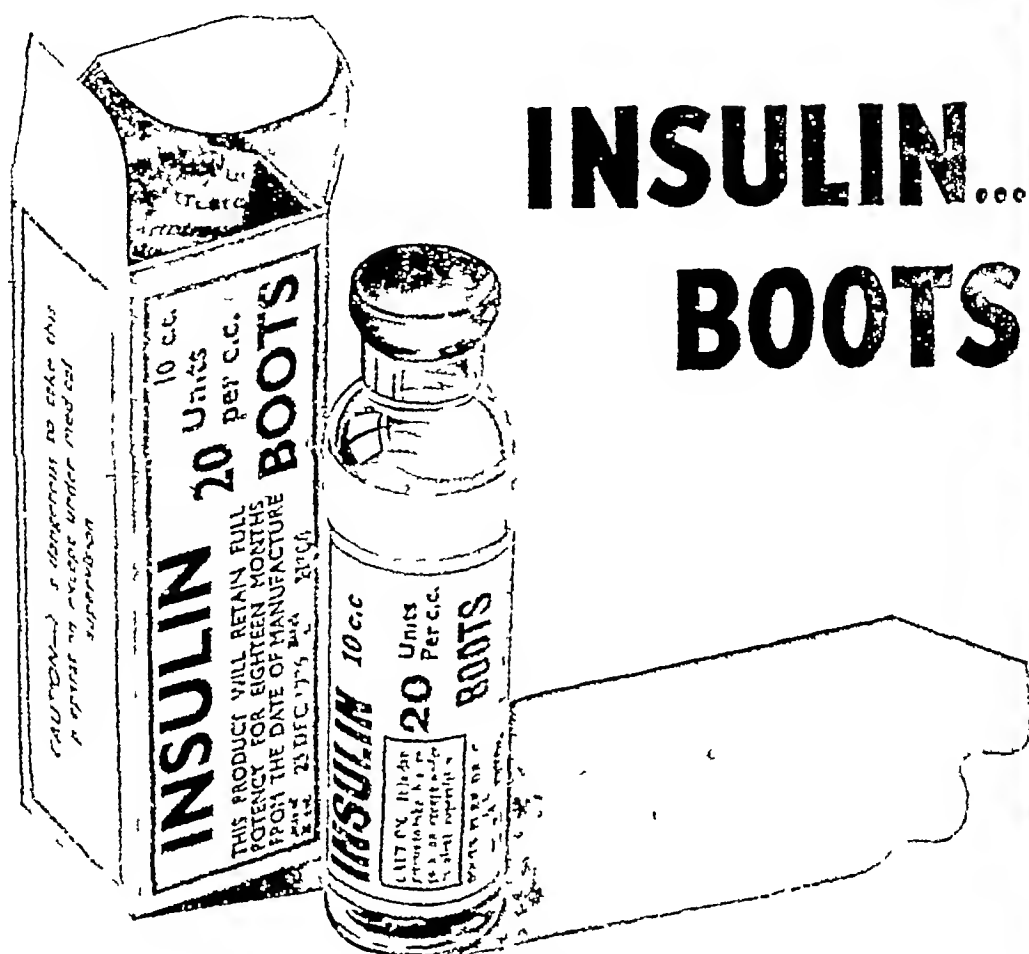
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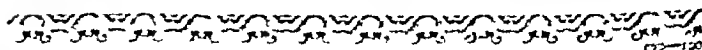


for Nursing Mothers prescribe

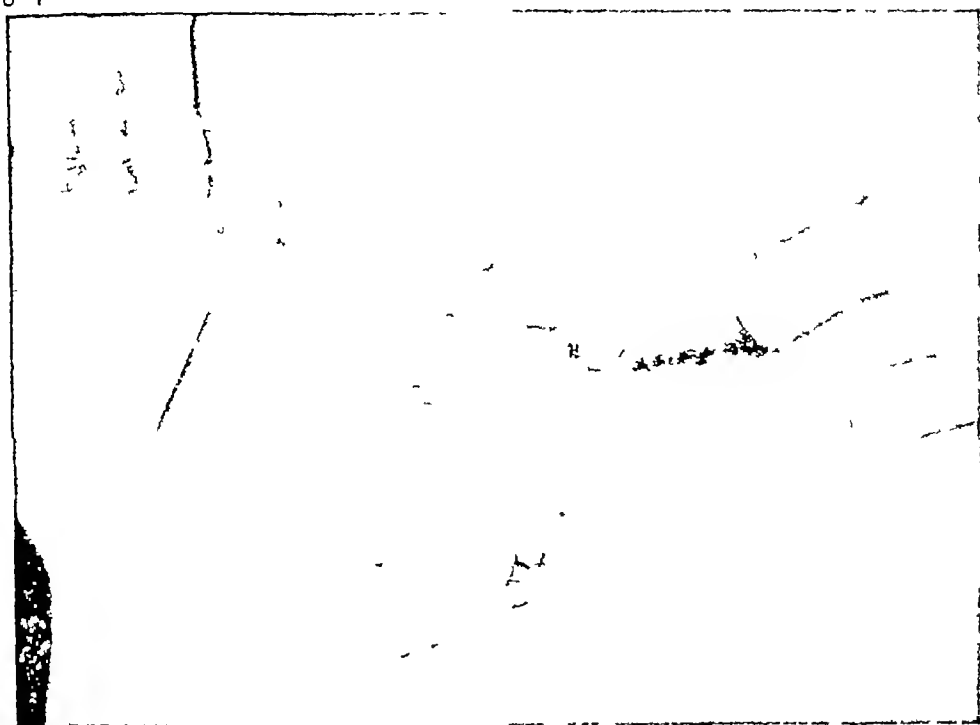
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THE WIDER FIELD OF APPLICATION

THERE are many conditions which are sequelæ of or accompaniment to diseases in which the administration of alkalis is of definite benefit

Hyperchlorhydria, hyperacidity, nervous dyspepsia, together with acidoses and ulcers of the stomach and duodenum have always been considered as conditions for which alkali medication is indicated, but there are also pathological manifestations far removed from these conditions which have been found to respond to proper alkaline medication

Clinical experience has shown that the alkalis chosen in BiSoDoL viz sodium bicarbonate and magnesium carbonate, are therapeutically an ideal combination. The sodium bicarbonate offers the system a readily available alkali and the insoluble basic carbonate provides pronounced alkalinizing powers against acidity as it arises. The mixture presents a combination of unusual buffering agents and avoids therefore the possible danger of alkalosis, which is associated with the administration of a single alkali.

The depletion of the alkali reserve and the consequent disturbance of the acid base balance of the body, caused by disease, can therefore be compensated for by the careful use of BiSoDoL.

While the formula of 'BiSoDoL' was originally evolved for the correction of acid conditions of the stomach, so suitable has it been found in balanced alkaline medication, that it is now largely prescribed in this wider field.

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kindly inform our Medical Department

BiSoDoL

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*Sodium Bicarbonate
Magnesium Carbonate
Sodium Pearl-mate
Pepsin
Licorice
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FOR

- Hyperchlorhydria
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- Pre and post-operative treatment
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- The common cold
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- Anæmia
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- Pyorrhœa
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(MIDGLEY)

Made to 49 separate formulae

The purpose of the "Medisoap" series of medicated soaps is to enable physicians to prescribe, in a pure saponaceous basis, the medicaments indicated in any particular case of skin disease

The formulae embrace the majority of the recognised medicaments which can be used effectively in this way. Each "Medisoap" had its origin in the prescriptions of dermatologists and the whole series has been revised from time to time in the light of accumulating medical experience. "Medisoaps" are therefore an important contribution to the therapy of the skin.

Our records show that the application of medicaments in this form is successful in a wide variety of skin diseases and there are well authenticated cases in which the method has succeeded in clearing up conditions which have defied other treatment.

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In order to expedite the selection of a "Medisoap" appropriate to any particular skin condition, we publish a Prescribers' Index to Medisoaps, which contains a clinical index and gives the full formulae. A copy of this Index will be posted on request.

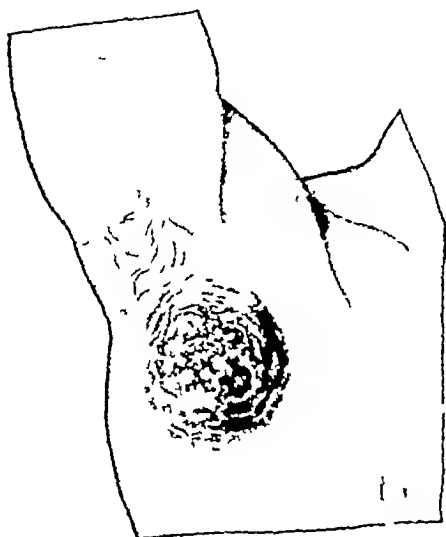
*Medisoaps' (Regd Trade Mark) are stocked by Chemists only.
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Medisoaps are made by Charles Midgley Ltd, Manchester
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In the treatment of

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the ideal is simultaneously to

- Relieve the pain
- Withdraw toxic materials
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*without the risk of disseminating
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with its long-retained heat, hygroscopic and
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BRAN

effectively relieves

**CONSTIPATION by
STIMULATING**

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NATURAL ACTION

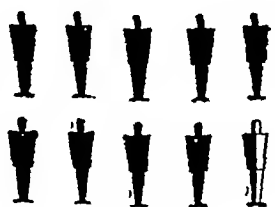
7½^D
Per
Packet



Medical men the world over are turning to Kellogg's ALL-BRAN as an effective and completely harmless constipation remedy. ALL-BRAN is easily digested and retains the valuable properties of the raw bran: assimilable iron and Vitamin B. ALL-BRAN cleanses like a *water-softened sponge*. Within the body the soft "bulk" of ALL-BRAN gently exercises intesti-

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Kellogg's ALL-BRAN is effective in all ordinary cases of constipation except those with hyper-sensitive alimentary tracts. It needs no cooking. Serve like any other cereal food or make into biscuits, cakes, omelettes, etc. Full-sized sample packet free on request.



98% cases of
CONSTIPATION
yield to the BRAN remedy

In laboratory tests, Bran has proved a definite remedy in 98 cases out of 100. The failures were all due to the patients' inability to accommodate bulk in fruit, vegetables or Bran.

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The ideal urinary antiseptic for oral administration!

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HEAD INJURIES IN GENERAL PRACTICE *

BY

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In a single surgical charge in the Edinburgh Royal Infirmary over the period of a year seventy cases of head injuries were admitted 55 per cent of the total admissions, and the mortality was 142 per cent. I have quoted these figures to show what is already known—that this type of injury is relatively common increasingly so and that it is associated with a considerable risk to life.

Significance of the History

It is important to have some record of the history of the accident if certain pitfalls of diagnosis are to be avoided for there are many conditions apart from head injury which are associated with unconsciousness. The position is all the more confusing when there are no witnesses of the occurrence the only evidence available being the fact that the individual was found lying unconscious perhaps bleeding from a scalp wound.

Some months ago a woman in the late sixties was admitted to my ward. She was deeply unconscious there was a scalp wound in the right temporal region and a flaccid paralysis of the left arm and leg. She had been found lying at the bottom of a common stair and it was the impression of the nurse who assisted her that she must have fallen and injured her head.

In actual fact she was the victim of apoplexy and in this instance the head injury—if the scalp wound may be described as such—was *post hoc* to her unconsciousness, though we might have been excused if our appreciation of the position had pictured the reverse. There are similar possibilities of error in relation to the unconsciousness of drunkenness the coma of renal failure and diabetes the collapse of syncope and even the intoxication of drugs.

We must remember too that injury to the skull and its contents may arise through indirect violence.

The roof of one of the large halls in Edinburgh was being redecorated and a rope was passed from the upper scaffolding to the floor. A painter descended by it and unfortunately his hands were slippery with oil so that instead of dropping gradually he came down at a run and arrived at the floor of the hall in a sitting position. He apparently had some degree of concussion but the jeers of his fellow workmen brought him to his senses and he walked away.

Forty-eight hours later he was admitted to hospital with cerebral compression. He died and necropsy revealed a fracture at the base of the skull encompassing the foramen

in another of overlooking cranial or cerebral injury because the *modus operandi* has been atypical.

It may be difficult to obtain an accurate account of the sequence of events immediately subsequent to the injury but it is of considerable practical importance. Following a head injury the sequelae may follow one or other of three possibilities. There may be the temporary disturbance of a slight concussion a brief loss of consciousness followed by a rapid return to complete normality or there may be the deep unconsciousness of a severe concussion the state developing in such close relationship with the accident that it appears to arise coincident with the blow or yet again consciousness is retained for some time after the accident but presently there is a lull and a state of stupor develops. The first and second of these possibilities require no elaboration their meaning is apparent but when the third development is recorded it is apt to have a somewhat sinister significance for it may be that it records the historical sequence of a case of cerebral compression. If the individual retains consciousness for an appreciable period of time after the accident and then passes into a stuporous condition the chances are that a lesion was initiated the effects of which are now being manifested.

Shock and Other Injuries

There are three questions which our preliminary examination should attempt to answer:

1. Is shock present and if so to what degree?
2. Are other injuries present apart from damage to the skull and its contents?
3. What type or types of head injury exist?

The first and second of these considerations are incidental matters and yet they have a real importance. Shock is the sequel of severe injuries whatever their character but it is apt to be manifest in head injuries to a disturbing degree. It is the inevitable accompaniment of concussion if the latter is in any way severe and in actual fact there is no clear line of distinction between the two. We recognize the existence of shock and estimate its degree by the appearance of the patient and by the fall in blood pressure and having recognized it we are entitled to draw the conclusion

* This is the chance of a head injury in the general practice.

pressure it affords a temporary safeguard against bleeding immediately after the accident.

We should treat the shock but appreciating that it has a certain salutary influence we should not employ the intensive stimulating methods that are used in ordinary shock, lest by so doing the blood pressure is unduly raised and intracranial bleeding ensues.

Injuries of other parts must be examined in order that their exact nature may be estimated and the urgency of their treatment decided. The injuries of motor accidents are often multiple, and I have known a man sustain a perforation of his intestine in addition to severe injury to the skull. The preliminary examination should review the general situation and allow of a decision on the relative urgency of the individual lesions.

Possible Head Injuries

Estimating the damage which may have been received by the skull and its contents is, however the most important part of the examination. Individually or in any combination there may be the following:

- | | |
|---------------------------------|------------------------|
| 1 A simple scalp wound | 4 Concussion |
| 2 A fracture of the skull vault | 5 Cerebral compression |
| 3 A fracture of the skull base | 6 Cerebral laceration |

The basis upon which this classification is made lacks uniformity—concussion and compression are clinical manifestations, while scalp wounds and fractures are local pathological effects—but I know of no better presentation, and for practical purposes it fulfils our requirements.

When the patient is unconscious we begin the investigation by attempting to estimate the depth of unconsciousness. Such an estimate is a reliable index of the degree of intracranial damage and provides a standard by which we can contrast further improvement or deterioration. Four tests are applied in the following order:

- 1 A simple question such as "What is your name?" spoken in the ordinary tone of voice.
- 2 An imperative question spoken loudly close to the ear.
- 3 The induction of a painful stimulus by pressing the finger nail against the supra-orbital notch.
- 4 Testing the corneal reflex.

I need not elaborate the details beyond saying that response to the first indicates a comparatively slight concussion while failure to react to the last shows the deepest degree of unconsciousness compatible with life—cerebral activity is restricted to the automatic action of the vital centres.

Pulse, Respiration, Temperature, and Blood Pressure

It is in almost universal rule that these observations are recorded at two hourly intervals for the first twenty-four hours and thereafter at four hourly periods. The pulse readings are particularly important. A quickened pulse of small volume is the usual accompaniment of concussion but in the absence of complications there is an early readjustment to the normal. A slowing pulse rate accompanied by an increase in volume is a hint that compression is developing or at least that the vasomotor centres are being stimulated in some way. A quickened pulse rate maintained at high speed and yet showing increased volume is an indication that some degree of cerebral laceration without localized compression exists. These are generalizations but they are sufficiently constant to justify their recognition as indications of certain pathological changes.

Changes in respiration are less common but also of importance. In concussion respiration is usually normal and

shallow. Irregularity of the respiratory rhythm and particularly anything suggestive of a Cheyne Stokes change is ominous, because it is the response of an increased intracranial pressure. A much quickened respiration points to serious cerebral laceration generally of a diffuse character and most medical men are familiar with the respiratory changes of advanced cerebral compression—the irregular stertorous breathing which in its origin indicates an increasing bulbar compression and a failure of the vital nuclei in the medulla.

Temperature readings have a significance which is not fully appreciated. Assuming that extracerebral causes have been excluded, a rising temperature means that some degree of cerebral damage has been sustained. A pure uncomplicated concussion does not exhibit pyrexia, and if the sign is present something more local has occurred—a subdural ecchymosis, a cerebral laceration or a localized compression. I know of few individual features more suggestive than a pyrexial reaction in a head injury, and in general it may be said that the earlier the manifestation and the more intense the reaction the more serious is the cerebral damage.

Blood pressure readings should always be made and the findings recorded at two hourly intervals for twenty-four hours. In the period which immediately succeeds a head injury of any severity the blood pressure falls as recovery advances the pressure rises. If it does so gradually and after rising a few points above the normal readjusts itself to the average figure the prognosis is good and the evidences are those of a simple concussion. But if after the preliminary fall it rises to a high level and is maintained at it, may be 180 to 200 mm Hg there is ground for anxiety for this is a reaction which indicates an increasing intracranial pressure. On the other hand in injuries of extreme severity particularly such as are associated with extensive compound fractures of the skull vault the blood pressure may remain at a low level throughout the entire period of the illness.

Bony Injuries

If a scalp wound is present its position and character are noted and any haemorrhage should be arrested. By gentle retraction of the scalp wound the condition of the underlying skull can be seen and search made for a fracture, remembering always the risk of mistaking an oozing suture for a fissured fracture of the vault.

The skull vault is then palpated methodically, firm pressure being made with the finger tips and any painful reaction is noted. If pain is elicited in the absence of a haematoma it suggests the existence of a fracture. It is possible that the outline of a depressed fracture may be detected but it is difficult to distinguish between a localized circular bone depression and the softened centre of a haematoma. The mouth, the nose and the auditory meatus are examined and if bleeding is encountered an attempt is made to distinguish the haemorrhage of local injury from that which arises from damage to the skull base. If blood is escaping from the external auditory meatus its characters are noted—if its consistency is more watery than normal and if coagulation is delayed the probability is that cerebro-spinal fluid is mixed with it.

The maxillae and the mandible are examined and particular attention is paid to the investigation of the temporomandibular joint. Fractures of the middle of the skull base may result from a blow upon the forehead in such a direction that force is transmitted through the temporomandibular joints and it is well therefore to make this examination a routine procedure.

Pupil Reactions and Tendon Reflexes

Our attention is now directed to the pupils. Two practical considerations are

1 As a general rule the pupils in the average case of head injury are moderately contracted and react sluggishly to light.

2 If one pupil is widely dilated and fails to react to light the other presenting a normal appearance and retaining the light reaction and if the change is noted comparatively suddenly in the progress of the case one or other of two explanations is likely—a pontine oedema or haemorrhage which is interfering with the activity of the third nucleus or a cerebral compression developing on the same side as the dilated pupil. The latter is of significance in the recognition of the compression syndrome.

It is sometimes stated that the fundus oculi should be examined by an ophthalmoscope to determine whether a papilloedema is developing. It is true that in the later stages of compression papilloedema may develop and it is first manifest on the same side as the compression but unless the examiner is trained in ophthalmoscopy he is unlikely to find this method of investigation of practical value.

Examination of the extremities is now proceeded with. Any evidence of twitching is noted and the limb is moved into various attitudes in order to ascertain whether there is flaccidity or spasticity. If there is compression in the cortical motor area changes will be manifest in the musculature of the limbs on the contralateral side at first spasticity and later flaccidity. The tendon plantar and abdominal reflexes are examined but their evidences are not particularly trustworthy in head injuries for they sometimes appear to be disorganized by severe concussion and in the absence of any local cerebral lesion. It is inadvisable to base any definite conclusions upon them in the period which immediately follows a head injury.

An x-ray examination of the skull concludes the preliminary examination. There are circumstances in which such an examination may be impossible but every effort should be made to secure it. It may reveal a vault fracture which has been hitherto unsuspected and by outlining the extent and position of the injury it supplies most important information.

Arriving at a Diagnosis

The practical issue in the diagnosis of a head injury may be summed up in the simple question "Is a state of cerebral compression developing?" The compressing factor may be general as for example a cerebral oedema or it may be restricted and local as in the case of a fragment of bone driven inwards or an extradural haemorrhage and yet again—and this is the most significant possibility of all—it may be local yet progressive so that eventually its effects are manifest throughout the entire cerebral area. A middle meningeal haemorrhage is the classical example of the last possibility and of all the sequelae of the head injuries it is the one which it is most imperative to recognize because in such an eventuality early operation is the only means by which life may be preserved. Compression factors which from the beginning are general in distribution are less urgent questions and there are certain of them which yield to non-operative

pain on pressure but the possibility is put beyond doubt by an x-ray examination—a detail of the investigation which should never be omitted.

Fractures of the Base of Skull—The nature of the injury, the mechanism and the distribution of the force may lead us to suspect a fracture of the base of the skull. Haemorrhage from skull apertures and cavities or a delayed ecchymosis in the subconjunctival or orbital regions may help in diagnosis. Pain produced by firm pressure upon the mastoid processes is a reasonably reliable sign in fractures of the posterior and middle fossae. When other signs are absent the severity of the cerebral damage may indicate the possibility of fracture. A ray examination is rarely helpful—to obtain a reliable picture would necessitate a disturbance of the patient which is not permissible but sometimes the radiograph of the vault reveals a fracture running towards the base and with such evidence we may draw reasonably accurate conclusions.

Concussion

The great majority of head injuries examined within a short time after the accident show evidence of concussion. Compression develops later and the time interval of its appearance depends upon the source responsible. There is some doubt as to the nature of the process by which concussion arises but for our purpose we may accept the view that a sudden trauma applied to the skull is conveyed to the cerebral tissues and thus produces a temporary derangement of nuclear activity and even perhaps a molecular disintegration of the connecting and distributing elements. The result is a depression of the entire mechanism of the central nervous system with the qualification that its effects vary according to the situation and function of nerve elements. As might be anticipated from its exposed position the cortex suffers most and there is a depression of the higher centres which initiate motor and sensory activity with loss of consciousness in varying degrees. So the process is distributed but with this saving element that what might be called the vital nuclei the centres which control circulation and respiration automatic to some extent and resistant at all times are affected least and last.

The clinical appearance resembles that of surgical shock with the addition because of the locale upon which the trauma is exerted of a disturbance of consciousness in varying degree. The state of the patient in the period immediately subsequent to the head injury may be described as follows. He may be unconscious in the first or second degree (a deeper stupor generally means that there is something more than pure concussion), the pulse rate is quickened and of reduced volume, the respirations are quickened and shallow, the blood pressure is reduced and the temperature is subnormal, the musculature is flaccid though occasionally a limb will take up a cataplectic attitude, the appreciation of pain is diminished, the skin is pale and the surface temperature is lowered. This picture represents the state of concussion or, as some prefer to term it, cerebral shock.

Onset of Compression

This accident fecal in its beginnings and yet progressive in character produces a state of affairs which affords perhaps the most illustrative and impressive features of a compression syndrome. When the haemorrhage accumulates to an appreciable extent it constitutes in addition to the already existing volume of intracranial contents and as the intracranial space is already fully occupied accommodation is supplied by displacing a certain amount of cerebrospinal fluid from the cerebral to the spinal distribution. The relief is a limited one, and, the compressing influence continuing to develop, the thin-walled cortical veins become affected. To some extent blood is driven out of them and I suppose an immediate slight further degree of additional accommodation is provided but again the benefit is short-lived and presently the pressure on the veins leads to a congestive reaction throughout the brain substance. Compression continuing and no further accommodation being possible a zone of pressure anaemia appears in the immediate proximity of the compression. In depth the anaemic area is relatively small a matter of millimetres but in surface it will be as extensive as the area in contact with the compressing influence. Anaemia means inactivity of the cortical area concerned the clinical evidence being a localized paralysis of the area innervated from the cortical field. Coincidentally and beyond the zone of anaemia the brain tissue is congested and as venous and sinus pressure continues to be exerted a cerebral oedema develops. Finally if compression continues to be exerted the brain tends to become mobilized towards the skull base in the direction of the foramen magnum.

The significance of the change is obvious. There is medullary compression and oedema gradual failure of the cortical nuclei which control circulation and respiration, and eventually the inevitable result—death from respiratory failure.

Early Symptoms and Signs

The late signs of compression are obvious but under such conditions operation is generally unavailing. Early recognition is essential if good results are to be secured. If there has been a period of consciousness between the concussion and the onset of compression certain symptoms may be recorded. A severe insistent headache is complained of there is an intolerance to bright light amounting almost to a photophobia the mental attitude alters and the patient becomes restless and excitable unduly irritable and even irrational. These are features of much significance and if they are noted in the post-concussion phase they indicate a state of cerebral congestion which may well suggest the onset of compression. Ultimately the patient relapses into unconsciousness and as insensibility deepens the general and focal signs of compression become evident. In such instances the significance of the changes are generally appreciated for the relapse is so impressive that it demands recognition and further investigation.

Dancer arises when the stupor of concussion passes almost imperceptibly into the unconsciousness of compression and the latter state develops so gradually that its recognition is overlooked until the opportunity of affording relief is almost past. In this case the unconsciousness deepens the face becomes flushed there is restlessness particularly when any stimulation is applied to the body surface the pulse is full and volume increased and blood pressure readings are considerably increased the respiratory rate falls but there is a coincident increase in the individual excursions the temperature rises the pupils are equal and contracted the urine is scanty. These

are the evidences of a general intracranial rise in pressure. If the compressing force is focal in its immediate effects certain local peripheral evidences become manifest and these are demonstrated in most characteristic fashion when pressure is exerted upon the cortical motor area a development which arises so typically when the compressing element is a haemorrhage from the middle meningeal artery. As a cortical anaemia develops the musculature of the opposite arm and leg and side of the face demonstrates incoordinated contractions and with further compression a flaccid paralysis is evidenced. Lastly if a unilateral delayed dilatation of the pupil appears it is an evidence of compression on the same side as the dilatation.

These then, are the two aspects of compression the one general both in distribution and in manifestations the other focal in its peripheral effects. It is important to appreciate the distinction and to recognize the actual situation for while the first may be treated in its initial stages at least by non-operative measures the second demands surgical intervention at the earliest moment.

Diagnostic Tripod

Some further evidence is required however and we obtain it by lumbar puncture and the readings of a spinal manometer. The normal cerebrospinal fluid pressure varies within considerable limits 60 to 120 mm of water being regarded as average readings. Where compression exists the readings are consistently higher than 120 mm and they may even reach a height of 250 mm. This is indisputable evidence, and it has the further advantage that it affords a reasonably accurate conception of the degree of the compression. Even if a special manometer is not available lumbar puncture should still be undertaken. A normal cerebrospinal pressure is revealed when fluid drops from the needle at the rate of one drop per second, and one can draw reasonably accurate conclusions according to the variations which are manifest. Lumbar puncture is a valuable procedure but I suggest that it should not be practised until we have reason to suspect that compression may be appearing. To adopt it as a routine in the early stages of head injury is probably injudicious. Its evidence at this stage is not reliable whilst it may be that the manoeuvre so disturbs the pressure balance that a further cranial haemorrhage is started.

To sum up the position we are justified in diagnosing compression on three points of evidence:

- 1 The effect of a general increase of intracranial pressure as revealed by the pulse the blood pressure the respiratory rate the temperature the appearance and general behaviour of the patient.

- 2 The effects of a local cortical pressure as shown by a developing peripheral paralysis.

- 3 The reading of the cerebrospinal fluid pressure.

These are observations which can be made by any medical man and in general it may be said that they are the foundation upon which the diagnosis of compression is based.

Positive Late Developments

If the concussion period has passed and compression has not developed so that no signs appear to be present a natural and satisfactory course here can only be the possibility which have to be kept in mind—delayed compression oedema which arises in association with cerebral laceration and a meningeal cephalitis—both of septic invasion extending from a fracture of the skull has communicated with the meninges and the

The first of these possibilities—compression oedema, a sequel to cerebral laceration—is not unduly serious, but unless we are aware of the possibility we are apt to exaggerate the significance of its development. It generally appears about the fourth or fifth day after the accident, and it is this delayed development which is apt to prove disconcerting. When all appears to be going well, and pulse and temperature have been following normal lines the temperature rises, the pulse rate falls and a drowsiness which may pass into complete unconsciousness affects the patient. It is a temporary change. It usually disappears spontaneously, and its progress can be arrested by one or other of the hypertonic medications which are described under treatment. The origin of the change is not fully understood, but in point of time it appears to correspond to the phase when the reactionary changes preparatory to healing of the cerebral tear are developing.

The second possibility—the development of a delayed infection—is an entirely different matter.

Last November a young man was admitted to my wards with a fracture of the middle fossa of the skull bleeding from the left auditory meatus indicated that the fracture communicated with the inner and middle ears. His immediate recovery was all that could be desired and sixteen days after the accident was sustained I demonstrated the case to a clinic as an illustration of a satisfactory and encouraging recovery. I alluded to the risks of delayed infection but I felt satisfied that in this instance at least the risks were past.

I had spoken too soon the same evening the temperature rose to 99.5 F and the pulse rate had quickened from 80 to 110. When I saw him next morning it was evident that meningitis had developed and in spite of our efforts he succumbed four days later to a streptococcal meningitis.

It was an experience which impressed us with the uncertainty which must attend the later progress of certain types of head injury.

Treatment of Uncomplicated Concussion

The injured man is undressed with the minimum of disturbance. He is placed in bed flat on his back, and his head is turned to one side. In this position he breathes more easily, if he vomits he is less likely to aspirate the vomited matter and if there is bleeding into the mouth the fluid which otherwise would be swallowed will collect in the hollow of the cheek. We assume that the preliminary examination is completed and we have arrived at a provisional appreciation of the condition. At this early stage we may take it that the clinical state is one of concussion the possibility of compression is in the future early or remote as its genesis may decide but at this point it need not trouble us so far as treatment is concerned. Concussion is tantamount to shock and we treat it accordingly. The body temperature is raised by hot water bottles or by a shock cradle. Fluids are administered preferably by mouth or if that is impossible by subcutaneous or rectal routes. Intravenous methods are inadvisable, for a sudden rise in blood pressure may initiate bleeding, and a too copious supply of normal saline may increase the tendency to oedema of the cerebral tissue. In a desperate case it might be permissible to administer intravenous saline by the drip method but the indications are infrequent. If a scalp wound exists we take immediate steps to arrest the bleeding. I suspect that there are many head injuries in which the haemorrhage from a neglected scalp wound has been the factor that precipitated a fatal issue. A two-hourly pulse, temperature and respiration chart is recorded and we keep a close watch upon the state of the bladder. A distended bladder is often the cause of a restlessness on the part of the patient which the physician may ascribe to other more serious influences.

Allaying Restlessness

The patient should be kept as quiet as possible if he is in a hospital ward he is screened off if he is in a room by himself the room is darkened. He may become restless many cases of head injury pass through this phase, and it may be an ominous sign. It may indicate the onset of compression, but in most cases it represents the reaction that is coincident with recovery from concussion. Restlessness presents the first problem in treatment and means must be taken to allay it, for if it persists it is harmful. Any attempt at physical restraint is resented and in the effort intracranial pressure rises at a time when this is least desirable. Morphine and its derivatives are contraindicated for several reasons. They are apt to increase the venous engorgement of the cerebral tissue, they depress the respiratory centre and there is the clinical objection that the resultant hypnosis may disguise the deepening unconsciousness which otherwise would indicate the onset of compression. Experience has shown that chloral hydrate combined with potassium bromide is both efficient and safe. Fifteen to twenty grains of each drug is a suitable amount and if necessary it may be repeated four-hourly. If the patient cannot or will not swallow, paraldehyde may be administered per rectum, it is given in a dosage ratio of 1 drachm per stone of body weight up to a total of eight drachms. In its administration there is the practical point that it is best tolerated when made up in mucilage of acacia in a proportion of two parts to one of the mucilage. There are instances in which these sedatives are insufficient, and in such an event hyoscine hydrobromide in doses of 1/200 grain hypodermically may be given, but only when less powerful sedatives have failed.

Such is the treatment adopted in the presence of an uncomplicated concussion, and in general it may be said that it is the treatment of choice in the early stages of the majority of head injuries.

Treatment of Fractures

Assume now that an x-ray examination of the skull has been carried out, and it is reported that there is a linear fracture of the skull vault. How does this affect the situation? Generally speaking the finding has no particular significance. It is a complicating feature, and implies some increase in the length of time of the convalescence, and when it is shown to occupy a situation which brings it into relation with the middle meningeal artery it may arouse in our minds the suspicion of haemorrhage from that vessel. These are special considerations however, and individual attention is paid to them, but it is well to appreciate that the ordinary linear vault fracture is a relatively insignificant lesion which certainly calls for no variation from the ordinary scheme of treatment.

It may be that the vault fracture is of the depressed variety. In this event are we still to adopt a conservative attitude? The answer is that under certain conditions operation is indicated as when a scalp wound overlies the fracture, when there is radiological and clinical evidence that the fragment is in driven and when we have reason to suspect that the fracture is associated with a subdural or extradural haemorrhage. I do not mean to imply that all of these developments demand immediate operation. The last may be an urgent matter the first has underlying it the anxiety to prevent intracranial infection, and therefore the sooner it is remedied the better. The decision regarding the in-driven fragment will depend on local circumstances, recognizing of course that the

earlier the relief the better for the patient. There is no hard and fast rule, but whenever possible operation should be postponed until the effects of cerebral shock have subsided.

Fracture involving the skull base I dread more than any other type of head injury, for the complications which follow in its wake. Fractures of the anterior fossa of the skull are rarely associated with immediate danger, but they are the type in which a delayed sepsis is apt to arise because of the frequency with which they communicate with the cavity of the nose. Fractures of the middle fossa have dangers which are both immediate and remote—immediate because an extensive haemorrhage so often accompanies the break and because the line of it may involve the sella turcica and endanger the pituitary or its stalk, remote because a communication with the ear cavity may provide the avenue for infection. Fractures of the posterior fossa give us the most immediate concern because of their proximity to the vital area of the medulla, but on the other hand they are in large measure free from the risks of secondary infection.

Taken as a group the gravity of base fractures in contrast to fractures of the vault depends in large measure upon an anatomical fact—the relation of the dura to the bone. At the skull base the dura is closely adherent to the bone so that when a fracture occurs a tear of the dura is almost inevitable. In the vault, on the other hand, dura separates with the greatest of ease except where sinuses exist and the complication of dural rupture is therefore much less frequent. For the moment the knowledge that a fractured base exists need not call for any variation in treatment: we follow the lines which have been described and we take particular care to avoid any obvious sepsis in those cavities which lie in relation to the skull base. It is for this reason that we advise the instillation of a few drops of 5 per cent argyrol into the auditory meatus and perhaps spray the nose and mouth with the same preparation. Restlessness is evident in many cases of this type and if it appears should be treated at an early stage by the judicious exhibition of sedatives.

Treatment of Compression

Twenty-four hours having passed deepening unconsciousness, alterations in pulse, blood pressure, and respiration and a rising temperature may indicate the onset of a generalized and progressive cerebral oedema. A lumbar puncture is carried out and the cerebrospinal fluid pressure is estimated. If the reading is less than 200 mm. of water but above the normal reading of 100 to 120 mm. the cerebrospinal fluid should be drained until a normal pressure is reached; if on the other hand the pressure exceeds 200 mm. it is an indication for more active dehydration by the hypertonic therapy first suggested by Weed and his co-workers. If the patient is able to swallow he is given 2 drachms of magnesium sulphate dissolved in 2 ounces of water and thereafter at intervals of two hours 1 drachm of the salt in 2 ounces of water administered until a watery stool is evacuated. If swallowing is impossible 3 ounces of magnesium sulphate in 6 ounces of water is given in six doses. These are hypertonic solutions and in virtue of their osmotic properties they attract and withdraw fluid from the tissues until an osmotic balance is reached. The cerebral tissue parts with the fluid in common with other tissues and the oedema is thereby relieved. It is an efficient procedure, comparatively painless, but it is proved that it does not balance and it is not a substitute for craniotomy when indicated.

Hypertonic solutions such as 50 per cent glucose or 30 per cent sodium chloride injected intravenously are powerful dehydrating agents. There must be no evidence of recent bleeding if they are to be employed for as rapid dehydration occurs a clot may be disturbed and a serious haemorrhage ensue.

Decision to Operate

If lumbar puncture or alimentary dehydration afford relief the situation may be stabilized and symptoms of compression may not recur. If they do reappear and continue to develop a repetition of the treatment described may be called for. But if all efforts are unavailing and the compression persists and increases I think we are justified in deducing that whatever the cause of the compression it is not a simple and general oedema. It is more likely to be a haemorrhage which is slowly but insidiously progressive and we are now faced with deciding whether or not to operate.

Three general considerations are: first the operation of a simple cerebral decompression is a relatively easy one; secondly if there is doubt it is better to operate than to delay and to regret; thirdly if operation is to be attempted the earlier it is carried out the better. It is my impression that this means of relief is not employed as often as it might be. Too often it is delayed unduly and if so we cannot expect that a local decompression will afford relief to a brain that is completely waterlogged.

TECHNIQUE OF OPERATION

If the patient is deeply unconscious no anaesthetic will be required, but there are many advantages in a local anaesthetic such as 1 per cent novocain to which adrenaline (1 in 200,000 of the solution) has been added. The infiltration is carried along a line which extends vertically upwards from the zygoma one inch in front of the external auditory meatus for a distance of three to four inches.

The superficial tissues are divided, the temporal fascia is incised and the fibres of the temporal muscle are split and retracted so as to expose the bone of the temporal table. The bone is perforated with a trephine or burr at a point about two fingerbreadths above the upper border of the zygoma and with a nibbling forceps the vault is cut away until an aperture about two and a half inches square is made. It may be that the compressing factor is found to be a haemorrhage in the extradural area, the result of a tear of the middle meningeal artery; if so we remove the clot and ligature the vessel. Failing this finding we open the dura in a cruciate manner taking care to avoid the dural vein and if of necessity they must be divided picking them up with a fine round needle and suture and ligaturing each individually.

This is as much as the average operator should undertake. Any obvious source of haemorrhage should be controlled but no further intervention should be carried out unless the operator has special training in neurosurgical surgery. The operation has achieved what was intended—it has relieved intracranial pressure and any haemorrhage encountered has been arrested. The dural flap is left widely separated, the split in the temporal muscle is retracted by a few interrupted catgut sutures, the line of the temporal fascial incision is closed with a continuous catgut suture and the head is covered with a sterile gauze pad or plaster.

Such are the steps of the operation and it will be seen that it is a relatively easy and straightforward procedure. I anticipate that it will be criticized for a number of reasons. A craniotomy should be performed on the whole by a specialist trained in general or neurosurgical surgery. I appreciate all these criticisms but the condition in which the operation is performed is of more importance than the person who performs it. It is a procedure which should be carried out in the emergency department of a general hospital with the necessary facilities and staff.

carrying through a procedure which may be the only means by which life can be saved

In many instances the subtemporal decompression affords relief if it fails to do so and if there is no response to a repetition of the alimentary dehydration we may consider the advisability of repeating a subtemporal decompression on the opposite side, and if this fails we can but await events, with the satisfaction, however of knowing that we have done all that it is in our power to avert disaster

After-treatment

The after treatment of head injuries may be summed up in the words 'Go slow'. Lasting harm may be done by an attempt to shorten the convalescence or to agree to an unduly early return to the stress of everyday life. The period of confinement to bed will depend upon the nature and extent of the injury. Three to four weeks is a common average. A low diet with abundance of fluid is allowed and half an ounce of magnesium sulphate each morning is a safe and efficient purgative. It is a good rule to give 10 grains of potassium bromide daily. It lessens the irritability of the central nervous system and its employment at this early stage may prevent unpleasant sequelae in the future. For insomnia we use luminal (2 grains) or medinal (7½ grains) or soneryl (5 grains).

Sooner or later there comes a time when the question of resuming ordinary activity has to be considered. This is an anxious decision and if we are to do the best for the patient it will be made the subject of experiment. A testing time when a graduated and provisional resumption of activity is permitted will be instituted. If there are sequelae in the form of giddiness and headache, mental fatigue, and inability to concentrate, we must recognize these as warnings that the time is not yet opportune and the patient must be advised to extend his convalescence. This the aftermath of head injuries is in some respects the most difficult problem of all but it is scarcely within our sphere for the moment and I have mentioned it for one purpose only—that our consideration of the subject may be rounded off and reasonably complete.

W. Titkemeyer (*Med Welt* February 13 1937 p 209) draws attention to recent investigations on tobacco smoke which consists of tars, nicotine, pyridine bases, the lower aliphatic acids, carbon monoxide, carbon dioxide, and ammonia. Nicotine is still believed to be its most poisonous constituent. Four drops are lethal in one half to one minute, 40 mg produce disturbances lasting twenty-four hours. Five ordinary cigarettes contain a lethal amount of nicotine. The amount of nicotine absorbed by the body depends on many factors. It is detoxicated in the liver and excreted through the skin and kidneys. The gaseous contents of tobacco smoke are now said to have no effect on the general health. Its deleterious effect on the buccal mucous membrane is believed to be due partly to the raising of mouth temperature, especially in cigar and pipe smokers, and its property of getting saturated with water from the mucous membrane. These factors are more important than the chemical constituents of tobacco in the production of smokers' catarrh. In surveying the literature the author is struck with the discrepancies in the findings of various authors and he suggests in the interests of public health that a more scientific standardization in the investigation of tobacco smoke be adopted—namely, that the length to which a cigarette is smoked be indicated, that the humidity of the tobacco be noted, that the amount of tobacco smoked per cigarette or cigar be weighed, and that the length of the interval of smoking be accurately timed.

INSULIN SHOCK TREATMENT OF SCHIZOPHRENIA

BY

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The insulin shock treatment of schizophrenia is well established on the Continent; the results as summarized in Dr. Isabel Wilson's report for the Board of Control must be regarded as sufficiently encouraging to warrant a trial of the method in this country. The treatment has therefore been instituted at the West Ham Mental Hospital and the results in an admittedly limited number of cases are fully justifying what was initially regarded as in the nature of an experiment. In the preliminary consideration of this treatment the question first to be settled was how far it would be practicable, in view of the complicated technique within the organization of an ordinary rate-aided mental hospital. It is the purpose of the present communication to show that with a well-disciplined and enthusiastic staff it can be undertaken in the infirmary ward of such a hospital without overtaxing the staff and without any serious interference with ward routine.

Administrative Arrangements

It was decided to use the male infirmary ward which serves the whole of the male side (593 patients). In this ward there is accommodation for fifty-three patients. In the observation section there are nineteen beds and two single rooms and a padded room are available. Projecting from this section is a bay of six beds; this was selected for the cases under treatment with a view to disturbing other patients as little as possible. The male nurses work a forty-eight hour week in two shifts of four nurses each. Each shift comprises a charge nurse, a deputy, and two probationer nurses. The shifts work week about mornings and afternoons.

Realizing the need for perfect staff co-operation, the two charge nurses had the treatment fully explained to them. The difficulties and dangers were stressed but good care was taken to reassure them and to work up their enthusiasm. They were then given the Board of Control's Blue Book to read. Incidentally it may be mentioned that the doctor responsible had had experience of hypoglycaemic states whilst working under W. Wilson Ingram (Sydney) during his researches into the massive dose insulin treatment of diabetes mellitus.

Treatment was begun on one patient, a case of severe catatonic dementia praecox. The whole course was carried through on this patient, no further cases being begun until the treatment had been finished, so that the nurses' interest was not divided. They thus became wholly familiar with the routine and gained confidence. It took a fortnight to work up to the shock dose (140 units). During each of the two weeks the afternoon shift, which was not actually doing the treatment that week, was repeatedly put through the drill (described later).

It was found useful for the doctor to pretend to be the patient and to act as dramatically as possible the various crises that might be expected. By the end of the fortnight both shifts were perfect in their parts. The value of this training has since been demonstrated by the fact that no emergencies have occurred during the treatments, which the nurses have not been able to deal with pending the doctor's arrival. Although a patient's appearance has

often been very alarming they have never cried wolf nor on the other hand have they ever failed to notify immediately any critical occurrence

The first patient made an apparently complete recovery from his psychosis the enthusiasm of the staff was therefore well maintained Two patients were then treated concurrently and we now have six beds occupied by patients undergoing active treatment We have had no accidents Altogether 205 shocks have been induced There have been no administrative difficulties and none are now expected One walks into the ward and sees perhaps five patients deep in coma gravely shocked and finds at the same time the other business of the ward being normally carried on

General Results

All the patients treated have been advanced cases with marked immediately discernible symptoms of dementia praecox Five have completed treatment Three have apparently recovered, one with great insight, since discharged The other two are still being watched their insight being developed by daily talks with a view to their adapting themselves well to life when they shall have returned to the outside world

Of the two who have not recovered one is greatly improved and the other is unchanged All except the one failure put on weight while actually under treatment A sixth is nearing the end of his treatment He is improving and has already lost his delusions and hallucinations, after an unremitting attack lasting eighteen months

The Treatment

A typical shock proceeds as follows

About two hours after a shock dose of insulin a change is observed in the patient He sweats profusely and becomes drowsy The pulse rate alters it may accelerate or retard Within about half an hour he becomes restless tossing from side to side at first moaning and later crying out

Then particularly in the first few days furor may set in He leaps up in bed staring and crying out aloud He throws himself about violently and has the appearance of maniacally resisting a great fear He froths at the mouth and his pupils dilate He may beat his head and hands and feet frantically This phase may last for fifteen minutes

Coma follows and the patient lies shrunken into his bed profoundly collapsed with a diminished pulse he is stertorous and ashy pale and is bathed in a profuse sweat Although the pupil still reacts to light the abdominal reflexes are lost and the plantar reflexes are extensor He salivates profusely and must be laid on his side to allow the saliva to run out From time to time he may be convulsed Occasionally a true epileptic fit may be seen with epileptic cry, a tonic stage with cyanosis and a clonic stage

After about an hour and a half he is given glucose solution through a nasal tube which had been fixed in position during the stupor stage In ten minutes he becomes conscious and the early excitement returns He seizes hold of the attendant and wants to be reassured that he is not dying he is grateful to be reassured a most gratifying symptom in a lost apathetic and inaccessible patient In another five minutes he is quiet but confused He is now rubbed down and changed and is ready presently for the dinner which he eats with good sometimes ravenous appetite

After several days of the treatment the excitement does not occur and the whole induction and recovery is a

very quiet business At this hospital we now premedicate the patients prone to epileptic fits during shock with 2-grain doses of prominal, and have not had any fits since commencing it We regard this as an advance in technique

Clinical Technique

During the treatment the pulse and temperature are recorded at 6 a.m. and 6 p.m. Urine is tested daily at 6 a.m. Slight glycosuria is common whilst the patients are undergoing treatment but stops at the finish of treatment

1 Preliminary Phase—Ascertaining the shock dose

Inject at 7.15 a.m. Start with 20 units intramuscularly, the patient fasting and increase daily by 5 or 10 units according to progress A common shock dose is 130 units. Subsequent shocks are easier to induce than the first, and after a few days it will be found possible to reduce the dose considerably

2 Phase of Daily Shocks—(No treatment is given on Sundays.)

(a) Note that the chart and urine are normal

(b) Inject the insulin intramuscularly at 7.15 a.m.

(c) Thereafter feel the pulse frequently and record it at intervals of fifteen minutes Take the temperature every hour apply hot water bottles if it is below 97 Watch the respirations and be on the lookout for any blueness

(d) The doctor passes the nasal tube lubricated with glycerine as soon as the patient becomes stuporous. It is fixed in position with adhesive strapping so that the part issuing from the nose and lying over the cheek is covered This prevents it from being hooked out by the patient

(e) At 12.15 p.m. pour in the glucose solution

(f) As consciousness returns remove the tube Give the patient two dessertspoonfuls of golden syrup if he likes it

(g) Take the patient out of bed rub him down vigorously and dress him in front of the fire

(h) Most important (perhaps a great part of the success of the treatment depends on this), someone must be continually at hand to reassure and mother the patient during his return to full consciousness

(i) Ordinary dinner at 1 p.m.

(j) During the afternoon at about 5 o'clock usually the patient may go off into a coma again Try to prevent this by giving glucose the doctor should be called The nasal tube is got ready (This complication has been uncommon in our experience)

The Team Drill

1 Administration of the Insulin

The second nurse waits upon the charge nurse who gives the insulin

2 Passage of the Nasal Tube

(a) The third nurse takes a test tube containing blue litmus paper stands at the head of the bed and steadies the patient's head

(b) The doctor stands at the patient's right side

(c) The second nurse hands the lubricated nasal tube and stands back

(d) The doctor passes the tube

(e) The charge nurse affixes the suture to the tube draw off about half an ounce of gastric juice and squirts it into the test tube held by the third nurse If the litmus turns red it indicates that the tube is in the stomach

(f) The second nurse fixes the nasal tube in position with adhesive plaster and puts a wooden plug in the end of the nasal tube Meanwhile the rest of the team are able to proceed with the next patient

3 The Shock Stage—During the shock period a nurse keeps very close watch and the other two nurses remain within earshot

4 Bringing the Patient Round—During the preceding hour the glucose solution has been measured into pints and kept warm by one of the nurses not watching the patient He now brings in these pints on a tray

(a) The charge nurse affixes the funnel to the nasal tube and holds the funnel while the second nurse pours in the solution.

(b) The plug is reinserted and the two nurses move on to the next patient. The third nurse watches the patients who have had the glucose.

(c) At the first sign of consciousness by the patient the third nurse removes the plaster and withdraws the tube. He watches the patient carefully since he may become very restless.

(d) All four (the doctor and the three nurses) assist in rubbing down the patients, changing them and "mothering" them. This is the time when contact is made with the patient.

Drill for Emergencies

1 *The Patient goes Blue*

(a) *In coma* Two nurses stand one on each side. The first nurse throws back the bedclothes and thereafter attends to the head end of the patient. The second nurse slips his hands under the patient's hips and gently throws him over on to his side towards the other nurse. The first nurse replaces the bedclothes. Meanwhile the third nurse has called the doctor. Such cyanosis is usually due to tongue swallowing.

(b) *Coming out of coma (regurgitated fluid)* In addition to the foregoing the first nurse grasps the patient around the shoulders and holds him half out of bed rolled over the nurse's knees with his head hanging well down to the floor.

2 *The Patient Becomes Violent*—The first nurse holds the patient tight against his body ("hugs him"). The second nurse directs the movements of his arms and legs where they cannot do harm. Meanwhile the first nurse must continue soothing and reassuring the patient. During a quiet period the patient is lifted down on to the floor mattress and his own mattress is lifted down beside it to give as large a protected area as possible. We have found that anything approaching rigid restraint makes the patients more violent.

3 *Disturbance of Respiratory Rhythm*—The doctor must be called immediately. Be prepared to apply artificial respiration if necessary.

4 *The Pulse Falls Below 50 or Rises Above 150*—The doctor must be called immediately.

5 *The Pulse Falls Below 40 or Rises Above 160*—The nurse should administer glucose immediately if the nasal tube is in position. Meanwhile the doctor has been summoned.

6 *Other Emergencies*—If the nurse is worried and the doctor is long in arriving 1 ccm of adrenaline can be given. Theoretically this should terminate the coma. (We have not had experience of this.)

7 *Epileptic Fit*—The nurse should manage this as any ordinary fit. The doctor should be notified. He will terminate the coma.

In practice we have found the following additional points of value. If a patient has a tendency to vomit his glucose solution the addition of an ordinary alkaline powder to the feed will prevent it. If the swallowing reflex is sluggish the nasal tube is sometimes hard to pass. Tap the patient's larynx lightly and the patient will usually swallow. A cigarette tides a difficult patient over his hungry period.

The glucose solution is prepared daily in the ward from commercial crystalline glucose. Six ounces are added to a pint of water. An emergency tray is kept always ready in case a coma should have to be hurriedly terminated. We have ampoules containing 30 ccm of 10 per cent glucose in normal saline solution and the necessary syringes for giving this intravenously. We once terminated a coma by this method; the patient became conscious within two minutes of injecting one ampoule. Adrenaline is also kept on the tray. During the coma we raise the foot of the bed six inches. We use nasal stomach tubes sizes 10 and 12.

Summary

1 Insulin shock treatment is feasible in a rate and a mental hospital without any special dislocation of the normal hospital service.

2 The essential importance of sound team work is demonstrated and a method of training nurses for it is given.

3 The results to be expected are mentioned.

4 A typical insulin shock is described.

5 The technique is explained and the instruction to the nurses is tabulated.

Acknowledgement for permission to carry out this treatment and to publish the results is made to the medical superintendent of the West Ham Mental Hospital Dr J Harvey Cuthbert and thanks are also due to Dr J J Murphy of the same hospital for his valuable support and help.

CARCINOMA OF THE CERVIX IN INDIA THE FIVE-YEAR END-RESULTS*

BY

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Malignant disease of the uterus is as common in India as it is elsewhere. While studying uterine cancer first for three years in Germany and since then in India I found it most difficult to follow up these cases. In Germany I found that many patients changed their residences but it is the custom there to notify the police and the municipal office of the district or ward left as well as of the one entered. Thus there is very little chance of losing sight of a case.

Perhaps the ideal conditions for following up cancer cases are found in Sweden where the Government has made it obligatory for every patient to report when notified if she does not do so she has to account for her failure. Heyman of Stockholm is fortunate in having been able to follow up all his cases year by year for the last decade. In Great Britain Victor Bonney's investigation is perhaps the most complete but in spite of his efforts he could not trace all his cases; he had lost sight of twelve after five years and twenty-three after ten years.

Unfortunately the situation is very different in India. The economic condition of our people renders about half the patients houseless and there is inefficient civic organization there being no arrangement for the notification of change of address. Moreover individual irresponsibility on the part of the patients makes the question of following up extremely difficult. I always try to take three addresses in the case of each patient besides that of the attending doctor if any. Of the three addresses one is that of the patient herself, the second one is of her relatives and the third one of her neighbours. I issue letters periodically to different addresses but unfortunately the response is meagre. For the follow up records of my cancer cases I have considered those cases which could not be traced as dead although we found one or two cases unexpectedly later on to improve the five year statistical results. I encountered one of my patients of 1926 quite recently not being able to trace her I had recorded her as dead.

* Read at a clinical meeting of the Calcutta Branch of the British Medical Association.

Classification of Cases

Assorting my cases for the last ten years—a total of 700—I find that 10 per cent fall in the early group. In my previous communication to the Third International Radiological Congress in Paris in 1931 I classified my cases as early late and terminal, but since then I have been following the international classification of carcinoma of the cervix uteri as recommended by the Cancer Commission of the League of Nations, dividing all cases into four stages according to the anatomical extent of the growth. The classification of Schmitz (1927) is almost the same. He recognizes four groups: (1) clearly localized carcinoma, (2) borderline cases, (3) clearly inoperable cases, and (4) terminal cases with pelvic involvement. Histologically I have followed Schottlander and Kermanner's classification of ripe unripe and mid ripe cells.

Victor Bonney (1935) devised his own classification of carcinoma cervix cases according to whether the regional glands removed at the operation are or are not carcinomatous. His reasons for non-acceptance of the League of Nations classification (which is generally used in radiation therapy) are that he began his work before radiology appeared in the field and secondly, because no useful comparison can be drawn between what one man sees and another thinks he feels. But Bonney's classification cannot be accepted as practical, since it is based on operable cases only in all of which the regional glands are removed. Until a better classification can be obtained it seems advisable to retain that of the League of Nations, which will render comparable the results of investigators in different parts of the world.

Technique of Treatment

There are three different methods of treating cervical cancer: Wertheim's abdominal operation, Schauta's vaginal operation and radiation treatment. Although Wertheim's operation was usual at the beginning of this century the adherents of Schauta's vaginal operation have continued to use this technique on account of the high mortality resulting from laparotomy and the relatively unsatisfactory duration of any benefit obtained in other cases. Shortly before the war some of the French and German gynaecologists began treatment with radiation after the war this treatment was almost universally accepted. The three methods of treatment—namely Wertheim's abdominal operation, Schauta's vaginal operation and radiation—have after about a quarter of a century outgrown the stage of trial and established a certain uniformity: a satisfactory comparison is now permissible and a conscientious worker will decide his plan of treatment on the basis of this comparison.

Wertheim's method has most nearly reached perfection in the hands of Victor Bonney (1935) whose results have been consistently good. Dissection of all the regional glands is the rule rather than the exception in all his 483 cases since 1907. The primary mortality ranges from 9.5 to 20 per cent, an average of 14 per cent. Schauta's operation has been greatly improved by Adler's more extensive vaginal procedure associated with immediate post-operative irradiation. It is useless to perform the ordinary vaginal hysterectomy which passes under the name of Schauta's operation. Free dissection of the ureters with removal of parametrial tissue should be undertaken in each case. The primary operative mortality is about 3.6 per cent. Radiation treatment has yielded the best results at the Radiumhemmet in Stockholm. We all follow more or less the same principles as those propounded by Heyman (1935) who wrote that if

properly applied radium treatment may produce at least as good results as the operative method. Adler (1932) adds that particular importance is to be attached to the word properly because the properly performed radium therapy is at least as difficult to learn as any surgical technique.

Results of Treatment

Table I shows the relative value of the different methods of treatment. The comparative figures from the literature indicate that in the hands of experts the results of radiation therapy might be as good as those of operation but

TABLE I—Comparative Statement of Five Year End results by Different Methods of Treatment (Adler)

Radiation	World literature	17.45 %	
	Borsell Heyman	23.3 %	(21.8 %)
	Bowling Fricke	23.0 %	
	Gray Ward	23.6 %	
Operation	World literature	19.1 %	
	Bonney (abdominal) Schauta (vaginal)	25.0 % 22.5 %	
Operation and Radiation	Franque (abdominal)	28.1 %	
	Pelham (vaginal)	28.0 %	
	Adler (vaginal) 3rd method	31.8 %	

in no case will they exceed them. In irradiation we have a second means of attack against cancer, but no better (Adler, 1932).

Comparing the results of abdominal and vaginal operations, the table reveals almost a similar permanence of cure although the primary mortality of the abdominal operation is on an average nearly four times that of the vaginal operation. The same table shows a decidedly higher proportion of permanent cures by the vaginal operation when combined with post-operative irradiation. This is Adler's achievement which he reported by invitation at the forty-fourth annual meeting of the American Association of Obstetricians Gynecologists and Abdominal Surgeons in 1931. The end results which I present have been obtained solely by radiation treatment consisting of combined radium and deep x-ray exposures. As a rule in this treatment an application of radium element corresponding to 6,000 milligramme hours is given partly in the vagina and partly in the cervical canal. This is supplemented by an intensive course of deep x-ray therapy. Since 1932 I have changed my technique and have been following that of Adler—namely radical vaginal operation with post-operative irradiation.

It seems necessary to state clearly certain fundamental rules of cancer statistics. It is the custom to term a patient cured when at least five years have elapsed since the end of treatment (operation or radiotherapy). Bonney (1935) states that 10 per cent of all recurrences appear between the fifth and tenth years. Five years freedom from recurrence is only a 90 per cent cure but ten years freedom is a 100 per cent. Among the permanently cured we differentiate between relative and absolute cures. The relative cure percentage is found by comparing the number cured after five years with the number operated on or fully irradiated. The absolute cure percentage is found by comparing the number cured with the total number of cancer cases seen or admitted (whether or not operated on or fully irradiated). For cancer statistics the "absolute cure" percentage should always be given because so far as the operative method is concerned the relative cure percentage depends greatly upon the operability rate which varies with individual surgeons.

Figures for end-results also depend upon the efficiency of the follow-up system. In India we are handicapped in many ways. First it is impossible to trace and follow up many patients because they have no fixed residence. Secondly some do not complete the full treatment, after having taken only a part of it they cease attending either because they think that they are cured or they find the treatment too expensive. Thirdly, since quite a large number of them succumb to tropical diseases, the absolute permanent cure rate is considerably affected. In spite of all these difficulties my end results will bear comparison with the results reported by other investigators.

Table II shows the comparative five year end results of irradiation treatment of carcinoma of the cervix by different investigators. Out of 352 cases (from 1926 to 1930) we have obtained 72.7 per cent of absolute cures.

TABLE II—Comparative Five year End results of Irradiation Treatment of Carcinoma of the Cervix Uteri

Classification	Investigator	Percentage of Five year Cures					
		Stage I	Stage II	Stage III	Stage IV	All Cases	
Schmitz	Schmitz 438 cases	80	41.9	16.3	1.7	19.14	
	Schreiner and Wehr (955 cases)	63.1	32.7	17.8	1	11.8	
League of Nations	Paris						
	Lacassagne (350 cases)	42	28	10	0	20	
	Heyman (1,439 cases)	57.5	34.3	1.2	5.3	21.9	
	Stockholm	—	—	—	—	21.3	
	Munich	—	—	—	—	17.6	
	Calcutta	—	—	—	—	20.5	
American College of Surgeons	Barlett and Smith (143 cases)	80	27.3	11.6	3.5	11.9	

in Stage I cases 41 per cent of absolute cures in Stage II cases 11.5 per cent of relative cures in Stage III cases and taking all the stages together 20.5 per cent relative cures and 11.1 per cent absolute cures. I am convinced that this percentage could be raised by making the treatment less costly and thus more accessible to patients and by securing their co-operation.

Table III indicates the number of positive five year cure cases year by year and stage by stage numbering forty. Table IV records the total number of cases admitted the total number taking the full course of treat-

TABLE III—Positive Five year Cure Cases of Carcinoma of the Cervix Uteri

Year	Stage I	Stage II	Stage III	Stage IV	Total	Grand Total
1926	1	3	1	—	5	43
1927	3	4	4	—	11	
1928	1	2	5	—	8	
1929	2	3	2	—	7	
1930	1	2	6	—	9	

ment and the survival periods which I have traced up to nine years. This table shows that out of a total number of 352 cases 156 took only a part of the treatment and forty-eight were lost sight of. These cases have been considered as dead in finding out the absolute cure rate. Tables V, VI and VII show the survival periods traced up to nine years in different stages of carcinoma of the cervix.

TABLE IV—Carcinoma of the Cervix Uteri (All Stages Together)

Year	No of Cases Admitted	No of Cases Taking Full Course of Treatment	Alive at the End of Years—										Lost Sight of
			1	2	3	4	5	6	7	8	9		
1926	23	15	15	14	10	9	7	5	5	4	3	3	
1927	62	34	25	25	22	18	13	11	11	9	8	—	
1928	101	53	37	31	21	13	13	8	5	3	—	—	3
1929	95	48	47	35	22	15	12	7	5	—	—	—	
1930	71	46	29	26	19	13	10	9	—	—	—	—	

TABLE V—Carcinoma of the Cervix Uteri (Stage I)

Year	No of Cases Admitted	No of Cases Fully Treated	Alive at the End of Years—										Lost Sight of
			½	1	2	3	4	5	6	7	8	9	
1926	2	2	2	2	2	2	2	1	1	1	—	—	—
1927	3	3	3	3	3	3	3	3	3	2	2	—	—
1928	1	1	1	1	1	1	1	1	1	—	—	—	—
1929	4	2	2	2	2	2	2	2	1	—	—	—	—
1930	1	1	1	1	1	1	1	1	—	—	—	—	—

TABLE VI—Carcinoma of the Cervix Uteri (Stage II)

Year	No of Cases Admitted	No of Cases fully Treated	Alive at the End of Years—										Lost Sight of
			1	2	3	4	5	6	7	8	9		
1926	4	4	4	4	4	4	3	3	3	2	2	2	—
1927	5	5	5	5	5	4	4	4	4	4	—	—	—
1928	6	5	3	3	3	2	2	2	1	1	—	—	2
1929	11	9	7	7	7	6	3	3	3	—	—	—	2
1930	8	8	2	2	2	2	2	2	—	—	—	—	6

TABLE VII—Carcinoma of the Cervix Uteri (All Stages Together)

Year	No of Cases Admitted	No of Cases Fully Treated	Alive at the End of Years—										Lost Sight of
			1	2	3	4	5	6	7	8	9		
1926	11	9	9	8	4	3	2	1	1	1	1	—	
1927	49	26	17	17	14	11	6	4	4	3	2	— 9	
1928	89	47	33	27	17	10	10	5	3	2	—	— 14	
1929	74	37	33	26	13	7	4	2	1	—	—	— 4	
1930	52	37	24	23	16	10	7	6	—	—	—	— 11	

Conclusion

In conclusion I must add that the percentage of cures could be greatly increased by earlier diagnosis using every means of investigation. We want our medical institutions to take the initiative. Every student should be alive to the question of early detection of cancer and every medical practitioner should know that these cancer cases are of frequent occurrence.

Early cases are first encountered by the general medical practitioners. If we really want to increase the number of cases receiving early treatment we shall have to get the sincere help and co-operation of our colleagues. Cancerphobia will not kill a person but a neglected and

undetected carcinoma of the cervix will lead to certain death

The task is very difficult. Even Victor Bonney states 'Nor have I observed that patients in more recent years present themselves earlier in spite of modern propaganda. Lastly, the work of cancer investigation cannot be complete unless substantial help and co-operation come from the corporation and the Government'

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HYPERTROPHIC PULMONARY OSTEO- ARTHROPATHY AS THE FIRST SYMPTOM OF PULMONARY NEOPLASM

BY

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Hypertrophic changes in the fingers have often been described in diseases of the lung. The following case reports are published because in each patient changes in the limbs formed the earliest symptom of a pulmonary neoplasm. Three cases were diagnosed and treated as rheumatoid arthritis the fourth was sent to the National Hospital Queen Square as suffering from acromegaly. Had the true significance of the changes in the limbs been realized the growth in the lungs might have been treated several months earlier.

Case Reports

Case 1—In April 1933 a man aged 56 began to notice that his feet and ankles were becoming larger; he could not get his boots on and his knees felt stiff and uncomfortable. In October 1933 his hands began to feel large and lumpy; they gradually became weak and stiff and he had to give up his work. By November 1933 in spite of rest his elbow joints and shoulders had become stiff; he developed a very slight cough but had no sputum. In December 1933 he was sent by his doctor as suffering from acromegaly to the National Hospital Queen Square where hypertrophic pulmonary osteoarthropathy was suspected. His chest was radiographed and a provisional diagnosis of pulmonary neoplasm made. In January 1934 he was admitted to Brompton Hospital. The only abnormality discovered in the chest was impaired resonance at the right apex. His teeth were in good condition his blood pressure was 140/30 and the heart sounds were normal. He had marked and painful hypertrophic pulmonary osteoarthropathy of the hands and feet. Bronchoscopic examination failed to reveal any abnormality although radiography had shown a rounded shadow in the right upper lobe suggesting the presence of a neoplasm. Radiography of the limbs showed new periosteal bone round the metacarpals phalanges radius and ulna. In view of the increasing severity of the symptoms it was felt that surgical removal of the primary cause offered the only hope for the patient. Pneumonectomy was performed but owing to his low condition the patient survived the operation only a short time. Examination of the removed lung showed a large columnar-celled carcinoma growing from the right main descending bronchus.

Case 2—In December 1931 a married woman aged 58 who had previously felt very well began to have rheumatic pains first in the feet then spreading to the hands and left shoulder. In May 1932 she noticed that her hands were

larger and that the tips of her fingers were getting broader. In July 1932, she went to a clinic and was treated for rheumatism but did not improve. In the following August she developed a slight cough and a feeling of lassitude and in November she was admitted to the Brompton Hospital complaining of lassitude and pains in the joints especially those of the fingers and left shoulder. On examination the left apex was dull to percussion and the breath sounds were poor. One small gland was found in the left axilla. The hands were broad and the fingers "drumstick", while the bases of the nail beds were red and swollen. The interphalangeal joints were stiff and painful to move and there were similar changes in the feet. Radiography of the chest showed a dense opacity in the upper and middle zones suggesting atelectasis and the presence of a neoplasm. The left hand and foot showed the typical changes of hypertrophic pulmonary osteoarthropathy. The ungual phalanges and the radius and ulna had bony like expansions at the distal ends. In the tibia and fibula new periosteal bone was laid down in the form of an irregular capsule. The patient was given deep x-ray therapy but a radiograph one month later revealed no change in her condition.

Case 3—In November 1931 a man aged 53 first noticed pain and swelling in the knee joints. This was treated as housemaid's knee, but did not improve. The pain and swelling then spread to the ankles wrists elbows and shoulders (in that order) and a diagnosis of rheumatoid arthritis was made. In February, 1932 he noticed that his fingertips were becoming larger at this time he was being treated at Bath. His medical attendant found suspicious signs in his lungs although the patient had not complained of any pulmonary symptoms. A radiograph of the chest was taken and he was then sent to the Brompton Hospital out-patient department where a radiograph (August 1932) revealed a large mass at the base of the right lung. A few rhonchi and weak breath sounds were heard at this base. Shotty glands were found on both sides of the neck and a large smooth gland was palpable in the right axilla. Nothing else abnormal was discovered. The knees ankles and wrists were generally enlarged but there was no limitation of movement. The fingers were drumstick in shape and the small joints of the fingers and toes were thickened. The bones showed typical periosteal thickening. On bronchoscopic examination a small nodule was detected projecting from the posterior wall and partially occluding the lumen of the right main descending bronchus. A portion of this was removed and was found to be a squamous-celled carcinoma. Radon seeds were inserted through a bronchoscope. In November 1932 radiography showed no change in the opacity but the condition of the joints was less painful. In July 1933 the patient was keeping well and working; he had neither cough nor pain. The fingers were unchanged. In January 1934 another radiograph showed no change in the opacity and the patient was still well and working.

Case 4—In April 1932 a man aged 45 found that his knees were swollen; they were painful while walking, but were relieved by rest. He was told by a medical practitioner that he had rheumatoid arthritis and was given an ointment to rub into them. In May the patient first noticed that his fingers were swollen; this swelling steadily progressed. In June he underwent an operation for appendicitis. In August a pain in the right scapular region began. He continued with his work until November when cough developed with dyspnoea on exertion. He was admitted to Brompton Hospital in February 1933. There were a few discrete glands in the groin and the breath sounds at the right base were weak. Well marked drumstick clubbing was present in both hands. Radiography showed an opacity at the base of the right lung and a bronchogram indicated that the lipiodol had failed to fill the right descending bronchus at the site of the opacity. Bronchoscopic examination revealed a red granular area in the lateral secondary division of the right descending bronchus. A portion of this was removed and proved to be carcinomatous. Thoracotomy was performed in the hope of removing this growth but a firm mass—the size of a cricket ball—was found in the right lower lobe invading the middle lobe and extending into the hilar region.

Since this was considered irremovable radon seeds were inserted and the patient was discharged in a somewhat improved condition

Clinical Signs

Clubbed fingers were mentioned as a symptom of tuberculosis by Hippocrates and French writers of the present time call them *doigts hippocratiques*. Hypertrophic pulmonary osteoarthropathy, however, was not described until P. Marie (1890) published his account. Bamberger (1891) drew attention to the disease independently almost at the same time.

The actual deformity in clubbed fingers is as follows. The fingers of both hands are thickened and bulbous and the terminal phalanges are enlarged. The nail beds may be red and swollen and the nails are curved longitudinally and laterally. The bones and joints are not affected nor is the skin itself changed in any way. Trousseau likened the change to the head of a serpent.

In hypertrophic pulmonary osteoarthropathy the changes may not affect the tips of the fingers first. In fact the metacarpo-phalangeal region may remain normal. Marie described the disease as follows. Symmetrical osteitis of the four limbs chiefly localized to the phalanges and terminal epiphyses of the long bones of the forearm and leg sometimes extending to the roots of the limb and flat bones and accompanied by a dorsal and lumbar kyphosis and some affection of the joints.

Radiography may reveal proliferative changes in the ungual phalanges. New subperiosteal bone is laid down and sharply marked off and sometimes there are irregular burr-like expansions in the distal half. More rarely small osteophytes are present at the proximal end near the line of joint cartilage. Changes in the joints may affect the peri-articular tissues early. Later erosion of the cartilage may take place with lipping.

Kessel (1917), Montgomery (1916), Locke (1915) and others have observed many cases and believe that clubbing represents the early stage of hypertrophic pulmonary osteoarthropathy. They found that when there was simple clubbing clinically bony changes were present on x-ray examination. Lassere (1932) considered that vasomotor and venous stasis formed a favourable soil, and that there might be a deformity of the soft parts only, the presence of toxins being necessary for new bone formation.

Aetiological Classification

The underlying causes seem to divide the patients into two main groups.

1. Patients in whom there is some element of toxic absorption, such as (a) pulmonary suppuration as in lung abscess, bronchiectasis and empyema or (b) chronic intestinal infection and toxæmia, as in biliary cirrhosis, chronic diarrhoea, rectal polypus and sprue.

2. Patients in whom clubbing appears to be due to cyanosis and right-sided heart failure as in chronic pulmonary tuberculosis and in pulmonary fibrosis and heart disease particularly the congenital disorders.

In the toxic group the changes may come on very rapidly as in lung abscess when the fingers are generally sausage-shaped, red and swollen. In this type of patient the condition of the fingers tends to clear up after the source of the toxins has been removed. In several patients with bronchiectasis and marked clubbing the condition of the fingers almost vanished following the eradication of the diseased area by lobectomy.

Clubbing nearly always improves in lung abscesses treated adequately. Puig (1932) reported hypertrophic

pulmonary osteoarthropathy in a patient with an acute abscess of the lung with rapid disappearance of the clubbing as the lung condition improved. The disappearance of the capsule was only comparable with that seen in syphilitic dactylitis energetically treated. The same has been found with clubbing in intestinal infections. Moulonquet and Salomon (1932) described the clubbing in two patients suffering from colitis and stricture of the rectum in both the clubbing cleared up following colostomy and rectal lavage.

The second group appears to be associated with cyanosis and right-sided heart failure. It is well known that clubbing is common in and is diagnostic of those forms of congenital heart disease which produce cyanosis and dyspnoea. Fishberg (1932) found that whenever clubbed fingers occurred in phthisis the patient was also suffering from dyspnoea and dilatation of the right side of the heart. This would suggest that there was a mechanical disturbance of the circulation causing peripheral stasis which is probably also the basis of the clubbing which develops in congenital heart disease.

Jones (1931) considered that when the soft tissues only were involved the cause was peripheral dilatation and slowing of circulation due to right-sided heart failure. He found clubbing present in 40 per cent of congenital heart lesions and in 25 per cent of cases of subacute endocarditis. He believed that in the latter the clubbing was due to a local disturbance as opposed to the general cardiac back pressure in congenital heart lesions. Others have reported clubbing in subacute endocarditis and Puig (1932) noted it as the first sign in one of his patients. Whether the clubbing is due to general toxæmia to something akin to Osler's nodes or merely to cardiac failure is not known.

Conclusion

In spite of much discussion little is nevertheless known or understood of the true pathology or aetiology of the changes in the limbs described here. Why should hypertrophic pulmonary osteoarthropathy appear in some patients with pulmonary neoplasm when there is no evidence of either obstruction to the flow of blood through the lungs or of absorption of toxins? None of the patients reported here showed any symptoms suggesting either factor.

Some writers suggest that these changes are due to metabolic toxins produced by the breaking down of body tissues the toxins causing a vasomotor disturbance with peripheral dilatation of the capillaries. While the pathology of the disease remains so obscure the clinical connexion between the changes in the fingers and those in certain pulmonary diseases should not be overlooked. These changes as we have seen may appear before any other clinical sign. They will if recognized lead to an earlier diagnosis and treatment of the underlying condition.

Summary

1. Four cases with pulmonary neoplasm are reported in which the earliest symptom was hypertrophic pulmonary osteoarthropathy.

2. The aetiology of this condition is briefly discussed and the relevant literature reviewed.

It is suggested that investigation of the lungs should not be overlooked in patients with rheumatism or with changes in the joints appearing without known cause as well as in those with acromegaly.

I wish to express my thanks to Dr L. S. T. Burrell and Mr A. Tudor Edwards for their kind permission to publish.

the notes of the patients who were under their care at Brompton Hospital London

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OCULAR PARALYSES FOLLOWING MUMPS

BY

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The comparative rarity of the neurological complications of mumps and their unusual localization and termination in one of the two following cases have led us to put them on record

Case I

A boy aged 9 came to the Coventry school clinic in December 1929 because he had recently found that he could not see to read. While at the clinic he vomited and it was noticed that a large quantity of the vomit came through the nose. He had had mumps three weeks previously and a fortnight before admission he noted that he could not see to read. For the past fortnight food had regurgitated through his mouth.

There was complete paralysis of accommodation the pupils were widely dilated and did not react to light. No external muscles were affected. The vision was as follows: right eye 6/60 with +2 = 6/9 and the left eye 6/60 with +2 = 6/9. There was slight blurring of the edges of both disks. The knee jerk was absent on the right side and its presence on the left was doubtful. The boy was admitted to the eye wards of the Coventry Hospital. A swab was returned as negative for the Klebs Loeffler bacillus. He was transferred to the medical wards and lost sight of.

He was written for and examined on July 4 1934 when he was aged 14. The disk edges were still somewhat blurred but the eyes were apparently quite normal and there was no evidence of any paresis of any extrinsic or intrinsic muscles. At the time of the first visit we found that Osler in his *Textbook of Medicine* had mentioned that mumps was occasionally followed by peripheral neuritis.

The case may be summed up as an example of the picture presented by post-diphtherial paralysis of the intrinsic muscles of the eye but caused by the virus of mumps. It is probable that the slightly blurred disks were physiological and had nothing to do with the infection.

Case II

Another boy aged 12 came to the Eye Department of Coventry Hospital on March 15 1933 complaining of blurred vision in the left eye and inability to see things on the right side without turning the head in their direction. The symptoms had come on gradually a few days previously. One month before this date he had developed mumps. The attack was of ordinary severity and he did not stay in bed. A sister had suffered at the same time. There had been no headache fits, or any cerebral symptoms. His previous health had been very good. One brother had died recently from

pulmonary tuberculosis and a sister from meningitis probably tuberculous.

We found that the vision in the right eye was 6/24 and with glasses 6/45. In the left eye it was 6/24 and with glasses 6/18. Both fundi were normal. All the intrinsic and extrinsic muscles supplied by the third nerve were paralysed on the left side. The pupil was widely dilated and inactive. There was incomplete left ptosis with compensatory overaction of the left half of the frontalis. Food regurgitated through the nose. The general nervous system was normal. The Mantoux and Wassermann tests were negative. No Klebs Loeffler bacilli were found. There was a history that twelve months previously the left eye had been struck by a golf ball and that two stitches had been put into the lids one into each. The eye was not damaged, and there was no diplopia after the blow.

On March 17 paresis of the left external rectus appeared the superior oblique remained active. On May 23 the paralysis of the eye muscles was reported to be improving and on June 19 the eye movements were almost normal. On July 17 all the eye movements were normal except convergence. The pupil was still dilated. On August 21 the left pupil was still dilated and inactive and upward movement of the eye was defective. No change was noted on October 2 December 11 or December 18. The vision of the right eye was 6/45 and of the left 6/18 partly (with glasses).

On January 15 1934 there was slight defect of convergence and abduction. The pupil was still dilated and inactive on March 5. Convergence was still defective. There was no change on April 9. On May 14 there was still third nerve paralysis the left pupil was fully dilated and inactive. The fundi were normal. The condition was not so good as previously. In November there was still no change or improvement.

Comment

Numerous investigations of cases of uncomplicated mumps have shown that a meningeal reaction, as indicated by a lymphocytic pleocytosis, is present in most cases of this disease, even in the absence of any symptoms or signs indicative of cerebral involvement. It seems probable that the virus of mumps is itself potentially neurotropic, since several cases are on record in which clinical meningitis and encephalitis have preceded the onset of the glandular swelling. The pathology would therefore seem to be distinct from that of the cerebral complications of the other virus diseases (such as vaccination, varicella and encephalitis) in which it is generally held that the neurological complication is caused by a dormant virus which has been awakened to activity by the attack of the exanthem.

The peripheral nerve palsies accompanying mumps are often considered to be of the same nature as those associated with various toxins and infections and to be a lesion of the peripheral nerve endings but in view of the frequent meningeal reaction of parotitis it would seem equally likely that in some cases the lesion is one of the nerve trunk near its root (a meningoradiculitis). This would bring the pathology into line with that of the peripheral (cranial and spinal) nerve palsies associated with the various forms of meningitis acute and chronic.

The time of onset of the neurological complications is usually at the height of the parotitis while it is subsiding or in the early period of convalescence (third to fourteenth day). Periods of three weeks have been recorded. The longer interval of six weeks in Case II is unusual.

It appears certain that in some cases cranial nerve palsy due to the mumps virus may occur in patients in whom there has been no apparent parotitis and no orchitis, as is shown by the occurrence of such palsies in contacts in barracks during epidemics and in a member of the family of a definite parotitic patient. The possibility of such an

origin has therefore to be borne in mind in all cases of unexplained cranial nerve palsies. In the almost constant meningeal reaction of mumps may also lie the explanation of many cases of acute aseptic benign meningitis without parotitis.

Of the cranial nerves involved the optic, the facial and the acoustic are the commonest in the recorded cases. The third nerve and the post-diphtherial type of palatine and accommodation paralysis are much rarer. The benign and often transitory character of the effects on the nerves which result from the penetration of the sero-fibrinous exudate into their trunks at their origins and the pressure on these from the inflamed meninges have been emphasized. The two notable exceptions to this are the optic and acoustic nerves, where atrophy is apt to follow with disastrous consequences. The two cases here recorded are therefore of interest in the type of nerves involved and in the absence of recovery in one.

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Clinical Memoranda

Local Anaesthesia in the Repair of Torn Perineum

Anyone who has had any experience with cases of prolapse of the uterus and vagina cannot fail to be impressed by the enormous weight of evidence in favour of lacerations of the perineum as a contributory factor in the aetiology of this distressing condition. While holding an appointment as a house surgeon I saw a large number of such cases and took a careful obstetric history from each. There were two points which struck me as being of great importance: (a) practically every patient gave a history of a perineal laceration; (b) a large number of patients said that either their doctors did not repair the tear or that the midwives did not call in a doctor to see the tear.

Margaret Salmond and Gertrude Dearnley (*J Obstet Gynaec Brit Emp* 1935 p 446) in an investigation into this subject showed that midwives were inclined to overlook tears and that results obtained by general practitioners were not very good. However they offered no explanation why the practitioners' results were poor. The reason is I think that as the practitioner usually has no skilled anaesthetist at his disposal he is forced to do the operation without an anaesthetic at all and in his effort to spare his patient as much discomfort as possible he hurries the procedure with the result that it is not properly done. Therefore we need a method whereby anaesthesia can be produced easily, effectively and single handed by a general practitioner. When the procedure is carried out in the patient's home naked lights such as fires, gas-flames, etc. preclude the use of inflammable anaesthetics. A gas-and-oxygen apparatus is expensive and clumsy and needs a second skilled person to manage it. A small bottle of novocain solution, a 5-cm syringe and a needle in a sterile container occupy very little space and may be carried in the pocket. The practice of allowing midwives to repair the tear while the practitioner administers the anaesthetic is one to be most strongly condemned.

TECHNIQUE

The patient having been placed in the lithotomy position with sterile towels in place and the vulva thoroughly cleaned and painted with such antiseptic solution as the operator is in the habit of using (Bonney's blue staining, etc.) a 5-cm syringe is filled with 4 per cent novocain solution. The skin edges of the tear are infiltrated throughout their entire length. The infiltration should be done internally and the skin not punctured at all. This is usually all the infiltrating that is necessary since the torn deeper structures are as a rule insensitive to pain. In tears involving the levators, however, I have found that the muscles are sensitive and I recommend their infiltration. About 4 ccm of 4 per cent novocain solution is sufficient for the average repair. The largest amount that I have used was 10 ccm for a complete tear involving the whole of the posterior vaginal wall, the rectum and external sphincter. I recommend the repair being done within two hours of delivery as at the end of this time sensation begins to return to the deep structures.

RESULTS

All the patients have expressed their gratitude for not having been put to sleep and some who have had previous repairs have compared this method very favourably with the others they have had with general anaesthesia or with no anaesthetic at all.

The healing has in all cases been most successful and I have had none which have broken down or gone septic. It has been suggested to me that the novocain might cause soddening of the tissues in this potentially septic area and therefore the procedure might be considered risky. Such quantities of novocain which would cause this are never necessary to produce the required anaesthesia and no ill effects have followed its use in any of my cases. These observations are based on over 100 cases in hospital and on the district.

CONCLUSIONS

- 1 Suture of perineal lacerations is essential and unless done thoroughly is useless.
- 2 The anaesthetic of choice is local infiltration.
- 3 Infiltration of the skin edges is usually all that is necessary and should be done internally and the skin not punctured.
- 4 It is an extremely practical method for general practitioners.
- 5 It is very much pleasanter for the patient.
- 6 The use of general anaesthesia for the repair of even large tears is both undesirable and unjustifiable.

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P. Klotz (*These Paris* 1937 No 35) maintains that polyneuritis is most likely to develop in female subjects as they are particularly susceptible to endocrine disturbance. Experimentally a previous upset of the endocrine system by ovariectomy makes it impossible to produce that habituation to alcohol which it is easy to obtain in the healthy animal. On the other hand such an attempt at habituation results in the production of a state of hypersensitivity to the poison. Alcohol in polyneuritis develops after a more or less prolonged period of dyspepsia with atrophic gastritis and degenerative hepatitis and is more often produced in such cases by infections of which tuberculosis is the most important. It sometimes appears in an individual who has abstained from alcohol for some weeks or months. This polyneuritis is very often associated with anaemia and pronounced endocrine disturbances among which thyro-ovarian insufficiency predominates.

Reviews

MUSINGS OF A PHYSICIAN

Meditatio Medici A Doctor's Philosophy of Life By W Cecil Bosanquet D.M. F.R.C.P. (Pp 162 7s 6d net) Aldershot Gale and Polden 1937

Reviewers are traditionally believed not to read the books they review, but the most hardened reviewer would find it difficult to skip Dr Bosanquet's *Meditatio Medici* which in the small compass of 162 pages runs through the whole gamut from interstellar space to the intricacies within the atom, discussing, by the way, man, his development his conscious mind and his principles of conduct. Even the footnotes are illuminating and frequently amusing.

In these days of increasing specialism, where the knowledge of one expert is not readily available for another working in a different department, a book of this kind is refreshing especially when bearing the marks of wide reading and much reflection, excellently phrased in scholarly English. If we might venture any disparagement where we have received so much pleasure we might protest that a good deal of what the author says on education amounts to truism though we will qualify this by defining a truism as truth which people generally accept but seldom act upon. And there is sound truth in his plea that morality seems to penetrate the system most subtly and to take the firmest hold when it is inhaled from the social atmosphere surrounding the child rather than when it is deliberately thrust upon its attention. There is something to be said, moreover, for his view that standardized education may result in a levelling down, in effect a trade union *ca canny*.

The author's account of so much physics chemistry, and biology as bears on his main theme is lucid and free from technicalities as is his summary of anthropology. His speculations on the origin of sacred fires such as that of Vesta in Rome are of interest and we liked his suggestion that the tendency of children to construct huts in trees is the revival of an instinct derived from arboreal ancestors. It reminded us that a play which is so illustrative of regressive tendencies ends with Peter Pan in a hut on the tree tops in Kensington Gardens.

The title inevitably recalls Sir Thomas Browne to the mind perhaps intentionally so to emphasize the difference between seventeenth century thought and that of to-day. Thus, said Browne is man that great and true Amphibium, whose nature is disposed to live not like other creatures in diverse elements but in divided and distinguished worlds. Gone are the discursive though delightful musings of those days the poppy of oblivion has blindly scattered its opium upon them to day we are seeking a more unifying philosophy and we are grateful to Dr Bosanquet for trying to help us to find one.

ANAESTHESIA AND ANALGESIA

Recent Advances in Anaesthesia and Analgesia (including Oxygen Therapy) By C Langton Hewer M.B. B.S., D.A. Second edition (Pp 284 11s figures 15s) London J and A Churchill 1937

This work needs no introduction, for the first edition was published less than five years ago. In order to bring the second edition up to date a good deal of rewriting has been necessary and descriptions of four new anaesthetic agents have been added. These are cyclopropane diethyl ether sodium evipan and pentothal sodium. There are also chapters on carbon dioxide and oxygen as therapeutic agents. Besides chapters on the commonly employed

anaesthetic agents and their various types of apparatus space is also given to such subjects as the risk of explosion in anaesthesia and modern methods of local analgesia, including its use in the reduction of fractures. Special attention is also given to the different branches of surgery, such as cranial, thyroid thoracic, and abdominal, and the best methods of anaesthesia for them.

In order to keep the size of the book within reasonable limits Dr Hewer has had to be brief where no doubt he would have preferred to write at greater length. Nevertheless he has contrived to deal adequately with every subject of importance to the modern anaesthetist. He has supplemented his text with a useful list of references at the end of each chapter, so that the reader who wishes for fuller information on any point will know where to look. The book is not intended as a textbook for the student. Descriptions of signs and stages of anaesthesia are absent. But for the established anaesthetist who wishes to learn the latest views on the various branches of his specialty there is something of everything. It should prove popular with those working for their diploma in anaesthetics.

PHENANTHRENE DERIVATIVES

The Chemistry of Natural Products Related to Phenanthrene By L F Fieser (Pp 358 32s 6d net) New York The Reinhold Publishing Corporation London Chapman and Hall Ltd 1936

This volume, by Professor L F FIESER of Harvard, is No 70 of the American Chemical Society series of scientific and technological monographs. It has the essential qualities of a good monograph, since the author gives a thorough account of a special field of knowledge. Further more it is of exceptional value because the phenanthrene derivatives are a group whose biological importance has increased in a sensational manner during recent years. The presence of phenanthrene in coal tar was discovered in 1872 but the compound was neglected because it refused to yield valuable dyes. Morphine was recognized as a phenanthrene derivative as early as 1881, but the great biological importance of the group has only been established during the last decade. In 1928 Wieland and Windaus established the structural formula of cholesterol, proved its relationship with the bile acid and showed that both were phenanthrene derivatives. About the same time it was discovered that the antirachitic vitamin was a derivative of ergosterol.

Since that time it has been ascertained that the sex hormones are sterol derivatives, that the cardiac glucosides have a very similar structure and that the most active carcinogenic agents are phenanthrene derivatives. These remarkable discoveries have naturally provoked intense activity in biochemical circles and the author mentions that 45 per cent of his references are to work carried out in the lustrum 1930-4 while 23 per cent refer to work published in 1935. This sudden rise to fame of a relatively obscure and neglected group of compounds is one of the most striking recent events in biochemistry. The basic sterol ring contains 17 carbon atoms, and small alterations in the side chains often produce great changes in the biological activity. Hence the relation between the chemical structure and the biological activity of sterol derivatives is one of the more difficult and complex fields of biochemistry. The author succeeds in giving a very clear account of this difficult subject, an account that is greatly simplified by the lavish use of structural formulae.

The rate at which the complexity of the subject is growing may be judged by the fact that it was not until

1929 that a sex hormone (oestrone) was isolated in a pure state, while the author gives a chart of no fewer than twelve different sex hormones established in 1935 a number which has indeed increased during the last year. He recognizes the difficulty of describing a subject which is in the course of such rapid evolution but puts forward the opinion that probably the basic facts have been correctly determined and that future advance will be an expansion rather than a drastic revision of current opinions. His book will prove of very great value to research workers in a wide field, for the bulk of the recent literature on this subject has been too great to be followed by any except specialists on this branch of chemistry.

BOOKS ON PAEDIATRICS

The 1936 Year Book of Pediatrics Edited by Isaac A. Abt D.Sc. M.D. (Pp. 507, 87 figures, 2.50 dollars or 10s. 6d. postage 6d.) Chicago: Year Book Publishers. London: H. K. Lewis and Co. 1937.

Sick Children: Diagnosis and Treatment By Donald Paterson B.A. M.D. F.R.C.P. Second edition. (Pp. 690, 76 figures, 15 plates, 12s. 6d. net.) London: Cassell and Co. 1937.

Les Régimes chez l'Enfant By L. Babonneix. Pp. 608, 75 fr.) Paris: Masson et Cie. 1936.

Manuel de Puericulture By P. Lereboullet. Second edition. (Pp. 227, 55 figures, 22 fr.) Paris: Masson et Cie. 1936.

Aids to Diagnosis and Treatment of Diseases of Children By F. M. B. Allen M.D. M.R.C.P. Seventh edition. (Pp. 330, 4s. 6d.) London: Baillière Tindall and Cox. 1937.

Dr I. A. Abt has again edited a year's gleanings from the paediatric world literature with the collaboration of Dr A. F. Abt, and publishes them under the title *The 1936 Year Book of Pediatrics*. It is explained in the preface that although there are no outstanding advances to be recorded for the year under review steady progress is being made in many directions especially in the fields of vitamins and of virus diseases. An interesting feature of this 1936 volume is the inclusion of certain abstracts dealing with the aims and significance of children's hospitals. As in preceding issues, quite the most valuable part of this year book is the assortment of comments by the editor in small print at the end of certain abstracts. It is gratifying to see that a reasonable proportion of space is given to abstracts of contributions to the *Archives of Disease in Childhood*.

Steady progress is also indicated by the revisions and new material in the second edition of *Sick Children: Diagnosis and Treatment* by Dr Donald Paterson which appears seven years after the first. Perhaps the greatest changes are to be found in the chapter on blood diseases which now gives an up-to-date account of the principal disturbances with a useful collection of prescriptions. The use of small print throughout this edition for the less common maladies has enabled the author to keep it down in length and the resulting compact volume of just under six hundred pages has been achieved without the sacrifice of a good quality paper. A useful addition is a table of normal biochemical data presented immediately inside the front cover.

Diet for Children by Dr L. Babonneix is an ambitious work excused so to speak, by the author in a disarming introduction on the grounds that great advances in the scientific basis of nutrition have been made in recent years and that most books on this subject are concerned almost exclusively with young infants while he has carried on the principles and practical applications right through

childhood to early adolescence. The volume of nearly six hundred large pages is divided into three main sections. The first gives an outline of the general biological principles of dietetics and it is clear that the author has read widely in an extensive literature in order to present the facts in an interesting and accurate fashion. The middle section of the book is essentially an up-to-date manual on infant feeding in which due emphasis is placed upon the many advantages of natural breast feeding. After dealing in some detail with the normal infant the author proceeds to describe the dietetic aspects of treating infants suffering from various disorders and special types of dietetic material are discussed. The third part prescribes the correct feeding of children from 2 to 15 years of age in health and disease. Unfortunately the daily diet sheets are scarcely applicable in this country. To see nursery menus set out in French is novel and so appetizingly do they read that a possible method of dealing with trouble some anorexia suggests itself. Dr Babonneix is to be congratulated upon producing what will undoubtedly be regarded in French paediatric circles as a standard textbook on all that pertains to diet.

Professor L. Lereboullet's *Child Welfare Manual* has been carefully revised for a second edition and this modest little book can be heartily commended to those who wish to know how these things are done in France. Line drawings enliven the text and add to the value of the book. A pre-war chart (after Budin) shows the then common enormous increase in infantile mortality in the summer months. It would be more instructive to show what is happening to-day when winter diarrhoea from upper respiratory tract infections threatens to dominate the infant mortality returns.

Another new edition the seventh of *Aids to the Treatment of Diseases of Children* by Dr F. M. B. Allen of Belfast well maintains the reputation already held by this little book. New sections deal with the treatment of asthma and of pink disease. The prescriptions given at the end form a most useful addition to a thoroughly practical volume.

SOCIAL PROBLEMS OF DEAFNESS

Deafness and Commonsense By James Kerr Love M.D., F.R.F.P.S., LL.D. (Pp. 160, illustrated, 5s. net.) London: F. Muller.

Dr KERR LOVE has produced a little book which should be of great help to all interested either directly or indirectly in the social problems connected with deafness. The title gives a good indication of the purpose of the book for the author is concerned to show the nature of deafness how its effects may be best alleviated and how much can be done to improve the position of those whose lives are handicapped by the impairment or loss of hearing. Such a book is the best antidote to the quackery and exploitation to which the deaf are constantly subjected by the unscrupulous and the credulous and it is to be warmly recommended to all who need an accurate account in simple language of a problem which faces many parents, relatives and sufferers themselves.

Dr Kerr Love treats the subject from three aspects: to explain the nature of deafness, to show how the hard of hearing can make the best use of the hearing capacity they still possess and so help themselves, and to show the way in which deafness may be prevented. The problem is so largely a social and eugenic one that the co-operation of the public is essential and this book is an excellent

guide to that intelligent co-operation Dr Kerr Love is famous for his life long devotion to the interests of the deaf, and his latest publication increases the indebtedness of the deaf and their teachers to him. He adds a further interest to his tale by an account of the education and life of Helen Keller, the wonderful story of triumph over apparently insuperable disabilities.

Notes on Books

La Revolution Alimentaire Actuelle Ses Consequences Biologiques is a book of 192 pages by Dr G BELTRAMI (Paris Vigot Freres, 30 fr). "Eat dry, eat hard eat actively, eat in earnest" is the advice which Dr Beltrami gives the world if it would stave off the injury which modern civilization is inflicting on it. The particular harm is the decay of tooth, jaw, and face. Dr Beltrami has a simple faith and a simple cure for all the ills of the flesh. His doctrine is that we are being ruined by soft food, soft bread, soft drinks, use of jaws is necessary for health of teeth and face. If a way could be found he would make the child in the womb use its jaws. A hard teat an ivory ring for infants, wholemeal bread and tough joints for adults would soon put our jaws and teeth to rights.

The well known reference book issued annually by the Charity Organization Society under the title of *Annual Charities Register and Digest* continues to reflect the widespread interest taken in maternity and child welfare. Information on administrative agencies maternity and child welfare clinics, maternity homes, children's hospitals etc. which before 1935 were scattered through several different sections of the work, is now collected into one under the heading Maternity and Child Welfare. Copies of the 1937 edition of this very useful book may be obtained from the Charity Organization Society, Denison House, Vauxhall Bridge Road, SW 1 (cash price 8s 6d in the United Kingdom).

In a communication to the second Argentine Congress of Social Medicine, entitled *El Problema de los Incapaces por Accidente* (Rosario Libreria y Editorial Ruiz Cordobe) Dr JUAN CARLOS ALVAREZ maintains that official institutes for the study of injuries and the re education of the disabled should be created at once in order to prevent the accumulation of such incapacitated persons so far as possible. The function of such institutes should be to determine the percentage of permanent incapacity so that the proper compensation may be made.

The *Dentists Register* for 1937 has now been published for the Dental Board of the United Kingdom by Constable and Co Ltd, price 12s post free 12s 6d. The total number of names appearing on January 1 of this year is 14 706 being 201 more than the figure for 1936. Of these 8 399 (57.11 per cent) are registered with medical surgical or dental qualifications. The number of names added by registration was 470 including 107 foreign and seven colonial dentists.

Dr CLIFFORD ALLEN has written a monograph entitled *Modern Discoveries in Medical Psychiatry* (Macmillan 8s 6d). Perhaps the title is somewhat misleading as the author gives us a very interesting historical study of the developments of psychological medicine from the time of Mesmer and his discovery of hypnosis to the researches of Pavlov. Then we come to the work of Janet. It is true that Janet was not favourable to the theory of the unconscious but his clinical work was illuminating and the psychiatrists of that time greatly profited from his teachings. Then Morton Prince was responsible for a number of interesting researches on multiple personalities. Later on Freud formulated his theory of the unconscious which has done so much to illuminate the psychopathology

of the hidden depths of the unconscious. The remaining chapters deal respectively with work of Adler Jung, and Kretschmer. This is a good book which will be of interest to psychiatrists old and young.

The new *Medical and Dental Students Register* published for the General Medical Council by Constable and Co Ltd (price 7s 6d), gives the usual official information, with lists of medical and dental students registered during the year 1936, the totals being respectively 2,544 and 356.

Preparations and Appliances

THE AURAPHONE HEARING AID

A very neat and serviceable looking hearing aid has been brought out by Auraphone Limited (120 Wigmore Street W 1). To mention its external advantages first it weighs no more than two pounds with its batteries in place and in its bakelite container slips easily into the pocket or handbag. The running costs even if the instrument is used continuously for eight or ten hours a day amount to no more than ninepence or a shilling a week. More important than appearance however is the function of a hearing aid. The valve amplifying principle which has wrought a minor revolution in hearing aids giving greater freedom from distortion and improving hearing at a distance is embodied in the Auraphone instrument. Two valves are employed actuated by a dry high tension battery and a small low tension accumulator. It is possible to increase amplification at any desired part of the scale and the control of tone is easily adjusted. For the microphone a range of six different interchangeable types has been provided accentuating the very low and the very high notes with the alternatives in between. There is also a medium type possessing an equal range of amplification over the whole scale. The standard earpiece is light and neat in construction, and a midge earphone may also be provided of the diameter of a sixpence to fit the ear comfortably. The provision of aid for the deaf is much more than a mere question of amplification of all sounds it calls for selection and delicate control. Hardness of hearing is a condition of infinite variety and no instrument can fit every case but the Auraphone seems to have found a wide acceptance and is evidently the product of much careful thought both in respect to carriage and wear and also to the physics of sound conduction. The price is sixteen guineas.

HEARING AIDS AMPLIVOX MODEL

We have had the opportunity of inspecting the latest addition to the range of hearing aids by Amplivox Limited (106 George Street Portman Square W 1). This is known as the Amplivox model C and consists of a portable box which might very well be passed off (as many people are sensitive about using a hearing aid) as a small camera with the usual attachments. Its outstanding feature is the incorporation of a piezo-electric microphone ensuring good fidelity of sound reproduction and freedom from background noise which is so disadvantageous in many types of instrument and sometimes intolerable to the deaf. Three stages of valve amplification are provided. The batteries are of generous capacity for so small an instrument and last for five or six months and the accumulator can be used for 30 or 40 hours before recharging so that the cost of upkeep is a trifle. The sound intensity can be adjusted at will by means of a continuously variable volume control with an on off switch making the instrument very easy to use. An earphone of the disk type is provided also a small orifice fitting tube but the former is recommended for the best results. It is stated that the instrument has been found very successful in otosclerosis and senile deafness. It is designed for distance hearing as well as close conversation and we foresee the time when persons whose hearing is normal may make use of such instruments to overcome disadvantageous placing in public halls or places where acoustics are unfavourable. It was only from the point of view of normal hearing that we could try the instrument but in respect of volume and lack of distortion as well as absence of background noise it is wholly satisfactory. Model C is priced at eighteen guineas and the firm offers home trial before and a year's guarantee after purchase.

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THE NATIONAL DIET

The Advisory Committee on Nutrition appointed in May 1935 by the Minister of Health and the Secretary of State for Scotland has issued its first report and a descriptive account appears at page 771. The committee was asked "to inquire into the facts, quantitative and qualitative in relation to the diet of the people, and to report as to any changes therein which appear desirable in the light of modern advances in the knowledge of nutrition." The members of the committee addressed themselves particularly to three questions: (1) Is there sufficient food produced in or imported into the country to ensure for everyone a diet in conformity with the principles of modern knowledge? (2) Are the diets of different sections of the population adequate in every respect in the light of recent advances in the knowledge of nutrition? (3) Is the state of nutrition of every section as good as it could be made by the application of modern knowledge? The committee interpreted the term "state of nutrition" as applying to the physical and functional bodily condition only in so far as it is dependent on food.

The present report is mainly an account of the activities of the committee in attempting to answer these questions. These activities involved a comprehensive survey of the food supplies, diets, and state of nutrition of the population on a scale not hitherto attempted in this or any other country. The answers to the above questions are therefore of the first importance. It is with these answers that we are here concerned—the more so as in each case the answer is "No." The committee finds that the food produced in and imported into the country is sufficient to ensure for everyone an adequate supply of energy-yielding substances—starches, sugars and fats. It is sufficient also to ensure an adequate supply of protein. All, except a relatively small fraction of the population are obtaining the full amount of calories they require. There is no aggregate deficiency of fat in the national dietary but there is some deficiency of it in the diet of the very poorest. Consideration of the national food supply revealed no shortage of total protein but it is probable that there is some shortage of this constituent in the diet of the poorest section of the community. It appears

therefore, that although the national diet contains enough energy-giving foods—indeed enough and to spare—they are not distributed evenly among the people. The national diet is, however, deficient in certain 'protective foods' particularly milk, eggs, and green leaf vegetables. The average consumption of milk per head is only about half what it ought to be, while the national consumption of fruit and vegetables is very probably below the requirements for normal nutrition. Here again these deficiencies in the national diet are predominantly to be found in the poorer sections of the population and the problem of the more even distribution of foodstuffs forces itself insistently on our notice. We are faced then with the situation that while the national diet contains enough fuel for the bodily mechanism it does not contain enough of certain protective substances needed for the proper construction of that mechanism for the prevention of its deterioration and for the maintenance of its resistance against infection—in short for the prevention of disease.

The answer to the second question is to be found in the concluding sentence of paragraph 20 of the report: "Many of the public health measures which have been adopted in recent years such as the provision of milk for mothers and children are in themselves an admission that the home diets of some sections of the people fall short of the requirements which are essential for health." This answer was, for economic and other reasons to be expected. Indeed it arises out of the answer to the first question and involves the problem—a problem that must be faced—of the more equal distribution of food. There can be no question that while many have more food than they need many have less. The report provides no definite answer to the third question for the reason that the committee found no reliable method of assessing the state of nutrition as determined by food. But its attitude to this is revealed by certain statements made in the report. If the diet is unsuitable [and the committee says that in some sections of the people it is unsuitable] the body cannot be properly constructed neither can it function efficiently.

We believe that better physique and health can be obtained and resistance to disease increased by the application to human diet of recent knowledge which demonstrates the importance of certain classes of food for proper nutrition. Finally the inclusion of adequate quantities of the protective foods in the diet will ensure correct nutrition since given adequate resources most people instinctively consume sufficient of the energy-giving foods. Exception may be taken to the last of these statements on the

grounds that the function of nutrition depends on other factors besides food. But paragraph 13 of the report makes it clear that while the importance of these other factors is recognized their consideration is outside the scope of the committee's inquiry. Nevertheless the inclusion in this statement of some such words as that "correct nutrition will be ensured so far as food can ensure it" would have added to its value for there is the ever-present difficulty arising out of the confusion between the terms "nutrition" and "food" these terms are not synonymous.

It is clear, then, that despite their inability to assess the state of nutrition the members of the committee have little doubt that it is not "as good as it could be made by the application of modern knowledge." They affirm that "the progressive application of this knowledge and the concurrent rise in the standard of living have contributed to the general improvement in health." There is, however, much room for further improvement in the health and physique of the nation, and the more extensive application of recent discoveries in nutrition should result in new and higher levels of physical well-being. The work of the committee is far from completed, and it is perhaps for this reason that no mention is made, in the body of the report, of wholemeal bread and unmilled cereals. But general agreement with the recommendations of the Technical Commission, appointed by the League of Nations to define the nutritional needs of the human body, is recorded. The recommendations of the commission are published as an appendix to the present report. Amongst them is the following: "*White flour* in the process of milling is deprived of important nutritive elements. Its use should be decreased and partial substitution by *lightly milled cereals*, and especially by *potatoes* is recommended." We wish that this recommendation had been more wholehearted in view of the facts that whole meal flour is the staple article of diet of some of the finest races of mankind and that the important nutritive elements of which white flour is deprived in the process of milling include the vitamin B complex, vitamin E and a haemopoietic substance.

The changes in the diet of the people which in the opinion of the Advisory Committee appear desirable in the light of modern advances in the knowledge of nutrition may be summed up in the words: More protective foods, more milk, more fresh vegetables and fruit, more eggs, more potatoes. And in view of the committee's general agreement with the recommendations of the Technical Commission of the League of Nations there may be added to these changes: Less sugar, less white

flour, and more lightly milled cereals. This report, fortifying as it does the conclusions of others that have preceded it, points the way to a national food and a national health policy in conformity with "modern advances in the knowledge of nutrition," a policy which must include the greater production in this country, and the more equal distribution amongst the people, of those foodstuffs now known to be essential to health.

VACCINATION AGAINST ENTERIC FEVER

The prophylactic value of typhoid vaccine is almost universally held to be fully established but recent writings betray some uncertainty and a marked tendency to exploit new methods in the hope of achieving better results. That protection is not absolute everyone knows, but the fact that Montell¹ was able to collect 125 fully verified cases of typhoid in vaccinated individuals in the French Services is discouraging, in this series there were twenty deaths, and the author is convinced that attempted immunization, if it fails to prevent the disease, does not modify its course in any way. The recently published² statistics for the French Army and Navy though they deal with vast numbers, seem to have little meaning by far the lowest incidence of the disease is in unvaccinated individuals, though there are said to be peculiar reasons for this, and the relative merits of three types of vaccine used cannot for various reasons be safely deduced. Similar reports by Patterson and Cook³ on the effects of typhoid prophylaxis in the United States Army and Navy contain less statement of detail, and simply adduce a diminished frequency of the disease in the past twenty-five years as evidence of the efficacy of vaccination. That the incidence of typhoid among American troops in the European war and in the Spanish American war was as 1 is to 382 is no doubt a striking fact but it is capable of explanation in more than one way. Japan has a different story to tell. Kobayashi⁴ describes twelve outbreaks of typhoid in the Japanese Army often with a high case rate in one garrison for example, there were 104 men all of whom had had vaccine either ten or three months previously and among these there occurred forty-one cases of typhoid with nine deaths. On the other hand according to Ramsey immediate vaccination of household contacts lowers the expected frequency of secondary cases by three quarters. A resolution calling for the compulsory application of this safeguard was recently passed.

Muscl med 1935 62 49 97
Ent. Off. in Hyg. Publ. 1936 28 163
Amer. J. publ. Hlth 1935 25 281
Kobayashi Arch. exper. Med. 19 12, 1
Amer. J. Hyg. 1935 21 64

by the French Academy of Medicine. At the same meeting of the Académie Tanon, Rochoix and Cambessedes also brought forward evidence of a familiar type pointing to the efficacy of vaccination. Since the war when most men of military age were given vaccine the proportion of males of such age to females attacked has shown a diminution according to several reports, and in the recent Paris and Lyons epidemics referred to by these authors the incidence in males fell steeply after the age of 20, presumably in consequence of immunization during military service while that in females rose until the age of 30.

Such are the rather conflicting accounts of the effects of vaccination by the orthodox subcutaneous route. Its best known rival is the oral vaccine of Besredka and in this connexion it is disappointing to find that in the French Services only those men are given this vaccine "in whom any severe reaction would be dangerous." Thus no more than a few thousands have had it apparently with results not differing greatly from those of subcutaneous vaccination. A large scale trial of this method in Japan is reported by Abé who gave oral vaccine to 32,120 persons, of whom five suffered from typhoid in the ensuing six months, whereas there were forty cases among 45,790 untreated persons in the same families. Tehernozoubov on the other hand working in the neighbourhood of Zagreb has convinced himself of the value of oral vaccination against dysentery but doubts its value for enteric and offers the plausible explanation that dysentery, unlike typhoid, is a purely local infection for which local immunization would therefore be expected to succeed. Meanwhile it is being seriously suggested by E. Valentine, W. H. Park, K. G. Falk and G. McGuire that typhoid vaccine should be simply rubbed into the skin in an ointment or vanishing cream a proceeding which incredible as it may seem does cause agglutinin formation. Spassky and Danenfeld¹⁰ report favourably on a formalized vaccine (anavaccine) which has been administered to 400,000 people in Leningrad. This is said to cause milder reactions than a heat killed vaccine and experimentally gives at least as good antibody production. Perhaps the strangest procedure of all is that recommended by Suzuki and Sujco¹¹ who claim that a high degree of protection against infection by the typhoid bacillus can be achieved by oral vaccination with *Bact. pullorum* a micro-organism which causes an enteritis in fowls but is non-pathogenic for man.

Since its O antigen is identical with that of *Bact. typhosum* this is not as unreasonable as it sounds.

The chief conclusion to be drawn from this literature as a whole is that in dealing with a disease of varying but unpredictable and generally low incidence, genuine evidence of the efficacy of any method of prophylaxis is very difficult to secure. The probability is that all these methods are useful and it may be that where ordinary subcutaneous vaccination most signally fails either the individuals attacked were exposed to exceptionally heavy infection or the strains used in making the vaccine were unsuitable. In spite of all that has been written on the considerations which should govern the choice of strains for this purpose nearly all these reports ignore this aspect entirely and leave the reader to suppose that vaccine is just vaccine, the same the world over. How the efficacy of the newer methods is really to be determined on an adequate scale it is difficult to see, but no doubt they will achieve a good deal of popularity from the mere fact that they obviate the employment of a syringe and the discomfort which often follows its use.

THE FUTURE OF OUR POPULATION

We have received from the honorary secretary of the Population Investigation Committee Dr C. P. Blacker a very clearly written pamphlet¹ the work of Dr Blacker and Mr D. V. Glass setting out the salient features of the demographic position. There is no need to summarize the contents for they necessarily agree closely with those of the many other books and papers which have been noticed in our columns. But the proposals for further investigation by the committee raise a question which is of topical interest.

The Population Investigation Committee has a membership comprising representatives of various important bodies and includes individuals of scientific and professional distinction. It is however a private organization. Recently the *Times* has given much prominence to letters advocating the appointment of a Royal Commission apparently to undertake *inter alia* the work which the Population Investigation Committee desires to do. This raises the question which machinery is the more efficient? The *prima facie* appeal of a Royal Commission is great. It would have more prestige, it could at least in theory command the services of all the experts of the permanent Civil Service, its findings would receive wider publicity. A non-official committee even if it received liberal finan-

Bull. Ac. Med. Paris 1935 116 92.
Bull. Off. int. Hyg. publ. 1934 26 1741.
ibid. 1935 27 2155.
Ame. J. Hyg. 1935 22 24.
Ann. Inst. Pasteur 1936 56 76.
J. Biol. Med. 1936 27 539.

The Future of Our Population. Issued by the Population Investigation Committee, 69, Leeson Square, S.W. 1. (6d.)

cial aid could not secure of right the co-operation of the Civil Service, and its findings, unless congruent with the views of newspaper proprietors, might secure very little publicity. On the other hand the prestige of a Royal Commission has its disadvantages. We need not be very far gone on the path of genial cynicism respecting public appointments which Mr. Hilaire Belloc and the late G. K. Chesterton followed to recognize that a Royal Commission is sure to include a number of eminent persons chosen simply because they are eminent or which is worse, because they are representative of this or that interest or this or that theory. So far as scientific investigation is concerned these commissioners are passengers or even luggage. But people will not give time and trouble to an unofficial inquiry, an association with which confers no prestige unless they really are interested.

It is difficult to say which method of approach should be preferred. If it is thought that further scientific investigation of the factors of decreasing population is the most serious need of the time then we believe that the non-official method is the one that should be chosen. If it is thought that the present basis of knowledge is sufficient to justify or indeed force the National Government to undertake propaganda or measures of reform something more imposing than an unofficial group of scientific workers is needed. Whether on that hypothesis even a Royal Commission is imposing enough may be doubted. After all Royal Commissions have sometimes been mere expedients for the side tracking of politically dangerous questions. These are it may be suggested matters which the medical profession should consider carefully. All we can say with complete confidence is that the committee's pamphlet is a clear, competent and impartial summary of the relevant facts.

INFLUENZA PROPHYLAXIS

Recent papers dealing with the question of active immunization against the virus of influenza have focused attention on this important aspect of the influenza problem. Before the work of Smith, Andrews and Lindholm in 1933 which showed unequivocally that the prime cause of influenza was a filterable virus prophylactic vaccines in use against influenza were made from those cultivable bacteria associated with the disease. Few believed that these micro organisms played anything but a secondary part in influenza and the most that could be hoped from the use of such vaccines was reduction in the number of those complications for which secondary invaders were responsible. The results obtained were unconvincing but with the discovery of the true cause of

influenza the problem can be attacked again with renewed hope. In the ferret the experimental disease leaves behind it an immunity which lasts but a few months the same would appear to be true of the natural disease in man. Smith and his co-workers have shown that this waning immunity in the ferret can be restored by the subcutaneous inoculation of virus, a method of inoculation which does not give rise to infection in the fully susceptible animal. Most people possess neutralizing antibody as the result of previous conflict with influenza virus, the mechanism of immunity has been established in them, would it not therefore be possible to reinforce this basic immunity by the injection of a virus vaccine and so protect individuals at the time of epidemics? This is the problem which those working with influenza virus have attempted to answer. Francis and Magill have tried to do this by injecting living virus subcutaneously or intradermally. Their experiments were conducted on a series of twenty-two human volunteers and their criterion of immunity was an increase in the neutralizing power of the blood of these individuals. Their results showed that a titre of antibody equalling that produced by an attack of influenza could be obtained with regularity by this means that the antibodies persisted for at least five months and that the method of inoculation was without apparent danger. Andrews and Wilson Smith, as the result of preliminary work on mice chose to use a formalized virus vaccine in their attempts to immunize man. This choice was dictated by the fear that the employment of live virus in mass prophylaxis might prove dangerous and also because the experiments on mice suggested that virus given by a non-infecting route was equally effective as an immunizing agent whether it were alive or not. Their human experiments though fewer in number than those of Francis and Magill showed that inactive influenza virus injected subcutaneously evoked a good antibody response. In these experiments Andrews and Smith used a mouse lung virus, whereas the vaccine of Francis and Magill was prepared from virus grown in tissue culture. Burnet proposes yet another vaccine. He has demonstrated that egg grown virus loses its infectivity for the ferret and yet when administered by the nasal route gives rise to immunity. He suggests that such a virus might be sprayed into the nose and throat as a prophylactic measure in man. Promising though all this work may be it should be borne in mind that these measures have yet to be submitted to the crucial test of their efficacy in the field.

VOCATIONAL GUIDANCE AT BORSTAL

An important factor in the reform of a delinquent is his re-education in new habits of thought and action. The authorities of Borstal institutions seek to inculcate habits of industry, self-respect and self-control in young offenders and one of their chief instruments is the work party. They claim that if they can teach a boy to believe that he can do a good job of work

Brit. J. exp. Path. 1935 16 211
J. exp. Med. 1937 65 251
Brit. J. exp. Path. 1937 18 37

they will have done much to prepare him to receive the other important influences which they attempt to foster. A boy who is vocationally efficient tends to be generally contented. In order to improve the vocational efficiency of Borstal boys the National Institute of Industrial Psychology made a preliminary experiment about ten years ago to discover to what extent psychological tests by simplifying the problem of allocating boys to the most suitable working parties would make for contentment and stability in their work. The results were so promising that a second and larger experiment was carried out by the National Institute at the expense of the Medical Research Council. The report on this work¹ by Mr Alec Rodger suggests strongly that vocational guidance properly applied is of great help in placing boys in the right kinds of work and ought to be adopted as a routine method in any scheme of reform by industrial education. Four hundred boys were tested at the beginning of their period of detention. Recommendations were made for all of them but these were forwarded to the institutions in alternate cases only, the controls being allocated to work parties by the house masters. A hundred and ten of the recommended group of 158 became Grade A workers but only seventy-three of the control group of 160 became Grade A workers. The difference shows clearly that with the aid of the new procedure the house masters could achieve better results than they can without it. As Mr Rodger points out the proved value of the experiment represents only a minimum of its potential value and if trained advisers worked at the institutions the results would be even better. The Prison Commissioners have arranged on the advice of the Departmental Committee on the Employment of Prisoners that house masters and assistant house masters should be trained in the technique of vocational advice. Mr Rodger recommends that more boys should be employed on skilled work and should also have some opportunity of advancing in technical knowledge and that incentive should be increased by payment and the granting of certificates. Definite provision should be made for training in clerical duties and in work such as salesmanship which calls primarily for good social qualities. He suggests that further investigation should be carried out to discover whether more precise tests could be devised and to improve the study of temperamental differences.

SHIGA AND DYSENTERY

It is now almost forty years since Shiga identified the micro-organism which goes by his name and thus initiated the study of dysentery bacilli. Few of the great pioneers of that era are still living and it is thus of unusual interest to read a lecture by Shiga himself delivered at the Harvard Tercentenary Conference last September in which he surveys the consequences of his discovery. There has of course been an enormous reduction in the frequency of dysentery in Japan during

this century which must be largely the result of preventive measures based on bacteriological methods in particular the detection of carriers. Nevertheless Shiga appears to feel that the work to which he has devoted his life has not reached its goal and in so far as this is really true it means only that a perfect method of preventive immunization has not been found. That killed dysentery bacilli form a very unpleasant vaccine. Shiga proved in his own person in this lecture he actually says of a memory now very old that he was "frightened" by the reactions produced. Whether treatment with formalin or fractionation will overcome this difficulty without loss of immunizing power seems yet to be unknown. So far as present methods are concerned the most important question is whether oral vaccines on the Besredka model are really effective or not. Shiga records that these have been given to hundreds of thousands of persons in Japan but he appears unwilling to accept the results as favourable though he is evidently open to conviction that the method has possibilities. Nor does he appear to place faith in bacteriophage. If as Shiga hopes a better method of immunization is yet to be found we heartily wish him long life in which to see it arrive.

VASCULAR CHANGES IN HEMIPLEGIA

Kerr and Underwood¹ have recently described an unusual case of hemiplegia associated with vascular obliteration in the paralysed extremities. The patient a male clerk developed at the age of 23 a motor aphasia and right hemiplegia of gradual onset after a drinking bout. A year later though the aphasia and paralysis had partially recovered he observed that his right side was cooler than his left and that the pulse at his right wrist was feeble and sometimes could not be felt. At that time he began to suffer from Jacksonian convulsions beginning in the right arm and followed by a generalized fit and unconsciousness. These attacks continued till 1934 when at the age of 33 he was first seen by the authors. He was found to have some residual motor aphasia with a slight spastic paralysis of the right upper and lower limbs and a positive Babinski's sign on the right. The right upper and lower limbs were cooler and drier than the left and there was slight oedema of the right ankle. The most peculiar feature of the case was that the right brachial and radial pulsations were barely palpable and the right popliteal dorsalis pedis and anterior tibial arteries impalpable even after warming the limbs. These pulsations in the unaffected limbs were normal. The systolic and diastolic pressures were 130 and 110 mm Hg respectively. During two years of observation the patient's condition remained essentially unchanged but he presented from time to time thrombophlebitis of the superficial veins of the right lower extremity. Special examinations confirmed the diagnosis of obliterative arterial disease of the right upper and lower limbs and encephalography showed some atrophy of the left cerebral hemisphere. It is probable as the authors suggest that the hemiplegia

¹ *Lancet* Excerpta Medica, 1936, 215, 1255. By Allen L. Kerr and H. M. S. Underwood.

was due to a cerebral thrombosis. They suppose, first that this lesion interfered with the function of the premotor cortex which according to Fulton and his co-worker Kennard¹ leads to vasoconstriction in the opposite extremities and finally that "possibly the profound vasomotor imbalance incident to his hemiplegia hastened the evolution of an occlusive arterial disease." The case raises two chief questions: first, What is the cause of the diminished blood flow which is usual in the paralysed extremities in hemiplegia? and secondly, Does diminished blood flow favour arterial thrombosis? To the first question no final answer is possible for as Lewis and Pickering² have recently pointed out diminished blood flow through the affected extremity is common to all forms of motor paralysis in man. The second question was answered in the affirmative many years ago by Toma and in a subject who initially had vascular disease as judged by an apparent cerebral thrombosis, a raised blood pressure and thickened vessels in the unparalysed limbs it does not seem unreasonable to suppose that clotting in the arteries of the weakened extremities was hastened by the slow blood flow through them.

VETERINARY EDUCATION

The Special Educational Number of the *Veterinary Journal* (March 1937) states that the prospects in this profession are excellent at the present time and that there is no expectation of overcrowding for another ten years. There is indeed an insufficiency of graduates to meet the immediate demands of private practice of county, State and municipal bodies at home and of the Colonial Services. Colonel G. K. Walker writing on veterinary education regards the Report of the Conference on the Medical Curriculum, published in 1935 as of outstanding importance to the veterinary profession for the educational problems involved are to a considerable extent analogous. The report stresses very strongly the desirability of introducing the student during the last two terms of the pre-clinical period to the elements of pathology, immunology and bacteriology. This recommendation applies with equal or even greater force to the veterinary curriculum for veterinary hygiene is taken during this period. Nevertheless since the pre-clinical veterinary student is already burdened with the last-named subject and with animal management in addition to the studies analogous to those prescribed for medical students during the same period the inclusion of further subjects in the already crowded curriculum is a matter of some difficulty. It is suggested that the dropping of the examination in pharmacology would provide a partial solution of the problem. It appears that at some future time it will be necessary to extend the course of the veterinary curriculum from four to five years. Three years would then be available for the clinical period. It must be remembered however that under present conditions a minimum period of six months extra mural clinical instruction is required in addition to the work in hospital.

The Educational Number includes excellent practical articles on equine practice, poultry practice and the veterinary aspects of milk production and bacon factories. Other articles are devoted to Government and private practice in Australia and veterinary education in Canada. In an illuminating commentary on the milk industry Mr. P. B. Tustin details the simple procedure necessary for clean milk production showing that this is not an intricate scientific problem, and that expensive stabling and equipment are not required. The author deplores the fact that there are still veterinary surgeons to be found who advocate the consumption of raw milk despite the fact that Minett and Pullinger after an examination of sixty-five certified and Grade A (T.T.) herds found that 73½ per cent contained *Br. abortus* and 63½ per cent haemolytic mastitis streptococcus. A list of eight milk-borne epidemics during a period of eight years taken from the Ministry of Health reports includes outbreaks of 183 cases of scarlet fever with 3 deaths at Doncaster in 1936 and of 500 cases of typhoid with 47 deaths at Bournemouth in the same year, of 1 600 cases of paratyphoid with 6 deaths at Chelmsford in 1935 and of 1 200 cases of septic sore-throat (streptococcal) with 65 deaths at Hove in 1929. Altogether the eight epidemics mentioned were responsible for 3 766 cases of illness with 125 deaths. It is noted that the farms to which the sources of these outbreaks were traced were producers of the highest grades of milk. Mr. Tustin points out that no epidemics have been reported where milk is properly pasteurized. In America not only the veterinary and medical professions but also the largest organizations of milk producers are strong advocates of pasteurization.

TRAVELLING MEDICAL FELLOWSHIPS

The Medical Research Council announces that it has been entrusted by the Rockefeller Foundation of New York with £3 000 annually for three years in the first instance for the award of Travelling Fellowships in Medicine to candidates in the United Kingdom. This generous benefaction renews an arrangement which had been highly successful during an earlier period but which had latterly been interrupted during a revision of the Foundation's general policy. These Rockefeller Fellowships are intended for graduates who have had some training in research work in clinical medicine or surgery or in some other branch of medical science and are likely to profit by a period of work at a chosen centre in the United States or elsewhere abroad before taking up positions for higher teaching or research in this country. Five or six Fellowships will be available annually and applications for the academic year 1937-8 will be invited in May. It is of interest to recall an analysis which was made at the end of the previous ten year period of the positions occupied by the seventy men and women who had completed their tenure of Rockefeller Fellowships awarded by the Council. This showed that twelve were professors in universities, that thirty-six others occupied whole time positions for teaching and research and that a further sixteen held part time appointments of the same kind.

¹ *Arch. Neurol. Psychiat.* 1935, 33, 537.
² *Clin. Sci.* 1935, 6, 2, (1).

ENDOCRINES IN THEORY AND PRACTICE

This article is one of a series on Endocrinology contributed by invitation

HORMONES IN THE TREATMENT OF MENSTRUAL DISTURBANCES

By

P. M. F. BISHOP, B.M., B.Ch.

The causes of menstrual disturbances may be organic, nervous or endocrine. General debilitating conditions such as anaemia, tuberculosis and wasting diseases commonly give rise to amenorrhoea. Local lesions of the uterine mucosa or muscle such as chronic endometritis, polyps, fibroids and malignant new growths may result in excessive uterine haemorrhage. Such organic causes should be excluded before endocrine therapy is considered.

Emotional disturbance, a sudden shock or a change of environment may lead to amenorrhoea and it has been suggested that such stimuli may induce a flow of inhibitory impulses from the hypothalamic nuclei checking the gonadotropic secretions of the anterior pituitary which control the ovarian and hence the uterine cycle. In such cases the inhibitory influence on the pituitary may be removed as suddenly as it was applied with re-establishment of the menstrual rhythm. Should this occur while the patient is receiving hormone treatment the endocrinologist may claim a success to which he is not entitled for it is not generally conceded that the hypothalamic nuclei are affected by the therapeutic administration of pituitary or ovarian extracts.

The menstrual cycle is disturbed in such glandular syndromes as Graves' disease and myxoedema, Simmonds' disease, acromegaly, pituitary basophilism and the adreno-genital syndrome but treatment of the general endocrine disorder rather than of the menstrual derangement is indicated.

Finally the alteration of menstrual function may be the only sign of hormone deficiency and it is with the treatment of such cases that this article is concerned.

Uterine Bleeding in Menstrual Disorders

If a course of large doses of oestrin the ovarian follicular hormone is administered to a castrated woman uterine haemorrhage will take place from one to two weeks after the last injection. This is known as oestrin withdrawal bleeding. If smaller doses are given intermittently haemorrhage may arise during the course of treatment. Such haemorrhage is due to the effect of oestrin on the endometrium being maintained at the level or threshold at which bleeding occurs. This may be described as threshold bleeding. Oestrin withdrawal bleeding therefore supervenes when the oestrin effect on the endometrium is withdrawn from a super-threshold level.

This excretion would account for the high concentration of oestrin in the blood and in the urine which is found during the second half of the menstrual cycle—a time at which there is evidence of a comparatively low oestrin effect. Oestrin-withdrawal bleeding does not however take place for in the meantime progesterone has been exerting its own specific effect on the endometrium converting it into the premenstrual type. As the corpus luteum wanes the endometrium is deprived of all hormonal sustenance and begins to be shed on the twenty-eighth day of the cycle—menstrual bleeding.

Whether menstruation occurs regularly, not at all or irregularly and excessively depends therefore on the effect of oestrin on the uterus and the subsequent presence or absence of progesterone. Amenorrhoea is usually due to a sub-threshold effect of oestrin on the uterus. The endometrium fails to reach that stage of development which must be attained before bleeding can be induced. Menorrhagia and metrorrhagia supervene when oestrin reaches and is maintained at the threshold or bleeding level. Since ovulation fails to take place and no corpus luteum is formed this constant effect of oestrin continues unopposed owing to the absence of progesterone.

Amenorrhoea, Hypomenorrhoea, Oligomenorrhoea

OVARIAN REPLACEMENT THERAPY

The sub-threshold effect on the uterus in amenorrhoea, hypomenorrhoea (scanty flow) and oligomenorrhoea (prolongation of interval) may be due to inadequate secretion of oestrin (ovarian deficiency) to failure of the uterus to react to normal quantities of oestrin (uterine deficiency) or to a combination of the two. The uterus is usually small and the endometrium atrophied.

The first stage of treatment therefore is to build up the uterus to adult size which in itself may result in rendering the endometrium more sensitive to ovarian stimulation. This may be accomplished by the administration of some compound of oestrin (ovarian replacement therapy). 50,000 I.B.U.* of a reliable preparation of oestradiol† (the hormone actually secreted by the ovarian follicle) are injected intramuscularly at intervals of three to four days until five doses have been given. This course of 250,000 I.B.U. which probably represents an unnecessarily high dose should induce an oestrin withdrawal haemorrhage ten to fifteen days after the last injection. A second course of injections should begin immediately bleeding occurs. In the absence of a haemorrhagic response an interval of three weeks should separate the two courses.

Progesterone inactivates oestrin which is therefore more effective during the first than the second half of the menstrual cycle in cases of hypomenorrhoea. Even in

the appearance of the vaginal smear. Accurate information as to the uterine growth response can be obtained only by measurement of the intra uterine length with a metal sound. The most convenient criterion of response is uterine bleeding. In cases of long standing amenorrhoea this is produced only if relatively high doses are administered. Usually three or four courses are required to induce or restore uterine function.

If the amenorrhoea is due to uterine insensitiveness alone such replacement therapy may induce the uterus to respond to the natural secretions of the ovaries and the menstrual rhythm may be restored without further treatment.

OVARIAN STIMULATION THERAPY

If the uterine hypoplasia results not from a primary failure of uterine development but from defective ovarian activity this must now be dealt with. It may be due to an inadequate pituitary stimulus or to a failure of the ovary to respond to normal amounts of pituitary secretion.

The second stage of treatment consists, therefore in prescribing gonadotropic extracts (ovarian stimulation therapy) 100 to 500 R U* of a gonadotropic extract of pregnancy urine† are injected intramuscularly three times a week for four weeks. This course may be repeated. Treatment should then be discontinued for a month, after which it may be resumed if there is no re-establishment of spontaneous menstrual rhythm.

Theoretical considerations would indicate that the ideal form of treatment is the administration of a follicle-stimulating hormone (prolan A) for a fortnight, followed by the luteinizing hormone (prolan B) during the second fortnight. Unfortunately clinically effective follicle stimulating extracts are not yet obtainable commercially and consequently only luteinizing extracts are used. Available experimental evidence would indicate that the adequate dose for the human female is probably higher than now employed.

Estimation of Oestrin and Prolan

Estimations of oestrin and prolan in the blood and in the urine are considered by some authorities to be useful in determining the nature of the disturbance of hormone secretion. It is found however, by most workers in this country who are familiar with such technique that the methods of hormone assay of body fluids at present in use are not sufficiently accurate to provide valuable information. Furthermore the finding of an excess or deficiency of any particular hormone in blood or in urine does not necessarily indicate a corresponding excess or deficiency of secretion or utilization of that hormone in the organism.

The results of hormone therapy in this group of cases are disappointing. Menstrual cycles are very seldom established in cases of primary amenorrhoea (women over the age of 18 who have never menstruated). Permanent re-establishment of menses occurs in 10 to 20 per cent of cases of secondary amenorrhoea and in cases of oligomenorrhoea and hypomenorrhoea regularity and normal loss are achieved and maintained in 30 to 40 per cent. Such results are not surprising when the intricacies of the problem are considered. The delicate interrelations between pituitary, ovary and uterus are difficult to re-adjust by the use of hormone extracts of which the optimum dose is not known. The reasons for applying a particular hormone at a certain phase of the cycle are

* Gonadotropic hormones have not yet been obtained in crystal line or synthetic form and are therefore assayed biologically in rat units (R U) instead of international or weight units.

† Pregnyl (Organon), Anlutrin S (Parke Davis), Prolan (Bayer), Goran (British Drug Houses). Such extracts contain mainly prolan B the luteinizing hormone.

at present based chiefly on hypothetical conjecture. Even the nature of the extract is not in some cases, the most suitable—for example the use only of luteinizing extracts for ovarian stimulation, which probably requires a carefully adjusted combination of follicle stimulating and luteinizing hormone.

Menorrhagia and Metrorrhagia

This type of menstrual disturbance will be considered under three headings: menopausal, maturity and puberty bleeding, for the treatment differs according to the age of the patient.

MENOPAUSAL BLEEDING

The activity of the ovary is waning. It is becoming insensitive to the gonadotropic stimuli of the pituitary, even though these are now relatively excessive. Oestrin is reaching no longer super threshold but threshold or bleeding levels. Progesterin, if secreted at all is ineffective in lowering such levels. Attempts to prolong the life of the ovary by artificial stimulation with gonadotropic extracts are illogical. Treatment should be designed to hasten the death of the ovary by destructive doses of deep x rays or of radium, or to remove the source of the haemorrhage by hysterectomy.

MATURITY BLEEDING (METROPATHIA HAEMORRHAGICA)

Ovulation fails to take place and the ovaries may be palpably enlarged and are studded with small cystic follicles which have not ruptured. The endometrium is submitted to continuous stimulation by oestrin, and an exaggeration of the proliferative phase ('Swiss cheese' or glandular hyperplasia) results in thickening and sometimes polyposis. The menstrual rhythm is disturbed and periods of profuse flooding or mild but continuous haemorrhage alternate with amenorrhoea. During the bleeding phase oestrin is presumably being maintained at threshold levels in the absence of progesterin. During the phases of amenorrhoea oestrin has either failed to reach the threshold level or continues to be above it.

The treatment during a bleeding phase is to administer progesterin or a luteinizing gonadotropic extract 1 Rab U* of progesterin or 500 R U of a gonadotropic extract or both should be given by intramuscular injection daily until the haemorrhage ceases. Such treatment usually succeeds in arresting the flow within three or four days. To re-establish the normal rhythm is more difficult, but an attempt may be made to do so by applying a continuous luteinizing stimulus such as 100 R U of a pregnancy urine extract three times a week for a month. Such a course may be repeated as indicated in the section on amenorrhoea.

PUBERTY BLEEDING

The cause of this type of bleeding is not completely understood but it is probably due to defective function of the corpus luteum. The menstrual rhythm is usually undisturbed and the condition is one of pure menorrhagia though sometimes the menstrual cycle is shortened to three weeks.

Treatment consists in increasing the luteinizing stimulus 100 R U of a gonadotropic extract are injected intramuscularly three times a week for four weeks. The course may be repeated as indicated in the section on

* Progesterin has recently been synthesized. One IU (international unit) = 1 mg of synthetic progesterone. At present the synthetic product is not generally available commercially and natural progesterin extracted from the corpora lutea of ovariectomized pigs is used in rabbit units (Rab U).

† Progesterin (Organon) 1 Rab U = 1 IU. Prolan (S. Bayer) and Progesterin (British Drug Houses) available in international units. Lilex Leo (distributed by Beecham) 1 Rab U = 1 IU.

amenorrhoea The results of treatment are highly satisfactory and normal flow is usually established within three or four months. It is important to deal with this condition early as it frequently leads to amenorrhoea or maturity bleeding if left untreated.

Dysmenorrhoea

When extrinsic causes of dysmenorrhoea such as fibroid polyps, the passage of clots or pieces of membrane or uterine congestion from pelvic inflammation have been excluded, there remain three factors—nervous, psychological, and endocrine—the relative responsibility of which it is difficult to assess.

There is evidence to show that in a high proportion of cases of spasmodic dysmenorrhoea the pain is due to an inflammatory or irritative lesion of the sympathetic nerves supplying the uterus. In these cases hormone therapy is obviously of no value and the condition should be dealt with by cervical dilatation, alcohol injection of the pelvic plexus or pre-sacral sympathectomy. The psychological element may predominate not only in the obviously hyperaesthetic but also in the apparently "thoroughly sensible" type of woman, and the best way of determining how far it is responsible for the pain is by the administration of dummy tablets of oestrin (tablets of which the oestrogenic potency has been previously destroyed) or by injections of sterile olive oil. It is striking how frequently this device provides complete, if only temporary relief.

The cases of endocrine origin fall into two groups, those due to deficiency of oestrin and those due to lack of progestin. Dysmenorrhoea often accompanies uterine hypoplasia. Menstruation which is usually scanty, is taking place in an organ inadequately developed for such a function. There may be lack of co-ordination between the contraction of the uterine muscle and the evacuation of the blood from the narrow os. The dysmenorrhoea may disappear if the uterine hypoplasia is corrected. This may be accomplished by the oral administration of a compound of oestrin. 1 tablet of oestrone* the strength of which varies from 1000 to 50000 IU according to the requirements of the case should be administered daily by mouth. Such comparatively small doses affect only the development of the uterine muscle and do not interfere with the menstrual rhythm. They may therefore be given continuously throughout the cycle without fear of inhibiting menstruation. If higher doses are required they may be injected intramuscularly as in the course outlined in the section on amenorrhoea.

There is evidence to suggest that progestin inhibits uterine motility. Observations obtained by introducing a balloon into the uterus and recording the uterine movements on a kymograph show that during the second half of the menstrual cycle uterine contractions are in abeyance though they begin to reappear during the pre-menstrual twenty-four to forty-eight hours and reach maximum intensity during menstruation, this period corresponding with the regression of the corpus luteum and the absence of progestin. The administration of progestin therefore alleviates the symptom in some cases of dysmenorrhoea, particularly when the pain begins a day or two before the onset of the menstrual flow and is most intense on the first day of menstruation. 1 Rab U† of progestin is administered daily commencing one or

two days before the expected onset of the menstrual flow* and continuing up to the third day of the period.

Conclusions

During the past four or five years the pendulum of opinion has swung from unreasonable scepticism to unscientific optimism and it is important to consider critically the present possibilities and limitations of endocrine therapy in menstrual disorders. The subject is still in its infancy, and it will probably take another five years for sufficient data to be collected to enable sound principles of treatment to be laid down and clinical results to be evaluated.

At present there are two main principles of treatment, replacement therapy and stimulation therapy. Replacement therapy yields comparatively good results for its purpose is simple and direct. By administering oestrin for example it is possible to induce uterine growth. By injecting progestin the level of oestrin utilization which in a case of maturity bleeding has reached and is being maintained at the bleeding threshold may be lowered and the bleeding is immediately checked. The knowledge that progestin or prolan can effectively control the sometimes alarming haemorrhage of menorrhagia should save many a young woman from the tragedy of hysterectomy or the futility of a cruetage. Replacement therapy however is only temporary in its effect. Discontinue the administration of oestrin in a case of ovarian deficiency and the uterine muscle will atrophy. The progestin which checked a bout of bleeding in a case of menorrhagia will not prevent the repetition of such a flooding.

Stimulation therapy yields comparatively poor results except in cases of puberty bleeding. Re-establishment of menstrual rhythm in a long standing case of amenorrhoea or menorrhagia demands readjustment of a delicate endocrine balance whereby the ovary is subjected to hormonal stimuli of varying nature and intensity throughout the cycle.

Finally some of the preparations in use are substances of considerable potency the remote effects of which are even yet not fully recognized. They should therefore be employed cautiously and with respect lest they cause permanent damage to the uterus, ovaries or pituitary.

The Laboratories La Biotherapie of Paris have instituted an annual Besredka prize subject to the following regulations: (1) The prize will be awarded for an original manuscript or printed work on local immunity in its therapeutic applications. (2) MSS or printed works must reach *La Biotherapie*, 5 Rue Paul Barruel, Paris 15e before December 31 of each year, either in typewritten or printed form in five copies. Printed works must not be of earlier date than November 30 of the preceding year. (3) For manuscript work anonymity is optional; in such case the MS must bear a motto reproduced on an envelope containing inside the name and address of the author. (4) The competition is open to scientists without distinction of nationality, but MSS or printed works must be presented in French. (5) The prize is of 15000 francs. If the jury decides that no one of the presented works is worth a prize the amount is to be added to that of the next year but cumulation cannot exceed the sum of 30000 francs. (6) The jury is composed of Prof. A. Ch. Achard, member of the Institute, Prof. A. L. L. of the Faculty of Medicine of Paris, and Prof. J. B. of the Faculty of Medicine of Strasbourg.

ONE HUNDRED AND FIFTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION BELFAST, 1937

THE one hundred and fifth Annual Meeting of the British Medical Association will be held in Belfast next summer under the Presidency of Professor R. J. Johnstone BA MB, FRCS FCOG MP, consulting surgeon, Royal Maternity Hospital, gynaecologist to the Royal Victoria Hospital, and professor of gynaecology, Queen's University, Belfast, he will deliver his address to the Association on the evening of Tuesday July 20. The Sectional Meetings for scientific and clinical work will be held on Wednesday, Thursday and Friday July 21, 22 and 23, the morning sessions being given up to discussions and the reading of papers. The Annual Representative Meeting for the transaction of medico-political business will begin on the previous Friday, July 16. The full list of officers of the seventeen Scientific Sections, the provisional programme and time-table, information about accommodation, and other details of the arrangements for the Annual Meeting will be found in this week's *Supplement*. We publish below the second of a series of articles on Belfast and its medical and scientific institutions. The first article appeared on January 30 (p. 233).

THE CITY OF BELFAST

On April 27, 1613 Belfast, then a small town, was constituted a Corporation by a charter of James I, to consist of a Sovereign or Chief Magistrate and twelve Burgesses with the right of sending two members to Parliament. This charter was annulled by James II, and a new one was issued in 1688, but the original was restored in 1690 by William III. In conformity with the passing of the Municipal Corporations Act of 1840 the constitution of the Corporation was changed and made to consist of ten Aldermen and thirty Councillors, in 1898 it was further enlarged to fifteen Aldermen and forty-five Councillors. In 1888 Belfast was given the rank of a city by Royal Charter of Queen Victoria, conferring upon the new city all the rank, liberties, privileges and immunities incident to a city. In 1892 the title of Mayor was changed to Lord Mayor, and in 1923 the style of the Right Honourable was prefixed to his official title.

Belfast is a progressive modern city. While it has the marks of a great centre of manufacturing activity—commerce and industry first gave it prominence—it would be a false conception to picture it as a mere aggregation of industrial works with screeching sirens and belching chimneys. It is a metropolis and a university city. It boasts a series of buildings of imposing magnificence and pleasing architectural features. The deposit of grime upon the stonework of its buildings is conspicuously less than in say the manufacturing centres of the English Midlands. It has happily no legacy of ancient slums and overcrowded tenements; the thoroughfares are mainly straight and broad, shops and offices which met the requirements during the past century have been replaced by elegant emporiums and suites of offices

of modern taste and design. The visitor will readily pass the hours amid the attractions of the shopping centre of this, the capital city of Northern Ireland.

One notable, indeed almost unique feature that appeals to visitors is the constant views of the circling hills from the streets, adding charm and relieving monotony. A tram or bus ride along the Antrim Road transports the passenger to Bellevue and Glengormley, where a magnificent view of Belfast Lough, the pleasant hills of Down on the opposite shore, the Copeland Islands at the entrance to the Lough, and even the distant coast of Scotland is presented in a pleasing prospect. Or a trip to Ligoniel will yield a commanding panorama of the city encompassed by the hills with the opening to the south to mark the valley of the Lagan. Few cities provide such variety of scenic grandeur within a four mile radius of the hub of activity in the city centre.

This centre is at Castle Junction, through which all

trams pass close to the site of the former Belfast Castle where in resided the then Lord of the Manor, the Marquess of Donegall. Close to the landing place at Donegall Quay the visitor cannot fail to notice the Albert Memorial, a handsome clock tower 113 feet high erected to the memory of the Prince Consort in 1869. In those days the Mayor received a salary for his services—a practice long since abolished—and the then occupant (Mr. John Lytle) devoted his salary for two years to this object, the balance of the cost being raised by public

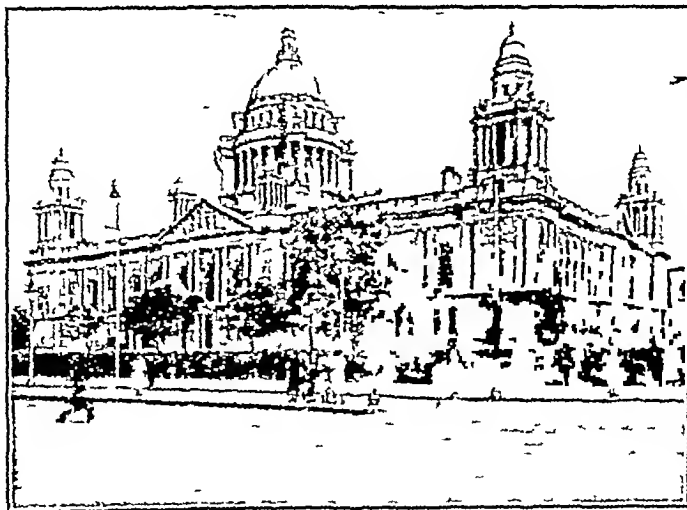


FIG. 1.—The City Hall Belfast

subscriptions. To-day the "Albert" is Belfast's time piece, and dominates High Street, Belfast's oldest thoroughfare.

The City Hall

The City Hall will attract the attention of the visitor as it occupies a commanding position at the southern

end of Donegall Place within a few hundred yards of Castle Junction. Perhaps some aesthetic critics will regret the absence of the modern severity of architectural design but most will admit that as a building the City Hall is most imposing and that as a spectacle its architectural detail is blended in a pleasing harmony of stone. Surrounded by beautiful and well kept gardens its proportions do not over-awe the neighbouring buildings or render the Hall itself insignificant. The building was erected on the site of the old White Linen Hall to the plans of Sir Brumwell Thomas at a cost of £328 000 and opened by the Marquess of Aberdeen as Lord Lieutenant of Ireland in 1906. The style of architecture is Renaissance. Portland stone being used in its construction. One side of the surrounding gardens has been adapted as the City War Memorial in the form of a Garden of Remembrance.

The façade as viewed from Donegall Place is pleasing and impressive. The lower story is used for offices and committee rooms; the upper lighted by lofty windows contains the Council Chamber and a magnificent suite of reception rooms. Above the *porte cochère* is a pediment with an allegorical group worked thereon. The massive central dome of the main building reaches 173 feet above the ground. The walls of the vestibule and entrance hall and the entire staircase are of beautifully variegated marble and there is an imposing entrance hall from which the main staircase rises a fine view of the interior of the dome being obtained from this point. Chaste stained-glass windows simple memorials to the glorious dead and to the heroes of many battles are erected in excellent taste, and make their appeal by virtue of their merit and appropriateness. The Council Chamber is furnished in oak beautifully carved and imposing in its stateliness; the reception rooms consist of a banquet hall and a Great Hall the floor of which is covered by a Donegal-woven carpet weighing five tons. The Great Hall is reserved for civic receptions, and on such occasions with the blaze from many electric lights illuminating the decorations the crowded floor gay with beautiful dresses and rich with brilliant uniforms and crimson robes and gowns the most captious critic will confess that this is indeed a noble hall of State and worthy of the municipal palace of a great city.

The Assembly Buildings

The Church House of the Presbyterian Church in Ireland in the Assembly Hall of which the Representative Body will hold its annual deliberations is a building

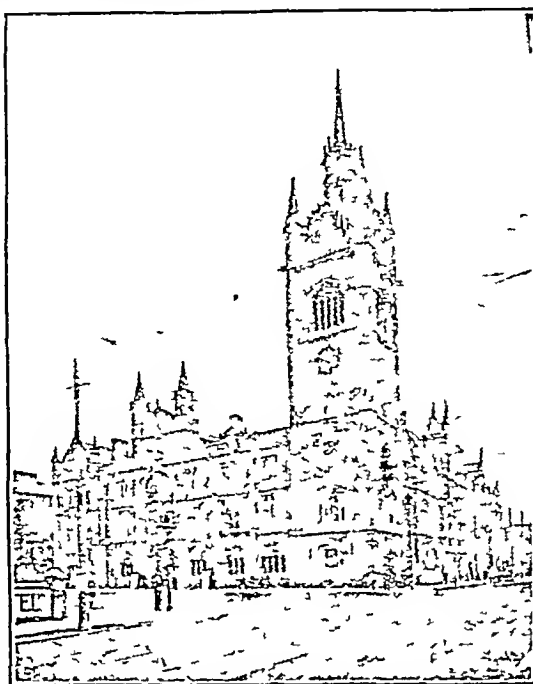


FIG 2—The Assembly Buildings Belfast

reminiscent of the Scottish baronial style of architecture. It is situated in Fisherwick Place within easy distance of the City Hall and city centre. It is conspicuous by its tall massive tower crowned with an arch spire similar to the steeple tower of St Giles in Edinburgh. It is easily located by its peal of bells, which chime the hours and quarters and by the electrically controlled carillon whose bells peal forth at midday and three hourly intervals by day. Within are housed the various departments of the Presbyterian Church with a minor hall, numerous committee rooms, offices, gymnasium and reading and recreation rooms. There is also a fine Assembly Hall, oval in plan with two galleries and a seating capacity of 2 300 ideal for its intended purpose of a debating chamber and hall for public lectures.

The Assembly's College, the Theological College of the Presbyterian Church is used for the training of students for the ministry. It was built in 1853 and residential chambers

have been added to the original building. It is close to Queen's University and has very kindly been granted to the Ladies Committee for use as a Ladies Club by the Principal of the College. During the construction of the

Parliamentary buildings at Stormont the College was used for the meetings of the Northern Ireland Parliament.

Fisherwick Presbyterian Church, five minutes walk from the University is to be the scene of the combined religious service with His Grace the Lord Archbishop of Armagh Primate of All Ireland, as the preacher. The various religious denominations have many beautiful edifices for the observance of public worship. Carlisle Memorial (Methodist) and St Peter's (Roman Catholic) being fine examples

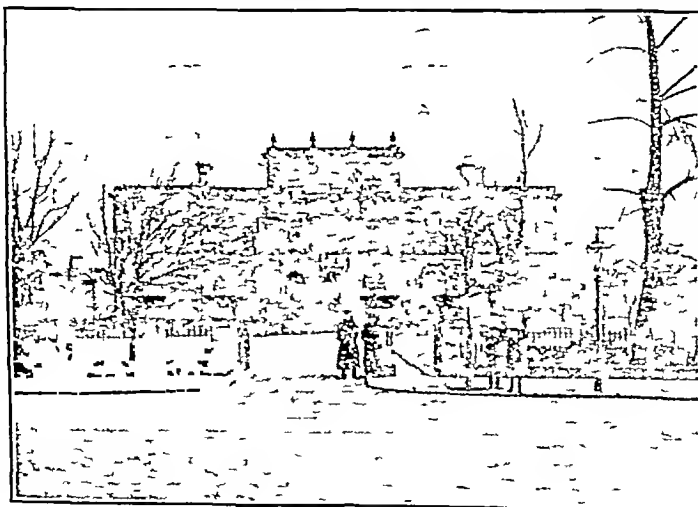


FIG 3—The Assembly's College Belfast

of harmonies in architecture and appeal in their religious symbolism. St Patrick's Church in Donegall Street, where will be the celebration of High Mass is noted for its magnificent decorations and beautiful interior.

The Royal Belfast Academical Institution opened in 1810 is one of the oldest secondary schools in Belfast and is famous as having had many notable scholars on its

roll, many of whom have distinguished themselves in the worlds of science, letters and art, among them Lord Kelvin whose father was one of the teachers, and who was born in one of the houses directly opposite and Viscount Bryce. It is an impressive building now partially concealed by the College of Technology which is a modern structure in the Renaissance style. The latter is maintained by the municipality and serves as a seat of education and training for those destined for the industries of a great city. Those interested in the process of linen manufacture who have not time or the opportunity of visiting the factories and works which specialize in the various branches of the industry could not do better than inspect the weaving-rooms on the ground floor where some forty distinct types of loom may be seen and where students are taught every process from the rough dressing of the flax to the weaving of beautiful damasks.

The Royal Courts of Justice

The Royal Courts of Justice are situated within a few minutes walk from Castle Junction. These form one of the most dignified and imposing public edifices in the United Kingdom, and Ulster owes both them and the larger Stormont Buildings to the generosity of the Parliament at Westminster. The buildings front three public roadways and occupy a site which was formerly a portion of the city markets. The style has drawn general admiration and those who spend some of their time in them will realize that the dignity and tradition of the law are nobly expressed in the centre of justice in Ulster. From the two principal entrances access is gained to the Central Court Hall from which admission to the four courts is obtained (two Kings Bench a Chancery and a Court of Appeal). Marble has been used for the decoration of the walls and floor of the Central Hall and Empire teak for the panelling of the Courts. The furnishing of the libraries is admirable, and conveys an atmosphere of restfulness and study in a sphere of erudition and knowledge. The opening ceremony was performed in 1933 by His Grace the Governor who formally handed the key of the building to the Lord Chief Justice for Northern Ireland Sir William Moore Bt.

The Ulster Hall

The Ulster Hall, in Bedford Street a short distance from the City Hall, was acquired by the Corporation some thirty five years ago. It is to serve during the Annual Meeting for the Trades Exhibition and Registration Rooms. As the visitor stands upon the platform and glances along the walls or at the lofty ceiling he might recall that the building has been the scene of many stirring political demonstrations, and that the platform upon which he rests has resounded on many occasions to the measured pacing of the lions of the British political arena and that the walls have echoed the pleadings, exhortations, denouncements and encouragements of Lord Salisbury, A. J. Balfour, Bonar Law, Sir Edward Carson, and Lloyd George, among many others.

The Museum and Art Gallery

The Royal Botanic Gardens close to the University contain the City Museum and Art Gallery, the present building being but the first stage of a more comprehensive scheme. In it are contained unique collections of Irish spinning-wheels and of bicycles together with examples of Irish arts-and crafts of cut glass work, ceramics and textiles, and relics of ancient Irish life in the form of archaeological specimens and other antiquities. The series of views of Old Belfast (forming part of the McGowan collection) will fascinate students of the city's history and many will be interested in the portraits of thirteen of America's Presidents who were of Ulster descent. One of the special attractions in the Art Gallery is the donation of Sir John Lavery R.A. of a representative collection of his works to the city of his birth. The genius of prominent Ulster artists—Conor, Henry, Craig, McKelvey, Carey and Gordon—is reflected in what promises to be a magnificent collection representative of fine art.

St. Anne's Cathedral

The cathedral built upon the site of the old parish

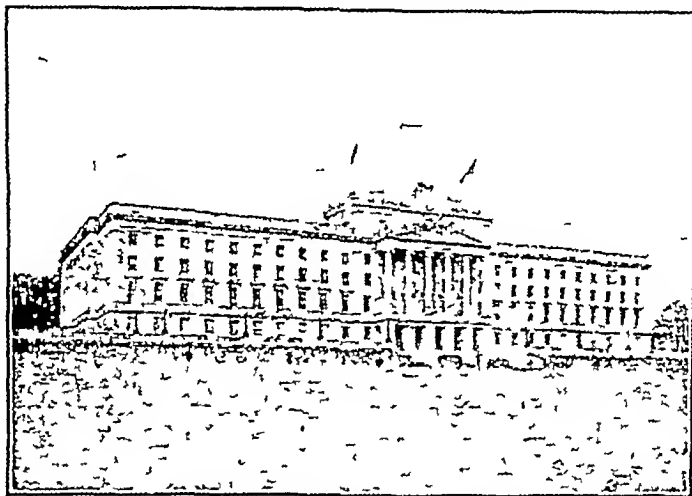


Fig 4—Parliamentary Buildings Stormont

church of St. Anne in Donegall Street unfortunately finds itself for the time being shut in in an area which is only beginning to undergo modernization in its building and development. The site and church were the gift of the fifth Earl of Donegall but the cathedral dates only from 1899 since when over £100,000 has been spent upon its construction and development. At present the building comprises the nave, baptistery and Chapel of the Holy Spirit and Crossing but additions are constantly being made.

according to a preconceived plan which will eventually produce an edifice in keeping with a city of deep religious feelings and convictions.

Parliamentary Buildings

When self-government was granted to the Six Counties area of Northern Ireland in 1920 it was essential to provide a fitting home for the newly constituted legislature. For this purpose the 300-acre estate of Stormont Castle on the County Down side of the city was acquired the existing castle being used as the official residence of the Prime Minister. Near by was built the Speaker's House, a pleasing picture in red brick amidst a cluster of trees. The most imposing feature, however, is the Parliamentary Buildings erected upon a plateau cut in the hill about three-quarters of a mile from the main road to Newtownards. The buildings are approached directly by the Processional Road straight and broad flanked by trees and terminating in a terrace at the foot of an imposing flight of granite steps leading to the main plateau upon which the buildings stand. Another entrance from the west, named after the Right Hon. W. F. Massey (a great Ulsterman and a great Imperialist who was Premier of New Zealand) joins the Processional Road at a circle where is erected the statue of Lord Carson. From the main terrace a splendid view of

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY APRIL 10 1937

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BRITISH MEDICAL ASSOCIATION

ONE HUNDRED AND FIFTH ANNUAL MEETING, BELFAST, JULY, 1937

Patron HIS MAJESTY THE KING

President SIR E. FARQUHAR BUZZARD, Bt., K.C.V.O., LL.D., D.M., F.R.C.P. Physician Extraordinary to H.M. the King, Regius Professor of Medicine, University of Oxford

President-Elect R. J. JOHNSTONE, B.A., M.B., F.R.C.S., F.C.O.G. Professor of Gynaecology, Queen's University, Belfast, Member of Northern Ireland Parliament

Chairman of Representative Body H. S. SOUTTAR, C.B.E., M.D., M.Ch., F.R.C.S.

Chairman of Council SIR KAYE LE FLEMING, M.A., M.D.

Treasurer N. BISHOP HARMAN, LL.D., F.R.C.S.

PROVISIONAL PROGRAMME

The Annual Representative Meeting will begin at the Assembly Hall on Friday, July 16, at 9.30 a.m., and be continued on the following three weekdays.

The statutory Annual General Meeting will be held at the Assembly Hall on Tuesday, July 20, at 12.30 p.m., and the adjourned meeting at 8 p.m.

The Annual Dinner of the Association will take place at the King's Hall on Thursday, July 22, at 7 p.m. The Popular Lecture will be given at the Assembly Hall on Friday, July 23, at 8 p.m.

The Conference of Honorary Secretaries will be held in the Assembly Hall on Wednesday, July 21, at 2.30 p.m. and the Over-seas Conference at the same place and time on Thursday, July 22.

A Combined Religious Service will be held in Fisherwick Presbyterian Church on Tuesday, July 20, at 4.30 p.m. High Mass will be celebrated "Coram Pontifice" at St. Patrick's Church, Donegall Street, on Thursday, July 22, at 9 a.m.

The Reception Room for registration at Ulster Hall will be opened at 2 p.m. on Monday, July 19. Ladies Club will be at Assembly's College.

The Annual Exhibition of Surgical Appliances, Foods, Drugs, and Books will be held in the Ulster Hall. The official opening will take place on Tuesday, July 20, at

9 a.m., it will remain open on July 21, 22 and 23, from 9 a.m. to 6 p.m.

The Pathological Museum and Exhibition of Radiographs, Physics Laboratories, Queen's University will be opened on Tuesday, July 20, at 11 a.m., and will remain open on the three following days from 9.30 a.m.

The clinical and scientific work will be divided among seventeen Sections, meeting at the Queen's University on Wednesday, Thursday, and Friday, July 21, 22, and 23. We publish below the names of the Sections and the officers appointed to each.

The following Sections will meet on Three Days

MEDICINE

President Professor W. W. D. THOMSON, M.D., F.R.C.P. (Belfast)

Vice-Presidents FOSTER COATES, M.D. (Belfast), F.G. HOBSON, D.S.O., D.M., F.R.C.P. (Oxford), W. MCLOPINAN, L.R.C.P. and S.I. (Belfast), Professor J. W. MCNEE, D.S.O., M.D., F.R.C.P. (Glasgow)

Honorary Secretaries S. I. TURKINGTON, M.D., 41 University Road, Belfast, EDWARD R. CULLINAN, M.D., F.R.C.P., 10 Park Square West, NW1

The following programme has been arranged

Wednesday, July 21 (Combined meeting with Section of Pathology, Bacteriology, and Immunology) 10 a.m., Dis
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ANNUAL MEETING THE SECTIONS

SUPPLEMENT TO THE
BRITISH MEDICAL JOURNAL

Discussion The Haemorrhagic States To be opened by Prof L J WITTS (London) and Dr N B CAPON (Liverpool) followed by Dr JANET M VAUGHAN (London) Pathological Aspects of Haemostasis and Dr W A TIMPERLEY (Sheffield), Treatment of Haemophilia

Thursday July 22—10 a.m. *Discussion* Cholecystitis To be opened by Prof J W MCNEE (Glasgow) followed by DAVID WILKIE (Edinburgh) Diagnosis and Treatment Sir GARRATT HARDMAN (Dublin) The Role of Surgery Dr T and Dr CHARLES H MILLER (London), Cardiac Pain in Gall-bladder Subjects

Friday July 23 (Combined meeting with Section of Surgery) —10 a.m., *Discussion* The Diagnosis and Treatment of Abscess of the Lung To be opened by Dr L S T BURRELL (London) and Mr J E H ROBERTS (London) followed by Dr PETER KERLEY (London) Dr CARL SEMB (Oslo) Dr GEOFFREY MARSHALL (London) Dr W BURTON WOOD (London) and Mr G R B PURCE (Belfast) (Members of the Section of Radiology will be welcome at this discussion)

Problem of Habitual Abortion and Mr V B GREEN ARMYTAGE (London) Hystero-salpingography—its Obstetrical and Gynaecological Importance

Thursday July 22 (Combined meeting with Section of Nutrition)—10 a.m. *Discussion* The Nutritional Needs in Pregnancy To be opened by Sir ROBERT MCCARRISON (Oxford) Dame LOUISE MCLROY (London) and Dr G C M M GONIOLE (Stockton on Tees) followed by Dr LUCY WILLIAMS (London) and Dr MARGARET I BALFOUR (London) Paper Mr D W CURRIE (Leeds) The Use of Vitamin E in Habitual Abortion (Members of the Section of Hygiene and Public Health will be welcome at this meeting.)

Friday July 23—Demonstration by Prof JOSEPH DE LEE (Chicago) of talking motion picture of the Forceps Operation including Episiotomy and its Anatomy Paper Mr C H G MACAFEE and Mr H I MCCLURE (Belfast) A Critical Survey of 349 Cases of Breech Delivery

PATHOLOGY, BACTERIOLOGY, AND IMMUNOLOGY

President Sir THOMAS HOUSTON OBE., M.D (Belfast)
Vice-Presidents Professor S PHILLIPS BEDSON, M.D F.R.S. (London) S C DYKE D.M. FRCP (Tottenham Staffs) N C GRAHAM M.C., M.B. Ch. (Muckamore, Co. Antrim), Professor J S YOUNG M.C., M.D (Belfast)

Honorary Secretaries Miss EILEEN M HICKEY, M.D M.R.C.P.I., 31 College Gardens Belfast Miss JANET M VAUGHAN D.M., M.R.C.P. British Post Graduate Medical School, Hammersmith Hospital Duane Road, W12

The following programme has been arranged
Wednesday July 21 (Combined meeting with Section of Medicine)—10 a.m., *Discussion* The Haemorrhagic States To be opened by Prof L J WITTS (London) and Dr N B CAPON (Liverpool) followed by Dr JANET M VAUGHAN (London) Pathological Aspects Dr S C DYKE (Wolverhampton), Blood Transfusion Dr R G MACFARLANE (London) Mechanism of Haemorrhage and Haemostasis and Dr W A TIMPERLEY (Sheffield), Treatment of Haemophilia

Thursday July 22 (Combined meeting with Section of Radiology)—10 a.m., *Discussion* Bone Tumours. To be opened by Dr R E. ROBERTS (Liverpool) Prof J S YOUNG (Belfast) and Mr HARRY PLATT (Manchester) followed by Dr J DUNCAN WHITE (London) and Dr J F BRAILSFORD (Birmingham) Members of the Section of Orthopaedics will be welcome at this discussion)

Friday July 23—10 a.m. *Discussions* (1) Influenza To be opened by Dr C H ANDREWES (London) followed by Dr C H STUART HARRIS (London) Dr R W FAIRBROTHER (Manchester) and Dr J G SCADDINO (London) (2) Staphylococcal Infections in Man To be opened by Prof J V BIGGER (Dublin) followed by Dr EILEEN O BARTLEY (Belfast)

PHARMACOLOGY AND THERAPEUTICS, INCLUDING ANAESTHETICS

(One Day to be devoted to Anaesthetics)

President Professor E. B. C. MAYRS M.D., DPH (Dunmurry, Co. Antrim)
Vice-Presidents OLIVE M ANDERSON M.D., D.A. (Belfast) Professor DAVID CAMPBELL, M.C. M.D. FRFPS (Aberdeen) Professor J H GADDUM M.R.C.S., L.R.C.P. (London) W B PHIMROSE M.B., Ch.B. (Glasgow)

Honorary Secretaries J T LEWIS M.D. FRCP 25 College Gardens, Belfast Miss KATHARINE G LLOYD WILLIAMS, M.D. 48 Gordon Square WC1

The following programme has been arranged
Wednesday July 21—10 a.m. *Discussion* Individual Variations in Response to Drugs To be opened by Prof A J CLARK (Edinburgh) followed by Prof J H GADDUM (London) and Colonel L. W. HARRISON (London) 12 noon Paper Dr J F BROCK (Cambridge) Iron Therapy in Hypochromic Anaemia

Thursday July 22—10 a.m. *Discussion* The Treatment of Circulatory Failure To be opened by Dr J CRICHTON BRAMWELL (Manchester) followed by Prof K D WILKINSON (Birmingham) Dr S B BOYD CAMPBELL (Belfast) Dr A R GILCHRIST (Edinburgh) and Dr E. P. POLLTON (London)

SURGERY

President Professor P T CRAMBLE M.B. FRCS (Belfast)
Vice-Presidents Professor L R BRAITHWAITE M.B. FRCS (Leeds) ADAMS A MCCONNELL M.B., FRCS1 (Dublin) HOWARD STEVENSON M.B. FRCS1 (Belfast) REGINALD M VICK, OBE., M.Chir., FRCS (London)

Honorary Secretaries H P MALCOLM, M.C. M.B., M.Ch., 27 College Gardens Belfast HAROLD C EDWARDS M.B. M.S., FRCS, 57 Queen Anne Street, W1

The following programme has been arranged
Wednesday July 21—10 a.m. *Discussion* The Surgical Treatment of Non-stenosing Peptic Ulcer To be opened by Prof JOHN MORLEY (Manchester) followed by Mr N C LAKE (London) Mr W H OGILVIE (London) and Dr CARL SEMB (Oslo) Paper Mr H W RODGERS (London) The Use of the Gastroscope in Cases of Dyspepsia with Normal X Ray

Thursday July 22—10 a.m. *Papers* Prof L R BRAITHWAITE (Leeds) The Significance of Bile in the Stomach Prof A K HENRY (London) Factors in the Successful Treatment of Severe Burns Mr J G YATES BELL (London) The Steinach Operation for the Relief of Prostatic Symptoms and Mr E W ARCHIBALD (Montreal) Cutting the Sphincter of Oddi for Relief of Pain following Cholecystectomy and Recurring Pancreatitis without Stone and for Subacute Cholangitis

Discussion Obstructions of the Common Bile Duct To be opened by Mr E R FLINT (Leeds) followed by Mr HOWARD STEVENSON (Belfast) and Mr G GORDON TAYLOR (London)
Friday July 23 (Combined meeting with Section of Medicine)—10 a.m. *Discussion* The Diagnosis and Treatment of Abscess of the Lung To be opened by Dr L S T BURRELL (London) and Mr J E. H. ROBERTS (London) followed by Dr PETER KERLEY (London) Dr CARL SEMB (Oslo) Dr GEOFFREY MARSHALL (London) Dr W BURTON WOOD (London) and Mr G R B PURCE (Belfast) (Members of the Section of Radiology will be welcome at this discussion)

OBSTETRICS AND GYNAECOLOGY

President Professor C G LOWRY M.D. FRCS1, FCOG (Belfast)
Vice-Presidents ALEX. J DEMPSEY M.B. FCOG (Belfast) T S S HOLMES M.Ch. FRCS, FCOG (Belfast) Professor A LEYLAND ROBINSON M.D. FRCS FCOG (Liverpool) WILFRED SHAW M.D., FRCS FCOG (London)

Honorary Secretaries C H G MACAFEE M.B. FRCS FCOG 18 University Square Belfast Mrs. HILDA N LLOYD M.B. FRCS, FCOG, 40, Harborne Road Edgbaston Birmingham

The following programme has been arranged
Wednesday July 21—10 a.m. *Discussion* The Clinical Value of Protonal and Similar Compounds in the Treatment of Puerperal Infections To be opened by Mr G F GIBBERD (London) Papers Mr PERCY MALPAS (Liverpool) the

12 noon, *Paper* Dr NATHAN MUTCH (London) Therapeutic Use of Magnesium Trisilicate

Friday July 23—Session to be devoted to Anaesthetics 10 a.m., *Discussions* (1) Anaesthesia in Minor Surgery To be opened by Dr J H CHALLIS (Woodford Green) (2) Vinyl Ether (with cinema film) To be opened by Dr V A. GOLDMAN (London)

The following Sections will meet on Two Days

ANATOMY, PHYSIOLOGY, AND BIOCHEMISTRY

President Professor E C. DODDS, M.D., F.R.C.P. (London)

Vice-Presidents Professor HENRY BARCROFT M.D. (Belfast) Professor R J BROCKLEHURST D.M. (Bristol) Professor MARY F LUCAS KEENE M.B., B.S. (London) Professor B A McSWINEY, M.B., B.Ch. (London)

Honorary Secretaries RICHARD H HUNTER M.D. M.Ch. Anatomy Department, Queen's University Belfast, Professor A. WORMALL, D.Sc., Department of Biochemistry St Bartholomew's Hospital Medical College E.C.1

The following programme has been arranged

Wednesday July 21—10 a.m. Discussion The Anatomy Physiology and Biochemistry of the Sex Glands To be opened by Prof E C DODDS (London) followed by Dr A S PARKES (London) Prof A B APPLETON (London) Dr P M F BISHOP (London), and Dr J M ROBSON (Edinburgh) *Papers* Prof W J E JESSOP (Dublin) Clinical Bearings of the Parathyroids Prof A WORMALL (London) Recent Work in the Chemistry of Insulin Prof T H MILROY (Edinburgh) Chemical Mediators in Nervous Activity and Dr R D LAWRENCE (London) The Use of Protamine Insulin and Similar Preparations 2.30 p.m. Demonstration at Pathological Institute of Cinema Film by Sir JOSEPH BARCROFT and Dr D H. BARRON (Cambridge) The Effect of Experimental Lesions in the Central Nervous System on the Growth and Movements of the Foetus

Friday July 23—10 a.m. Discussion Visceral Pain To be opened by Prof J MORLEY (Manchester) followed by Prof J R LEARMONTH (Aberdeen) Prof B A McSWINEY (London) Prof D T BARRY (Cork), and Dr E P POULTON (London) *Papers* Dr J DIXON BOYD (Cambridge) The Affluent Nerve Supply of Arteries with Special Reference to Pressor Receptors Dr D H SMYTH (Göttingen and Belfast) Vascular Reactions of the Kidney in Response to Carotid Sinus and Other Reflexes and Dr S NEVIN (London) The Application of Advances in Physiology and Biochemistry to the Study of Diseases of Muscle

DISEASES OF CHILDREN

President H. MORLEY FLETCHER, M.D. F.R.C.P. (London)

Vice-Presidents Professor SEYMOUR G BARLING C.M.G. T.D. M.Ch. F.R.C.S. (Birmingham) ROBERT MARSHALL, M.D. F.R.C.P.I. (Belfast) M BRICE SMYTH M.B. B.Ch. (Belfast)

Honorary Secretaries T H CROZIER M.D. M.R.C.P., 3 University Square Belfast URSULA SHELLEY, M.D., M.R.C.P., 79, Harley Street W.1

The following programme has been arranged

Thursday July 22—10 a.m. Discussion Dilatation and Elongation of the Colon To be opened by Prof J R LEARMONTH (Aberdeen) *Papers* Dr W R F COLLIS (Dublin) Modern Control of Scarlet Fever Mr F W E M WARDILL (Newcastle-on-Tyne) Cleft Palate

Friday July 23—10 a.m. Discussion Enuresis To be opened by Dr ROBERT HUTCHISON (London) *Paper* Prof SEYMOUR G BARLING (Birmingham) Treatment of Tuberculous Cervical Adenitis

NEUROLOGY AND PSYCHOLOGICAL MEDICINE

President GEORGE RIDDOCH M.D. F.R.C.P. (London)

Vice-Presidents R D GILLESPIE M.D. DPM F.R.C.P. (London) J PURDON MARTIN, M.D., F.R.C.P. (London) M J NOLAN L.R.C.P. and S.I. (Belfast) Professor LANIBERT C ROGERS F.R.C.S., F.R.A.C.S. (Cardiff)

Honorary Secretaries R S ALLISON M.D. M.R.C.P., 27 University Square Belfast DENIS H. BRINTON B.M., M.R.C.P., 27, Harley Street, W.1

The following programme has been arranged

Wednesday July 21—10 a.m. Discussion Early Diagnosis of Cerebral Tumours To be opened by Dr F M R WALSH (London), and Mr N M DOTT (Edinburgh)

Thursday July 22—10 a.m. Discussion The Mental Manifestations of Head Injury To be opened by Dr J PURDON MARTIN (London) and Prof E MAPOTHER (London)

NUTRITION

President Sir ROBERT MCCARRISON, C.I.E. LL.D., M.D., F.R.C.P. (Oxford)

Vice-Presidents Professor STUART J COWELL M.B. F.R.C.P. (London), J A SMYTH M.D. (Belfast) LUCY WILLS, M.B. (London)

Honorary Secretaries Professor DOUGLAS C HARRISON D.Sc. Ph.D. Department of Biochemistry Queen's University Belfast J F BROCK, D.M. M.R.C.P. Department of Medicine The University Cambridge

The following programme has been arranged

Thursday July 22 (Combined meeting with Section of Obstetrics and Gynaecology)—10 a.m. *Discussion* The Nutritional Needs in Pregnancy To be opened by Sir ROBERT MCCARRISON (Oxford) Dame LOUISE MCILROY (London) and Dr G C M M GONIGLE (Stockton-on-Tees) followed by Dr LUCY WILLS (London) and Dr MARGARET I BALFOUR (London) *Paper* Mr D W CURRIE (Leeds) The Use of Vitamin E in Habitual Abortion (Members of the Section of Hygiene and Public Health will be welcome at this meeting)

Friday July 23—10 a.m. Discussion The Physiological Basis and the Standards of Nutrition. To be opened by Prof STUART J COWELL (London) followed by Dr G C M M GONIGLE (Stockton-on-Tees) Dr HELEN M M MACKAY (London) and Dr J F BROCK (Cambridge) *Papers* Prof W R. FEARON (Dublin) Micrometabolic Constituents of the Modern Dietary their Sources Distribution and Significance Dr W R AYKROYD (Coonoor), The Detection of Malnutrition

OPHTHALMOLOGY

President J A CRAIG, M.B. F.R.C.S. (Belfast)

Vice-Presidents J D M CARDELL M.B. F.R.C.S. (London) I A DAVIDSON M.D. (Belfast) PERCIVAL J HAY, M.D. (Sheffield)

Honorary Secretaries J R WHEELER M.B. F.R.C.S. D.O.M.S. 6 College Gardens Belfast EUGENE WOLFF, M.B. F.R.C.S. 99, Harley Street, W.1

The following programme has been arranged

Thursday July 22—10 a.m. Discussion Squint and Heterophoria with Special Reference to Orthoptic Treatment To be opened by Mr W H McMILLEN (London) followed by Mr G G PENMAN (London) *Papers* (1) Wing Commander P C LIVINGSTON R.A.F. (London) The Role of Heterophoria in Binocular Disharmony with Special Reference to Air Pilots (2) Miss EUPHAN M MAXWELL (Dublin) A Note on a Case of Ectopia Lentis Associated with Arachnoidactyly

Friday July 23—10 a.m. Discussion Affections of the Eye with Relation to Skin Diseases To be opened by Mr J H DOGGART (London) *Papers* Mr R AFFLECK GREEVES (London) Some Unusual Cases of Glaucoma Secondary to Injury Mr J B MCAREVEY (Dublin) Corneal Transplantation in an Aphakic Eye (Members of the Section of Dermatology will be welcome at this meeting)

ORTHOPAEDICS, INCLUDING TREATMENT OF FRACTURES

President S T IRWIN M.B. M.Ch., F.R.C.S. (Belfast)

Vice-Presidents H F MACALEY M.B., M.Ch., F.R.C.S.I. (Dublin) R J MCCONNELL, M.B. M.Ch. (Belfast) T P McMURRAY M.B. M.Ch. F.R.C.S. (Liverpool)

Honorary Secretaries CECIL A CALVERT M.B., F.R.C.S.I. 8 University Square Belfast Miss E HENRIETTA JEBENS M.B., F.R.C.S. 56 Wimpole Street W.1

The following programme has been arranged

Wednesday July 21—10 a.m. Discussion Operative Treatment and Results in Fracture of the Neck of the Femur

Friday July 23—10 a.m., *Discussions* (1) Modern Treatment of Club-foot To be opened by Mr DENIS BROWNE (London) and Mr E. P. BROCKMAN (London) followed by Mr T. P. McMURRAY (Liverpool) (2) Tennis Elbow To be opened by Mr G. P. MILLS (Birmingham)

OTO-RHINO-LARYNGOLOGY

President HENRY HANNA, M.B., B.Ch. (Belfast)

Vice-Presidents J. W. KILLEN, M.B., F.R.C.S.I. (London derry) D. F. A. NEILSON, F.R.C.S. (London), DONALD WHEELER, M.B., F.R.C.S. (London) F. G. WRIGLEY, M.D. (Manchester)

Honorary Secretaries F. A. McLAUGHLIN, M.B., F.R.C.S., 71, University Road Belfast F. C. W. CAPPS, F.R.C.S., 16 Park Square East, NW1

The following programme has been arranged

Wednesday July 21—Programme will be announced later

Friday July 23 (Combined meeting with Section of Hygiene and Public Health)—10 a.m. *Discussion* Prevention and Treatment of Diphtheria To be opened by Dr A. GARDNER ROBB (Belfast) followed by Dr E. H. R. HARRIES (London) Dr W. T. BENSON (Edinburgh) and Dr C. J. MCSWEENEY (Dublin) *Paper* Dr E. H. T. NASH (Hounslow) and Dr G. CHESNEY (Poole), Diphtheria Immunization

HYGIENE AND PUBLIC HEALTH

President Professor W. J. WILSON, M.D., D.P.H. (Belfast)

Vice-Presidents Professor J. JOHNSTONE JERVIS, M.D., D.P.H. (Leeds) ELWIN H. T. NASH, M.R.C.S., M.R.C.P., D.P.H. (Hounslow) A. GARDNER ROBB, M.B., D.P.H. (Belfast), C. S. THOMSON, M.D., M.R.C.P. Ed. D.P.H. (Belfast)

Honorary Secretaries F. F. KANE, M.D., M.R.C.P.I., D.P.H., Purdysburn Fever Hospital Belfast H. E. COLLIER, M.C., M.B., Ch.B. University of Birmingham, Edmund Street, Birmingham

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* Enteric Fever To be opened by Dr J. RITCHIE (Dumfries) followed by Mr A. FELIX (London) Dr S. WATSON SMITH (Bournemouth) Dr S. H. COOKSON (Bournemouth) Lieut.-Col. C. H. H. HAROLD (London) Major General H. M. J. PERRY (London) Dr W. T. BENSON (Edinburgh) Dr E. H. R. HARRIES (London) Dr C. J. MCSWEENEY (Dublin) Dr C. S. THOMSON (Belfast) Dr A. GARDNER ROBB (Belfast) and Dr R. J. MAULE HORNE (Poole)

Friday July 23 (Combined meeting with Section of Oto-rhino-laryngology)—10 a.m. *Discussion* Prevention and Treatment of Diphtheria To be opened by Dr A. GARDNER ROBB (Belfast) followed by Dr E. H. R. HARRIES (London) Dr W. T. BENSON (Edinburgh) and Dr C. J. MCSWEENEY (Dublin) *Paper* Dr E. H. T. NASH (Hounslow) and Dr G. CHESNEY (Poole) Diphtheria Immunization

RADIOLOGY

President J. C. RANKIN, M.D. (Belfast)

Vice-Presidents R. MATLAND BEATH, M.C., M.B., B.S. (Belfast), STANFORD CADE, F.R.C.S. (London) E. W. TWINING, M.R.C.S., L.R.C.P., D.M.R.E. (Manchester)

Honorary Secretaries F. P. MONTGOMERY, M.C., M.B., D.M.R.E., Elmwood University Terrace Belfast GRACE BATTEN, B.M., D.M.R.E., Mount Vernon Hospital Northwood Middlesex

The following programme has been arranged

Wednesday July 21—10 a.m., *Papers* Dr E. W. TWINING (Manchester) Tomography Dr A. B. MacLEAN (Glasgow) Normogram for Radiography Dr C. L. McDONOGH (Dublin) Radiological Diagnosis in Obstetrics and Gynaecology Dr STANFORD CADE (London) Distance Mass Radiation (the Bomb) with film

Thursday July 22 (Combined meeting with Section of Pathology Bacteriology and Immunology)—10 a.m., *Discussion* Bone Tumours To be opened by Dr R. E. ROBERTS

(Liverpool), Prof J. S. YOUNG (Belfast) and Mr HARRY PLATT (Manchester) followed by Dr J. DUNCAN WHITE (London) and Dr J. F. BRAILSFORD (Birmingham) (Members of the Section of Orthopaedics will be welcome at this discussion)

TUBERCULOSIS

President JOHN R. GILLESPIE, M.D., D.P.H. (Belfast)

Vice-Presidents GEOFFREY MARSHALL, O.B.E., M.D., F.R.C.P. (London), J. E. H. ROBERTS, O.B.E., M.B., F.R.C.S. (London) A. TRIMBLE, M.B., B.Ch., D.P.H. (Belfast)

Honorary Secretaries B. R. CLARKE, M.D. Forster Green Hospital for Consumption and Chest Diseases Fortbrede Belfast, A. J. MORLAND, M.D., M.R.C.P., 135 Harley Street, W1

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* Tuberculosis in Hospital Workers To be opened by Dr PETER W. EDWARDS (Cheshire Joint Sanatorium) followed by Dr J. WATT (King George V Sanatorium, Godalming) and Dr R. MARSHALL (Belfast) 11.30 a.m. *Discussion* The Early Diagnosis of Pulmonary Tuberculosis To be opened by Dr G. MARSHALL (London) followed by Dr L. S. T. BURRELL (London) Dr M. F. O'HEA (Dublin) and Dr J. A. L. JOHNSTON (London derry) 2.30 p.m. Demonstration at Forster Green Hospital (Diseases of the Chest and Tuberculosis) Belfast

Thursday July 22—10 a.m., *Discussion* The Surgical Treatment of Apical Tuberculous Cavities To be opened by Dr CARL SEMB (Oslo) followed by Mr J. E. H. ROBERTS (London) Dr A. J. MORLAND (London) Mr G. A. MASON (Newcastle upon Tyne) Dr G. S. TODD (Midhurst Sanatorium) and Mr G. R. B. PURCE (Belfast) 12 noon *Discussion* Artificial Pneumothorax, with Special Reference to Bilateral Collapse To be opened by Dr J. CROCKETT (Glasgow) 2.30 p.m. Demonstration at Belfast Municipal Sanatorium (Tuberculosis) Whiteabbey

The following Sections will meet on One Day

DERMATOLOGY

President G. B. DOWLING, M.D., F.R.C.P. (London)

Vice Presidents S. W. ALLWORTH, M.D. (Belfast), REGINALD T. BRAIN, M.D., F.R.C.P. (London) W. G. HARVEY, M.D., F.R.C.P.I. (Dublin)

Honorary Secretaries IVAN H. MCCAW, M.D., 10 College Gardens Belfast R. MASON BOLAM, M.B., B.Ch., 11, Sydenham Terrace, Newcastle-on Tyne

The following programme has been arranged

Thursday July 22—10 a.m., *Discussion* Autophytic Dermatitis To be opened by Dr HENRY MACCORMAC (London) followed by Dr R. D. GILLESPIE (London) *Papers* Dr R. T. BRAIN (London), The Methods and Difficulty of Investigating Virus Diseases of the Skin and Dr F. A. E. SILCOCK (Leicester) Title to be announced later Afternoon demonstration of cases and pathological specimens in the King Edward VII Hall at the Royal Victoria Hospital (Members of the Section are invited to attend the discussion on Affections of the Eye with Relation to Skin Diseases in the Section of Ophthalmology on Friday, July 23)

MEDICAL SOCIOLOGY

President THOMAS CARNWATH, D.S.O., M.B. (London)

Vice-Presidents SIR FRANCIS E. FRENANTLE, O.B.E., M.D., F.R.C.P., F.R.C.S. M.P. (Hatfield) LEONARD KIDD, M.D. (Enniskillen) (Additional non medical vice presidents to be appointed)

Honorary Secretaries JAMES BOYD, M.D., F.R.C.P.I., D.P.H., 18 Cadogan Park, Belfast (Additional secretary to be appointed)

The following programme has been arranged

Friday July 23—10 a.m. *Discussion* The Wider Issues of Health Legislation in Industry To be opened by Dr L. P. LOCKHART (Nottingham)

PROVISIONAL TIME-TABLE

Friday July 16

- 9.30 a.m.—Annual Representative Meeting, Assembly Hall
Assembly Buildings, Fishervick Place
9.30 a.m.—Ladies Club open, Assembly's College Botanic Avenue
10.0 a.m.—Excursions for Ladies
11.0 a.m.—Civic Welcome to Representative Body by the Lord Mayor
1.0 p.m.—Lunch to Overseas Representatives Grand Central Hotel
4.0 p.m.—President of Ladies Section and Ladies Executive Committee "At Home to Ladies accompanying members of the Representative Body Great Hall Queen's University
7.30 p.m.—Representative Body Dinner Grand Central Hotel
7.30 p.m.—Dinner to Ladies accompanying Members of Representative Body, Students Union Queen's University
9.30 p.m.—Concert for Members of Representative Body and their Ladies Students' Union Queen's University

Saturday July 17

- 9.30 a.m.—Annual Representative Meeting, Assembly Hall
9.30 a.m.—Ladies Club open, Assembly's College
11.0 a.m.—Excursions for Ladies
1.0 p.m.—Photograph of Representative Body Royal Belfast Academical Institution
3.30 p.m.—Afternoon Party for Ladies accompanying members of the Representative Body by Royal Ulster Yacht Club Bangor
8.30 p.m.—Reception to Members of the Representative Body and their Ladies by the President of the Ulster Medical Society and Mrs Crymble

Sunday July 18

- 9.30 a.m.—Representative Body Excursion (all day) to Giant's Causeway and Antrim Coast Road
9.0 p.m.—Concert for members of the Representative Body and their Ladies, Whitla Medical Institute

Monday July 19

- 9.0 a.m.—Council Meeting Board Room Assembly Buildings
9.30 a.m.—Ladies Club open Assembly's College
10.0 a.m.—Annual Representative Meeting, Assembly Hall
10.15 a.m.—Excursion for Ladies accompanying members of the Representative Body to Mourne Mountains, Silent Valley, and Mount Norris Newcastle
10.30 a.m.—Visit to Hazelwood Estate Floral Hall and Bellevue Gardens for Ladies accompanying Members of Representative Body
2.0 p.m.—Reception Room open, Ulster Hall Bedford Street
3.30 p.m.—Garden Party to Ladies accompanying Members of Representative Body by Mrs Leatham "Mount Norris, Newcastle
8.45 p.m.—Theatre Performance for Members of Representative Body and their Ladies

Tuesday July 20

- 9.0 a.m.—Official Opening of Exhibition Ulster Hall
9.0 a.m.—Reception Room open Ulster Hall
9.30 a.m.—Annual Representative Meeting Assembly Hall
9.30 a.m.—Ladies Club open Assembly's College
10.0 a.m.—Short Tour for Ladies to Carrickfergus Castle and Strand
10.30 a.m.—Visits to Works, including the various linen manufacturing processes tobacco manufacture, shipyards rope making gardens nurseries Art Gallery etc.
11.0 a.m.—Pathological Museum and Exhibition of Radiographs open Physics Laboratories, Queen's University
12.30 p.m.—Annual General Meeting Assembly Hall followed by Extraordinary General Meeting
*2.30 p.m.—Visit to Belfast Hospitals and Reception by Chairman of Board of Management of Royal Victoria Hospital
3.0 p.m.—Visits to Works etc.
*4.30 p.m.—Combined Religious Service Fishervick Presbyterian Church Malone Road
*8.0 p.m.—Adjourned Annual General Meeting and President's Address, Assembly Hall
*9.30 p.m.—President's Reception Queen's University

Wednesday July 21

- 9.0 a.m.—Council Meeting Senate Room, Queen's University

- 9.0 a.m.—Reception Room open Ulster Hall
9.0 a.m.—Exhibition open, Ulster Hall
9.30 a.m.—Pathological Museum and Exhibition of Radiographs open, Physics Laboratories Queen's University
9.30 a.m.—Ladies Club open, Assembly's College
10.0 a.m.—Scientific Sections Queen's University
10.0 a.m.—Notts Ladies Golf Cup Competition and Ladies Putting Competition Royal Belfast Golf Club Craigavon
10.0 a.m.—Short Excursion to Bangor Donaghadee and Newtownards
10.30 a.m.—Visits to Works etc.
1.0 p.m.—Inn Medical Schools and Graduates Association Lunch Grand Central Hotel
2.30 p.m.—Secretaries Conference Board Room Assembly Buildings
2.30 p.m.—Demonstrations at City Hospitals
2.30 p.m.—Tour of Belfast Harbour
2.30 p.m.—Visits to Works
*4.30 p.m.—Reception by the Chancellor and Senate Queen's University Lennoxville House Malone Road
7.0 p.m.—Secretaries Dinner Thompson's Restaurant Donegall Place
7.0 p.m.—Inter University Swimming and Diving Competition Pickle Swimming Pool Bangor
*8.30 p.m.—Civic Reception City Hall
8.30 p.m.—Dance on R.M.S. *Almazora*
9.0 p.m.—Dance at the Plaza, Chichester Street

Thursday July 22

- 8.30 a.m.—Annual Medical Breakfast of National Temperance League Students Union Queen's University
*9.0 a.m.—High Mass Coram Pontifice St. Patrick's Church, Donegall Street
9.0 a.m.—Reception Room open Ulster Hall
9.0 a.m.—Exhibition open Ulster Hall
9.30 a.m.—Pathological Museum and Exhibition of Radiographs open Physics Laboratories Queen's University
9.30 a.m.—Ladies Club open Assembly's College
9.45 a.m.—Short Tour to Downpatrick Strule and Saul (St. Patrick's Country)
10.0 a.m.—Scientific Sections Queen's University
10.0 a.m.—Golf Competition for Leinster and Childs Golf Cups Malone Golf Club
10.30 a.m.—Visits to Works etc.
11.0 a.m.—Reception by Countess of Clanwilliam at Montalto Ballynahinch
11.0 a.m.—Visit to Nendrum Abbey Island Mahee and Strangford Lough
1.0 p.m.—Lunch to Women Members of Association Whitla Medical Institute College Square North
2.30 p.m.—Overseas Conference Board Room Assembly Buildings
2.30 p.m.—Demonstrations at Hospitals
2.30 p.m.—Visits to Works
*2.30 p.m.—Conferment of Honorary Degrees Queen's University
*4.0 p.m.—Garden Party and Reception by Government of Northern Ireland at Stormont
7.0 p.m.—Annual Dinner and Dance at King's Hall Royal Agricultural Society Balmoral

Friday July 23

- 8.30 a.m.—Annual Missionary Breakfast of Medical Prayer Union
9.0 a.m.—Reception Room open, Ulster Hall
9.0 a.m.—Exhibition open Ulster Hall
9.30 a.m.—Pathological Museum and Exhibition of Radiographs open Physics Laboratories Queen's University
9.30 a.m.—Ladies Club open Assembly's College
10.0 a.m.—Scientific Sections Queen's University
10.0 a.m.—Morning Coffee for Ladies at Lady President's Week-end House Longacre Newcastle
10.15 a.m.—Excursion to the Mourne Mountains Silent Valley and Mount Norris Newcastle
10.30 a.m.—Visits to Works etc.
11.0 a.m.—Reception and Lunch by Lady O'Neill Cleggan Lodge Broughshane and Visit to Glens of Antrim and Antrim Coast Road
11.0 a.m.—Coffee at Glencar Banbridge by invitation of Mrs T. J. Gibson
2.0 p.m.—Treasurer's Cup Golf Competition at Belvoir Park Golf Club
4.0 p.m.—Garden Party at Mount Stewart Co. Down by invitation of the Marquess and Marchioness of Londonderry
4.0 p.m.—Garden Party at Seapark Greenland by invitation of Sir George and Lady Clark
4.0 p.m.—Garden Party at Mount Norris Newcastle by invitation of Mrs R. R. Leatham

- 80 p.m.—Popular Lecture by Major General William P. MacArthur, DSO, OBE RAMC, Insects and Disease Assembly Hall
930 p.m.—Branch and Division Reception and Dance at Floral Hall Hazelwood, and Zoological Gardens, Bellevue

Saturday July 24

- 930 a.m.—Excursion to Grant's Causeway and Antrim Coast Road
40 p.m.—Garden Party

* Academic dress will be worn at these functions

The Local Honorary General Secretary of the Meeting is Dr F M B Allen, Whittla Medical Institute, College Square North, Belfast

HOTEL AND LODGING ACCOMMODATION AT BELFAST

The facilities for housing the members who contemplate visiting Belfast for the Annual Meeting next July has given the local committee a considerable amount of anxiety, but it is anticipated that those available will meet the requirements of all visitors. A list of suitable hotels is given below, and as stated the booking of *hotel accommodation* has been placed exclusively in the hands of Messrs Thos Cook and Son and if applications are made at their office, 27 Royal Avenue, Belfast, they will allocate rooms in order of application. No booking fee is charged, but a small deposit will be asked for on reservation being made. The deposit will be credited when the account is settled, or returned if it is found that the room is not required.

A register of lodgings is in course of preparation, and various students hostels also are available. Booking of these will be arranged through the Local Executive Office, and applications for hostel or boarding house accommodation should be addressed to the Secretary, B.M.A., Whittla Medical Institute, College Square North, Belfast.

A number of residents have offered *private hospitality* and this will also be available. Those members desirous of utilizing this should also apply to the secretary at the above address.

Licensed Hotels

Hotel	Rooms available			Tariff				
	Single	Double (1 bed)	Double (twin)	Bed and Breakfast	Dinner Bed and Breakfast	Dinner Bed Breakfast and Lunch	Hot Bath	
BELFAST								
Grand Central Royal Avenue			20	13/6	18/6	21/6	Incl	
Midland Station York Road	10		20	12/-	18/-	22/-	Incl	
Royal Avenue Royal Avenue	8	15		11/6	17/6	21/6		
Imperial Donegall Place	20	10		11/6	17/-	18/-	6d extra	
Queen's Victoria Street	11	7		8/6	12/-	15/-	Incl.	
Kensington, College Sq East	30	20		9/6	13/6	16/-		
Eglinton and Winton High St	14	13		9/6	13/6	16/6		
Union, Donegall Sq South	6	5	6	9/6	14/6	17/6	Incl	
ARKLE (24 miles) Laharna (L.N.S. Hotel)	20	33	32	8/6	13/6	17/-	1s. extra	
LARNE HARBOUR Olderfleet	5	5		9/6	14/6	17/6	Incl	
NEWCASTLE (31 miles) Sheve Donard	15	15	15	12/6	18/6	21/6	Incl	
DONAGHADEE (21 1/2 miles) Mount Royal				9/6	14/6	16/-		
BANGOR (12 miles) Regent Palace				8/6	12/-	15/-		
Royal	10		10	6/6	10/-	13/-		
				15/-	18/-	21/-	Incl.	
				(Minimum stay 7 days)				

Unlicensed Hotels

Hotel	Rooms Available			Tariff			
	Single	Double (1 bed)	Double (twin)	Bed and Breakfast	Dinner Bed and Breakfast	Dinner Bed Breakfast and Lunch	Hot Bath
BELFAST							
Robinson's Temperance Donegall Street	6	4	6	7/6	11/6	14/6	1/- extra
Belgravia Private Ulsterville Av (near 10 car stage)	6	6		8/6	11/6	12/6	1/- extra

* Allocation of rooms not stated but will probably have 10 free

† Allocation of rooms not stated but probably 50 free

All arrangements for the booking of rooms in hotels are in the hands of Messrs Thomas Cook and Son, Ltd Royal Avenue Belfast to whom all applications for hotel accommodation should be sent

ACCOMMODATION AND CRUISE ON S.S. "ALMANZORA"

To supplement the limited accommodation in an attractive manner arrangements have been made, with the approval of the Council of the Association, for provision of accommodation on board the s.s. *Almanzora*. During the period of the meeting the liner will be moored, in order that members may take a full part in all the social and scientific activities. Moreover, the mooring berth will be adjacent to a tram service which will take members to the city centre in ten to fifteen minutes. At the close of the meeting the liner will leave Belfast and, proceeding via the Inner and Outer Hebrides and Scapa Flow, will cruise in the Norwegian Fjords, visiting Trondhjem, Merok, Helsing, Oie, and other places of interest. The liner will return to Southampton on August 3. This cruise has been planned by Pickfords Travel Service in conjunction with the Royal Mail Lines and members of the Association who propose to attend the Belfast meeting and are interested in these arrangements are asked to make an early application to Messrs Pickfords at 205 and 206, High Holborn, W.C.1, or at any of their branches.

TRAVELLING ARRANGEMENTS AND "CONFERENCE" TICKETS

As on this occasion the journey to the place of meeting necessitates travel outside the limit of the English railways, arrangements have been made for the issue to members and those accompanying them to Belfast of a special Conference Ticket at the rate of the ordinary first or third class single fare plus one third for the return journey. This conference rate is more favourable than the special summer or monthly ticket available to all travellers by rail, and can only be obtained on presenting a voucher at the booking office of the station of departure. The vouchers can be obtained from the Financial Secretary, B.M.A. House, Tavistock Square, London, W.C.1, a separate voucher being required for each individual travelling.

Members must make their own individual arrangements for sleeping accommodation on steamers crossing to Ireland, and Messrs Pickfords help can be sought in this matter. Those who propose to travel by the Stranraer-Larne route are warned that on account of the Glasgow Fair holiday traffic little or no accommodation will be available on the steamers operating on this route. The railway company, however, has offered to provide a special steamer for the benefit of members of the Association provided an early indication can be obtained of the probable numbers travelling. To assist the railway and shipping companies concerned therefore, early communication with Messrs Pickfords is urged.

For those members who are interested in air travel inquiries are being made from the companies operating air routes to Belfast, and it is hoped to publish a further notice later.

CONVEYANCE OF MOTOR CARS

The following details regarding the conveyance of privately owned motor cars accompanying passengers to Belfast have been furnished by the Railway Clearing House

Motor cars accompanying passengers holding not less than one first-class or two third-class adult tickets per car are conveyed by passenger train between the points for which the tickets are available at the following specially reduced rates at owner's risk

Single rail journeys Minimum 50 miles 3d per mile per car

Return rail journeys Minimum 50 miles (outward journey) 4½d per mile per car on the single journey mileage provided

return passenger tickets are taken out and the motor car is booked for the double journey at the starting point

The foregoing arrangement applies in Great Britain only

Privately owned motor cars are also accepted for conveyance between British and Irish ports, and charged rate and a half for the double journey at owner's risk provided not less than two adult passengers accompany each car in both directions and that the motor cars travel by the same route on both the outward and return journeys. The motor cars are only booked through to the destination shown on the passengers' tickets and no break in the journey is allowed. Passengers must produce their tickets for the journey before the motor car will be accepted for carriage under these arrangements. Arrangements must be made beforehand in all cases

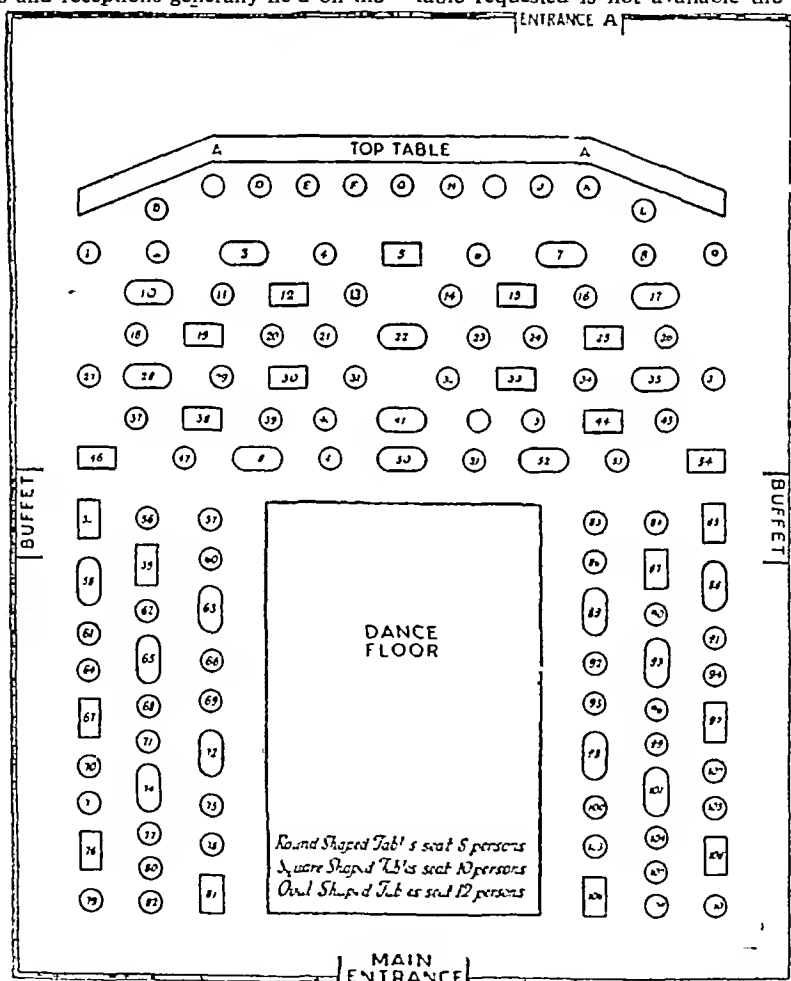
THE ANNUAL DINNER, JULY 22

AN INNOVATION

An innovation is being made in the form of the Annual B.M.A. Dinner at the Belfast Meeting on Thursday, July 22. The Local Executive feels that a purely formal dinner such as has been held on previous occasions does not make as wide an appeal to the younger members of the Association as the dances and receptions generally held on the

size of the main hall at Olympia but the very efficient sound amplifying system will ensure that speeches will be clearly heard in all parts of the room

It is hoped that members will make up their own parties and seats may be booked according to the position on the Table Plan, which is reproduced on this page. If the exact table requested is not available the nearest table of that



other evenings of the Meeting, and accordingly has decided to hold a dinner-dance instead

The Kings Hall, Balmoral which has been booked for the occasion, is capable of accommodating some 1,200 guests at tables for 8, 10, or 12 persons arranged in horse-shoe formation round a specially laid dance floor. The toast list and speeches will be limited, and it is hoped that dancing will start about 10 o'clock. The Hall is about

size will be allocated. Where a request is made for parties not large enough to fill a table seats will be allotted by the Dinner Committee. The ticket for the dinner and dance will 10s 6d., exclusive of wines and seats may be booked in advance upon receipt of payment

Applications should be made to the Dinner Secretary, B.M.A. 105th Annual Meeting, Whitla Medical Institute, College Square North, Belfast

THE ASSOCIATION OVERSEAS

Work of Dominions Committee

At the conclusion of the meeting of the Dominions Committee on March 18 one member suggested that the Council of the Association be requested to provide a large map of the world which could be unrolled in the committee room at each meeting. Certainly the members of the Committee are required to have the British Empire at their fingers' ends. During the meeting questions came up for discussion relating to medical service in several places in the West Indies—Windward Islands, St. Lucia, Trinidad—British Guiana, Nigeria and the Gold Coast, Northern Rhodesia and Kenya, Egypt and the Sudan, Hong Kong, Tonga in the Pacific, and Sarawak. It was believed to be the first time that Sarawak, which is an independent State under British protection and with a British rajah, had swung into the Committee's ken. It came forward that the service there had some disadvantageous aspects in regard to remuneration, leave and other matters and it was decided to ask for the observations of the London Office of the Sarawak Government on the complaints made.

Deputation to Colonial Office

The chairman (Dr. William Paterson) reported that a deputation from the Association had been received by representatives of the Colonial Office, when various matters which the Committee has had before it at previous meetings were discussed. These included questions affecting the Colonial Medical Service as a whole and also specific complaints from various parts of the Colonial Empire. Dr. Paterson said that the deputation was very courteously received by Sir George Tomlinson, Assistant Under-Secretary, and Sir Thomas Stanton, Chief Medical Adviser, and departmental officers were called in from time to time as different subjects were reached. In some conversation on the system of short-term appointments in the Service, which the deputation suggested might be extended to all colonies, it was pointed out on the other side that the system was foreign to the conception of the Civil Service as one which was intended to provide a life career to attract officers who desired to spend their working lives in it, and to retain the services of efficient men until the normal age of retirement.

Another point made by the deputation was that for the purposes of pensions, seniority, and salary account should be taken of any employment in a hospital immediately preceding appointment to the Service. To this the reply was made that officers are recruited for the Colonial Medical Service at a somewhat later age than for the Army and in the normal course of events applications from persons who have not held a hospital appointment are not considered. (The Committee thought that the Colonial Office might well be asked to state how many exceptions there have been to this rule in recent years.) It was also pointed out from the Government side that for technical reasons it would not be possible to reckon non-Government service towards pension, that the fact that medical officers are appointed at a somewhat later average age than officers in other branches of the Service is generally recognized by higher initial rates of salary and that the possession of special qualifications is in appropriate circumstances recognized by a higher initial salary than the normal minimum. It was stated that the various levies on salaries imposed by a number of Governments during the economic crisis had nearly all been removed. Those remaining, in Hong Kong and British Honduras would, it was hoped, not long continue. A very general restoration of travel and other allowances was also reported.

The deputation raised questions arising out of the revision of conditions of service in West Africa and sympathetic examination was promised. On the question of a change of policy in Hong Kong, whereby private practice has been disadvantaged, it was agreed that the Branch

should be informed that the matter had been the subject of conversation with the Colonial Office, and should be asked to submit representations to the Governor with the request that, if he felt unable to meet them, he should forward the correspondence, with his observations, to the Secretary of State. With regard to the Windward Islands Medical Service the deputation was informed that various reforms concerning salary scales were in process of being made and with regard to a question from Tonga it was promised that it would be considered what action could usefully be taken, though it appeared that the extent to which the Secretary of State is in a position to bring pressure to bear on the Tonga Government in these matters is limited.

Uniforms and Precedents

A report was made by Dr. J. L. Gilks, a member of the Committee, on a question which had arisen as to orders of precedence and regulations for the wearing of uniforms in certain colonies. The subject proved a very delicate one especially as regards the relative position of administrative and medical officers. Dr. Gilks said that in his view the administrative officer must always be the head of his own province or district, and that it would be wrong for him to be classed for uniform purposes below the medical officer serving possibly in his district. To grade officers for uniforms or precedence according to the salaries they drew or the length of their service would be quite impossible. This question had been raised by a communication from Zanzibar, and there Dr. Gilks said that the general table of colonial precedence showed chief commissioners, Government agents, and residents of provinces coming immediately before members of the Houses of Assembly, therefore the provincial commissioner would precede heads of departments unless the latter were members of the executive or legislative council. It did not appear whether the director of medical services was a member of any council in the Protectorate, if he was not, presumably he would be placed below the provincial commissioner.

This was evidently a thorny subject, and the Committee could only instruct that the Branch which had raised the question should be possessed of the information which Dr. Gilks had so painstakingly elicited and the view he had expressed.

From Various Quarters

A resolution from the Kenya Branch was before the Committee deprecating the method by which the retirement of a member of the East African Medical Service from a hospital appointment had been announced before any notification of it had been made to the member concerned and before he had intimated any desire to retire. It was agreed to request the Branch to say what action it would like the central office to take in the matter.

A letter from the director of the Sudan Medical Service was received explaining a wrongly worded paragraph in a pamphlet which had given rise to some misunderstanding and to which the Committee's attention had been drawn. The chairman said that he thought the Committee would take the view that the conditions of service were satisfactory.

Correspondence was reported with the Egyptian Embassy over a question of alteration of an official salary by reason of a municipal law. It was requested on behalf of the Association that to avoid future misunderstandings advertisements of vacant appointments should state clearly that official salaries were subject to such alterations. A further reply was awaited.

Inquiry had been made following a point raised at the previous meeting, of the Gold Coast Branch of the British Red Cross Society. This Branch exists to supplement and co-ordinate maternity and child welfare services and there was some suggestion of encroachment on private practice. The reply of the Branch was considered satisfactory and the hope was expressed that in any future development of

the service the possibility of any such encroachment would be borne in mind

The report of the committee appointed by the Trinidad Government to inquire into the general organization of the medical service of the colony was forwarded. It was decided to await the observations of the Trinidad and Tobago Branch. A similar report from British Guiana was accompanied by the comments of the Branch and it was agreed to send these comments as an expression of Branch opinion to the Colonial Office.

The retirement of Sir Thomas Dunhill from the membership of the Council as representing certain Australasian Branches was announced, to the great regret of the Committee, which passed a resolution of thanks to him for his long services.

Return of the Medical Secretary

The Medical Secretary was warmly welcomed on his return from India. In response, Dr Anderson mentioned the great hospitality which had been extended to him on every hand and gave an outline of the problems which he had had to consider. The Chairman of Council read a letter which had been received from Major-General D. S. Skelton, Acting Director of Medical Services in India, stating that the visit of the Medical Secretary had been of enormous value that he had created the friendliest possible atmosphere all over the country, and had done much to remove misunderstandings and misconceptions from the minds of their Indian friends. General Skelton congratulated the Council on having sent out to India an ambassador who had already brought about such important results.

PUBLIC HEALTH NOTES

Association of Public Vaccinators of England and Wales

In his presidential address at a recent meeting of the Association of Public Vaccinators, Dr James Bennett of Warrington reviewed the activities of the association since the war. In addition to such multifarious activities as advising members, assisting in the solution of difficulties arising between public vaccinators and their employers, and following and counteracting the activities of the anti-vaccinationists, the association has been intimately concerned with a number of major matters. One was the effort, ultimately successful, to secure restoration of the fee of 5s per case; the fee was reduced to 2s 6d in 1907. Another was the revision and re-editing of *The Truth about Vaccination*, a pamphlet which, as a statement of the case for vaccination, is in large demand for distribution by public vaccinators; it is also being issued by some maternity and child welfare authorities at their infant welfare centres. The changes in the employment of public vaccinators brought about as a result of the passing of the Local Government Act, 1929 by which the control of vaccinators passed from the boards of guardians to the councils of counties and county boroughs, have been closely watched by the association. Lastly, steps have been taken to combat the suggestion that compulsory vaccination should be abolished. The association points to the very small extent to which immunization against diphtheria is carried out in this country as an indication of the low level to which vaccination of infants would fall if compulsion were removed, and made representations on these lines to those organizations which at different times, were disposed to move for the repeal of legislation on this matter.

Public Health Appointments

The following changes have recently been made in the Public Health Service medical staffs

Dr S. Harvey, deputy medical officer of health for Kincardineshire to be assistant medical officer of health for Dumbartonshire

Dr G. J. Roberts, deputy county medical officer for Denbighshire to be deputy medical officer of health and deputy school medical officer for Bootle.

Dr Doris S. Williams, resident medical officer at Sheffield Municipal Hospital, to be assistant medical officer for Wallasey

Dr T. Adam is to retire next month from the appointment of medical officer of health for Stirlingshire

Dr D. H. Pennant has been elected a member of the Pembrokeshire County Council and has consequently resigned his appointment as district medical officer for the Narberth area

Correspondence

DELAY IN CHOOSING A PANEL DOCTOR

SIR,—I am the South Coast medical practitioner referred to in the *Supplement* of March 13 (p. 132) and after the pronouncement of the Insurance Acts Committee I was prepared to drop the matter in disgust having fruitlessly argued and pleaded with panel committees, insurance committees and in person with the Medical Secretariat. I am bound to admit that my Panel Committee and its representative pressed the matter with enthusiasm. It seems that the remedy I suggested having been found unsuitable the disease must be allowed to run unchecked by any other method of treatment.

The letter of Dr Alistair French in your issue of April 3 (p. 168) encourages me to reopen the subject with my Panel Committee. As he rightly points out the population of a newly built up area is not for the most part, a shifting one and there is no measure of equity, rough or ready.

The clerk to my Insurance Committee recently issued a laboured memorandum justifying a do-nothing attitude on the strength of a questionnaire sent round to a number of my recent acceptances. As I answered the questions for most of the patients myself the futility of such a procedure is obvious. To disprove my claim that in the end a patient usually called in the nearest doctor when driven by illness to choose one, this same clerk examined the prescriptions dispensed by the chemist up the hill from my house, though I could have told him that most of my people go to the chemist down the hill or into the neighbouring town. All this may help to prove that it is the doctor doing the work who knows the difficulties which may never be shown by statistics. It is a rule that the patient should choose a doctor without delay, but does anyone care a jot if that rule is obeyed? There is trouble if the doctor—for his part—does not obey his rules.

The scheme adopted by the London Insurance Committee seems a good one if only the patient will bother to remove his nice new card from the envelope in which it is sent to him! I am making quite a collection of URGENT notices removed from the unopened envelopes of delayed presentations. Now that the under 16's are soon to be included in insurance is this not a good opportunity to see that they will be trained—or forced—to obey the first rule and make the much prized free choice of doctor?—I am etc.

April 3

SOUTH COAST PRACTITIONER.

PARKING OF DOCTORS' CARS

SIR—After reading the letters you have recently published on this subject it would appear that the only remedy for doctors practising in the London district or other overcrowded areas would be to employ a chauffeur. As economic considerations must render this, in many cases, impossible perhaps Mr. Hore Belisha might be persuaded to make a grant from the Road Fund to enable doctors who otherwise could not afford a paid driver to employ one. Seriously, Sir, some settlement of the matter is urgently needed—I am, etc.

Bridlington March 28

C. J. GORDON TAYLOR.

British Medical Association

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQUARE, WC1

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Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street Dublin (Telegrams Bacillus Dublin Tel 62550 Dublin)

Diary of Central Meetings

APRIL

- 9 Fri Medical Students and Newly Qualified Practitioners Subcommittee 2.30 p.m.
- 15 Thurs Radiologists Group Committee 2.30 p.m.
- 16 Fri Public Medical Services Subcommittee 11 a.m.
- 20 Tues Joint Committee of B.M.A. and T.U.C. 11.15 a.m.
- 20 Tues Health Services Committee 2 p.m.
- 22 Thurs Insurance Acts Committee, Prescribing Subcommittee, 2.30 p.m.
- 23 Fri Journal Committee, Exchange and Free List Subcommittee 11.30 a.m.
- Joint Subcommittee re Provident Schemes and Payments to General Practitioners for Treatment 2 p.m.
- Police Surgeons Subcommittee, 4 p.m.
- 27 Tues Interim Committee re Provident Schemes 3 p.m.
- 29 Thurs Charities Committee 2.30 p.m.
- 30 Fri Organization Committee Grants Subcommittee 2.30 p.m.

Formation of Delhi Branch

With reference to the preliminary notice in the *Supplement* of January 9, 1937 (p. 24), the Council hereby gives notice to all concerned of the formation of a Delhi Branch of area coterminous with the Province of Delhi, the new Branch to come into existence as from the date of this notice

G. C. ANDERSON
Medical Secretary

April 10 1937

Formation of North-West Frontier Province Branch

With reference to the preliminary notice in the *Supplement* of January 9, 1937 (p. 24), the Council hereby gives notice to all concerned of the formation of a North-West Frontier Province Branch of area coterminous with the North West Frontier Province the new Branch to come into existence as from the date of this notice

G. C. ANDERSON
Medical Secretary

April 10 1937

Formation of Sind Branch

With reference to the preliminary notice in the *Supplement* of January 9, 1937, the Council hereby gives notice to all concerned of the formation of a Sind Branch of area coterminous with the Province of Sind the new Branch to come into existence as from the date of this notice

G. C. ANDERSON
Medical Secretary

April 10 1937

Branch and Division Meetings to be Held

- EAST YORKSHIRE BRANCH—Wednesday April 14 Discussion Allergic Diseases To be opened by Dr F. C. Ede Dr H. M. Leete and Dr E. M. Deam
- EDINBURGH BRANCH SOUTH EASTERN COUNTIES DIVISION—At Royal Hotel Galashiels Wednesday April 14 3 p.m. Remuneration of insurance practitioners etc.
- ESSEX BRANCH SOUTH ESSEX DIVISION—At Queen's Hotel Westcliff-on-Sea Tuesday April 13 8.45 p.m. Mr Hamilton Bailey Differential Diagnosis of Swellings of the Neck
- HEREFORDSHIRE BRANCH BARNEY DIVISION—At 53 Wood Street Barnet Tuesday April 13 8.30 p.m. Film B.M.A. World Tour, 1935

KENT BRANCH TUNBRIDGE WELLS DIVISION—At Kent and Sussex Hospital Tunbridge Wells Tuesday April 13 9 p.m. Dr E. A. Hamilton Pearson Child Psychology Members wives are invited

LANCASHIRE AND CHESHIRE BRANCH PRESTON DIVISION—Joint meeting with Preston Medico-Ethical Society at Preston Royal Infirmary Tuesday, April 13, 8.30 p.m. Film Fractures

LANCASHIRE AND CHESHIRE BRANCH HYDE DIVISION—At Hyde Town Hall Wednesday, April 14 8.30 p.m. Mr E. D. Telford Indications for Sympathectomy

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital, Kingsland Road E. Friday April 16 4.30 p.m. Clinical meeting X-Ray demonstration by Dr G. T. Loughborough.

METROPOLITAN COUNTIES BRANCH STRATFORD DIVISION—At King George Hospital, Ilford Friday April 16 3 p.m. Clinical meeting At Educational Offices Stratford Broadway Tuesday, April 20 9.15 p.m. Dr Henry Semon Cutaneous Allergy

NORTHERN IRELAND BRANCH BELFAST DIVISION—At Whitla Medical Institute College Square North Belfast Thursday, April 15 4.30 p.m. Dr G. C. Anderson (Medical Secretary) The B.M.A. and the Future of Medical Practice "All members of the Northern Ireland Branch are invited

NORTH OF ENGLAND BRANCH CONSETT DIVISION—At Commercial Hotel Consett Wednesday April 14, 7.15 p.m. Election of representative and deputy representative 8 p.m., Dr C. K. Ungley (Newcastle-upon-Tyne) Recent Advances in the Diagnosis and Treatment of Anaemia Preceded by supper

SOUTHERN BRANCH GUERNSEY AND ALDERNEY DIVISION—At Lukis House Grange, Friday, April 16, 8.30 p.m. B.M.A. Lecture by Mr A. Fleming

SOUTHERN BRANCH PORTSMOUTH DIVISION—At Royal Portsmouth Hospital, Thursday April 15, 3 p.m. Clinical meeting

SOUTH WESTERN BRANCH PLYMOUTH DIVISION—At Moorland Links Hotel, Wednesday, April 14 Social evening preceded by a party for children

SURREY BRANCH KINOSTON-ON-THAMES DIVISION—At Wilson Hospital, Mitcham Tuesday April 13 8.30 p.m. Wing Commander H. M. Stanley Turner R.A.F.M.S. (ret) Some of the Dangers of Pleasure Cruising

SURREY BRANCH REIGATE DIVISION—At East Surrey Hospital Redhill, Tuesday April 13 8.45 p.m. Dr H. Gardiner Hill Some Recent Advances in Dietetics and Endocrinology

SUSSEX BRANCH BRIGHTON DIVISION—At Royal Alexandra Hospital for Children, Brighton Thursday, April 15, 3.45 p.m. Clinical meeting

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH—At Worcester Royal Infirmary, Thursday, April 15 3 p.m. Clinical meeting

YORKSHIRE BRANCH SHEFFIELD DIVISION—At Grand Hotel Sheffield, Thursday, April 15 9 p.m. Cabaret Dance

POST-GRADUATE NEWS

Twenty lectures on psycho-physical adaptation representing an introductory course of psychological medicine for the general practitioner will be given on Thursdays at 3 p.m. and 4.30 p.m. from April 22 to June 24 at the Institute of Medical Psychology, Malet Place W.C. Dr H. Crichton Miller will lecture at 3 p.m. and Dr Cedric Shaw at 4.30 p.m. The fee for either series is £1 11s. 6d., and for both series £2 2s. Tickets must be obtained in advance from the educational secretary at the Institute

The next monthly clinical demonstration for medical practitioners will be given by Dr W. G. Wyllie at the Hospital for Epilepsy and Paralysis, Maida Vale W., on Thursday April 22, at 3 p.m.

Under the chairmanship of Professor H. E. Roaf Dr I. Harris will deliver a lecture on High Blood Pressure at the Liverpool and District Hospital for Diseases of the Heart, 34 Oxford Street Liverpool on Thursday April 15 at 4.30 p.m. Admission is free to members of the medical profession.

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road W.—Daily 10 a.m. to 4 p.m. Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations Mon 2.30 p.m. Dr C. W. Buckley, Arthritis Wed 12 noon Clinical and Pathological Conference (Medical) 2.30 p.m. Dr Gray Diagnosis of Malignancy 3.15 p.m. Clinical and Pathological Conference (Surgical) 4 p.m., Mr J. E. H. Roberts Surgery of the Chest 4.30 p.m. Dr W. E. Gye Experimental Cancer Research Thurs 12 noon Clinical and Pathological Conference (Obstetrical and Gynaecological) 2.30 p.m. Dr Duncan White Radiological Demonstration 3.30 p.m., Mr A. K. Henry Demonstrations on the Cadaver of Surgical Exposures 3.30 p.m. Mr Wilfred Shaw Irregular Uterine Haemorrhage Fri 2 p.m., Operative Obstetrics 3 p.m., Department of Gynaecology Pathological Demonstration

FELLOWSHIP OF MEDICINE AND POST GRADUATE MEDICAL ASSOCIATION 1, Wimpole Street, W.—*Royal Eye Hospital St George's Circus, S.E.* Afternoon Course in Ophthalmology *Plastic Surgery* Wed and Thurs Course in Plastic Surgery *Park Hospital Hither Green, S.E.* Sat and Sun, Course in Infectious Diseases

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Grays Inn Road, W.C.—*Mon to Fri*, Course in Anatomy and Physiology

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—*Thurs* 2 p.m., Clinical Lecture Dr Reginald Lightwood Interpretation of Splenic Enlargement 3 p.m., Clinico Pathological Lecture, Dr A Signy Modern Aspect of Diphtheria Out-patient Clinics, mornings 10 a.m. to 12 noon Ward Visits afternoons, 2 p.m. to 3.30 p.m.

INSTITUTE OF MEDICAL PSYCHOLOGY Malet Place W.C.—*Mon and Thurs* 5.45 p.m. Dr Emanuel Miller, Theories of Instinct

NATIONAL HOSPITAL FOR DISEASES OF THE HEART Westmoreland Street, W.—*Tues* 5.30 p.m., Dr T F Cotton Some Clinical Aspects of Myocardial Disease

ST JOHN CLINIC AND INSTITUTE OF PHYSICAL MEDICINE Ranelagh Road S.W.—*Fri* 4.30 p.m., Demonstration of Cases

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE Hammersmith, W.—*Daily* 2 p.m., Operations, Medical and Surgical Clinics *Mon* 10 a.m., Dr Post X-Ray Film Demonstration Skin Clinic 11 a.m. Surgical Wards 2 p.m., Surgical and Gynaecological Wards Eye and Gynaecological Clinics 4.15 p.m. Mr Arnold Walker Breech Presentations *Tues* 10 a.m. Medical Wards 11 a.m. Surgical Wards 2 p.m. Throat Clinic, 4.15 p.m. Mr Hamblen Thomas Rhinitis including Hay Fever *Wed* 10 a.m., Children's Ward and Clinic 11 a.m., Medical Wards 2 p.m. Eye Clinic, Gynaecological Operations, 4.15 p.m., Mr Gibb Demonstration of Eye Cases *Thurs* 10 a.m., Neurological and Gynaecological Clinics 12 noon, Fracture Clinic 2 p.m., Eye and Genito-Urinary Clinics *Fri* 10 a.m., Medical Wards, Skin Clinic 12 noon Lecture on Treatment 2 p.m., Throat Clinic *Sat* Children's and Surgical Clinics 11 a.m., Medical Wards The lectures at 4.15 p.m. are open to all medical practitioners without fee

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION—At Lock Hospital *Wed* 4.15 p.m. Dr David Watson Venereal Disease in Women

MANCHESTER ROYAL INFIRMARY—*Tues* 4.15 p.m. Dr A Ramsbottom, Infections of the Gall bladder *Fri* 4.15 p.m. Mr R L Newell Demonstration of Surgical Cases

DIARY OF SOCIETIES AND LECTURES

ROYAL COLLEGE OF SURGEONS OF ENGLAND Lincoln's Inn Fields W.C.—*Mon* 5 p.m. Hunterian Lecture by Prof Philip Wiles, Postural Deformities of the Antero-Posterior Curves of the Spine *Wed and Fri* 5 p.m., Arts and Gale Lectures by Dr John Beattie Anatomical and Physiological Relations of the Hypothalamus and Pituitary Gland

ROYAL SOCIETY OF MEDICINE

United Services Section—*Mon*, 4.30 p.m. Annual General Meeting Election of Officers and Council for 1937-8. Paper by Surgeon Commander J C Souter A Clinical Note on Fungus Infection of the Skin of the Feet

Section of Psychiatry—*Tues* 8.30 p.m. Paper by Dr C P Symonds Mental Disorder following Head Injury

Section of Physical Medicine—*Fri*, 3.30 p.m. Annual General Meeting at St John Clinic and Institute of Physical Medicine Ranelagh Road S.W. Election of Officers and Council for 1937-8 4.30 p.m. Visits and conducted tour to the different departments of the Clinic and Institute Demonstrations of apparatus and clinical cases by members of the staff

Section of Obstetrics and Gynaecology—*Fri* 8 p.m. Short Communication by Mr Everard Williams Pathological and Clinical Aspects of Infection in the Cervix Uteri and their Treatment Paper and Film by Dr Robert A Wilson (New York) Prevention of Asphyxial Death in the Newborn

Section of Radiology—*Fri* 8.30 p.m. Discussion Some of the Less Common Lesions and Special Methods of Investigation of the Alimentary Tract and the Influence of Adjacent Organs Openers Dr Courtney Gage Dr S Cochrane Shanks Dr R S Paterson, and Dr G B Bush

BRITISH INSTITUTE OF RADIOLOGY 32, Welbeck Street, W.—*Thurs* 8 p.m. Monthly general meeting

HARVEIAN SOCIETY OF LONDON 26 Portland Place W.—*Thurs* 8.30 p.m. Dr John Taylor Some Causes of Sudden Death Common and Uncommon, from the Medico-Legal Standpoint

HUNTERIAN SOCIETY—At Simpson's Restaurant Bird in Hand Court E.C., *Mon* 7.15 p.m. Annual general meeting

NORTH LONDON MEDICAL AND SURGICAL SOCIETY—At Royal Northern Hospital Holloway Road N *Fri* 9.15 p.m. Clinical evening

PADDINGTON MEDICAL SOCIETY—At Great Western Royal Hotel Paddington W., *Tues* 9 p.m. Dr T C Hunt The Abdominal Quartette (Colon, Appendix, Stomach and Gall bladder)

ROYAL INSTITUTION 21 Albemarle Street W.—*Fri* 9 p.m. Mr T Macara Science and the Conservation of Food

SOUTH-WEST LONDON MEDICAL SOCIETY—At Bolingbroke Hospital Wandsworth Common S.W. *Wed* 9 p.m. Mr Claude Mullins K.C. Marriage the Doctor and the Police Court

VACANCIES

ASHFORD GROSVENOR SANATORIUM—R.H.P. (male) Salary £100 p.a.

AYLESBURY ROYAL BUCKINGHAMSHIRE HOSPITAL—S-Cond R.M.O. (male) Salary £150 p.a.

BAGHDAD ROYAL COLLEGE OF MEDICINE—(1) Professor of Pathology (2) Professor of Bacteriology Salaries £150 per month each

BANGOR CAERNARVONSHIRE AND ANGLESEY INFIRMARY—(1) Senior H.S. (2) J.H.S. Males Salaries £150 p.a. and £100 p.a. respectively

BARNET VICTORIA COTTAGE HOSPITAL—(1) Children's P. (2) S. (3) Gynecologist

BARNSTAPLE NORTH DEVON INFIRMARY—R.M.O. Salary £150 p.a.

BATH ROYAL UNITED HOSPITAL—H.S. (male unmarried) for the Ear, Nose, and Throat Department Salary £150 p.a.

BEDFORD COUNTY HOSPITAL—(1) First H.S. (2) Second H.S. Males unmarried Salaries £155 p.a. and £150 p.a. respectively

BIRMINGHAM CITY—(1) Whole time J.M.O. (male) to Dudley Road Hospital Salary £200 p.a. (2) A.M.O. (male) for Colleshill Hall

BLACKPOOL VICTORIA HOSPITAL—H.S. (male) Salary £200 p.a.

BOURNEMOUTH ROYAL NATIONAL SANATORIUM—(1) Medical Superintendent (2) R.A.M.O. Salaries £800-£25 £850 p.a. and £200 p.a. respectively

BRADFORD ROYAL EYE AND EAR HOSPITAL—H.S. (male) Salary £180 p.a.

BRADFORD-GRASSINGTON CITY SANATORIUM—A.M.O. Salary £175 p.a.

BRIDGWATER GENERAL HOSPITAL—H.S. Salary £130 p.a.

BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN—H.S. (male) Salary £120 p.a.

BURTON-ON-TRENT GENERAL INFIRMARY—H.S. (male) Salary £150 p.a.

BURY INFIRMARY—Third H.S. (male) Salary £150 p.a.

CARDIFF KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION—H.P. (female) for Adelina Patti Hospital, Craig y nos Swansea Valley Salary £150 p.a.

CARDIFF ROYAL INFIRMARY—H.S. for the Ophthalmic Department Salary £80 p.a.

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL—H.S. (male) to the Ophthalmic and Ear, Nose and Throat Department Salary £150 p.a.

CHICHESTER ROYAL WEST SUSSEX HOSPITAL—J.H.S. Salary £125 p.a.

DARLINGTON MEMORIAL HOSPITAL—H.S. (male) Salary £150 p.a.

DERBY COUNTY BOROUGH—(1) A.M.O. Salary £500-£25 £700 p.a. (2) A.R.M.O. (male) for Derby City Hospital Salary £200 p.a.

DUDLEY GUEST HOSPITAL—Second H.S. (male) Salary £120 p.a.

DUNDEE CORPORATION—Medical Superintendent to Dundee Mental Hospital Ltd Salary £850-£25-£1000 p.a.

EAST HAM AND SOUTHEAST-ON-SEA COUNTY BOROUGH—Assistant Resident P. to Runwell Hospital Salary £350-£25 £450 p.a.

EASTBOURNE PRINCESS ALICE HOSPITAL—R.H.S. (male) Salary £150 p.a.

ESSEX COUNTY COUNCIL AND THURROCK URBAN DISTRICT COUNCIL—Assistant County M.O. and Assistant M.O.H. (female) Salary £500-£25 £700 p.a.

EXETER ROYAL DEVON AND EXETER HOSPITAL—H.S. (male) to the Ear, Nose and Throat Department Salary £150 p.a.

FINCHLEY MEMORIAL HOSPITAL Granville Road N—R.M.O. Salary £450 p.a.

FRODSHAM LIVERPOOL SANATORIUM Delamere Forest—Senior Assistant (male unmarried) to the Medical Superintendent Salary £350 p.a.

GLAMORGAN COUNTY COUNCIL—A.M.O. (male) Salary £550-£25 £750 p.a.

GLASGOW EYE INFIRMARY—R.H.S. Salary £150 p.a.

GREAT BARROW BARROWMORE TUBERCULOSIS SANATORIUM AND SETTLEMENT—H.P. (male) Salary £150 p.a.

GRIMSBY AND DISTRICT HOSPITAL—J.H.S. (male) Salary £150 p.a.

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Hiverstock Hill N.W.—H.S. (male unmarried) Salary £100 p.a.

HARROGATE ROYAL BATH HOSPITAL—R.M.O. (male) Salary £156 p.a.

HARTLEPOOL HARTLEPOOLS HOSPITAL—J.H.S. (male) Salary £150 p.a.

HERTFORD COUNTY HOSPITAL—Senior H.S. (male) Salary £200 p.a.

HOSPITAL FOR DISEASES OF THE SKIN Blackfriars S.E.—(1) Pathologist (2) Clinical Assistants

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—Half time Out Patient Medical Registrar (male) Salary £175 p.a.

HOVE GENERAL HOSPITAL—J.R.M.O. (male) Salary £120 p.a.

HOVE LADY CHICHESTER HOSPITAL FOR FUNCTIONAL NERVOUS DISEASES—(1) Senior H.P. (female) Salary £100 p.a. (2) J.H.P. Salary £50 p.a.

HULL ROYAL INFIRMARY—Second H.P. (male) Salary £150 p.a.
 ILFORD BOROUGH—R.M.O. (female) for the Maternity Home
 Salary £350-£25-£450 p.a.
 INDIA ZENANA BIBLE AND MEDICAL MISSION—Women Doctors
 KETTERING AND DISTRICT GENERAL HOSPITAL—(1) R.M.O. and (2)
 Second R.M.O. (male) Salaries £175 p.a. and £125 p.a.
 respectively
 KINGSTON-ON-THAMES SURREY COUNTY COUNCIL—J.A.M.O.s
 (males unmarried) for the Surrey County Mental Hospital
 Service Salaries £350-£25-£450 p.a. each
 LANCASHIRE COUNTY COUNCIL—Consulting Obstetrician (male)
 Salary £1000 p.a.
 LANCASTER ROYAL LANCASTER INFIRMARY—Two J.H.S. (males un-
 married) Salaries £130 p.a. each
 LEIGH INFIRMARY—J.R.H.S. (male unmarried) Salary £150 p.a.
 LINCOLN COUNTY COUNCIL—J.H.S. (male unmarried) Salary £150
 £200 p.a.
 LIVERPOOL BOOTLE GENERAL HOSPITAL—H.S. to the Special De-
 partments Salary £150 p.a.
 LONDON COUNTY COUNCIL—(1) Assistant Pathologist for the White
 chapel Clinic for the treatment of venereal diseases Turner
 Street, E. Salary £500 p.a. (2) A.M.O.s (Grade I) to (a) Pad-
 dington Hospital W., (b) St Andrew's Hospital, E., (c) St
 Clement's Hospital, E., (d) St George in the East Hospital E.
 Salaries £350-£25-£425 p.a. each (3) A.M.O.s (Grade II) to
 (e) Lewisham Hospital S.E., (f) Paddington Hospital W. (g)
 St George in the East Hospital E. Salaries £250 p.a. each
 Unmarried (a), (b), (c), (d), (f) and (g) are male appointments
 only
 LONDON JEWISH HOSPITAL Stepney Green, E.—Assistant Anaes-
 thetist Honorarium £115 6d per attendance
 LONDON LOCK HOSPITAL Harrow Road W.—R.M.O. to the Male
 Departments Salary £175 p.a.
 MACCLESFIELD GENERAL INFIRMARY—Second H.S. Salary £150
 p.a.
 MANCHESTER ANCOATS HOSPITAL—Full time Radiological Officer
 (non resident) Salary £300 p.a.
 MANCHESTER CITY—(1) Deputy Medical Superintendent for Booth
 Hall Hospital for Children (2) R.J.A.M.O. (male Grade II)
 for Baguley Sanatorium Salaries £550 p.a. and £250 p.a.
 respectively
 MANOR HOUSE HOSPITAL Golders Green N.W.—Assistant Visiting
 P. to Out patients Remuneration £115 6d per session
 METROPOLITAN HOSPITAL Kingsland Road E.—(1) Senior H.P.
 (2) Senior H.S. (3) J.H.P. (4) J.H.S. (5) C.O. and Resident
 Anaesthetist Males Salaries £100 p.a. each
 MIDDLESBROUGH NORTH ORMESBY HOSPITAL—H.P. (male un-
 married) Salary £120 p.a.
 MIDDLESEX COUNTY COUNCIL—Assistant Pathologist for Redhill
 County Hospital Edgware Salary £650-£25-£800 p.a.
 MINISTRY OF HEALTH Whitehall, S.W.—Temporary Serologist
 Salary £850 p.a.
 MORLEY BOROUGH—Assistant M.O.H. and Assistant School M.O.
 Salary £500-£25-£700 p.a.
 NATIONAL DENTAL HOSPITAL University College Hospital Gower
 Street W.C.—Hon. Assistant Anaesthetist
 NATIONAL TEMPERANCE HOSPITAL Hampstead Road N.W.—H.P.
 (male) Salary £100 p.a.
 NEWARK GENERAL HOSPITAL—R.H.S. (male unmarried) Salary
 £175 p.a.
 NEWCASTLE UPON TYNE ROYAL VICTORIA INFIRMARY—Hon. S.
 NORTHUMBRIA COUNTY COUNCIL—A.M.O. (unmarried) at
 Wooley Sanatorium, near Hexham Salary £350-£25-£450 p.a.
 NORTHWOOD MOUNT VERNON HOSPITAL—H.S. Salary £150 p.a.
 NORWICH CITY—R.M.O. to the Isolation Hospital Assistant
 M.O.H., and Assistant School M.O. Salary £450-£50 p.a.
 NORWICH NORFOLK AND NORWICH HOSPITAL—H.S. (male un-
 married) to the Special Departments Salary £160 p.a.
 NOTTINGHAMSHIRE COUNTY COUNCIL—Assistant School M.O. (male)
 Salary £500-£25-£700 p.a.
 NOTTINGHAM GENERAL HOSPITAL—(1) H.S. for Ear, Nose, and
 Throat Department (2) R.C.O. (male) Salaries £150 p.a. each
 PLYMOUTH PRINCE OF WALES'S HOSPITAL Devonport—J.H.S.
 Salary £120 p.a.
 POOLE CORNELIA AND EAST DORSET HOSPITAL—(1) R.S.O. (2)
 H.P. Males unmarried Salaries £200 p.a. and £150 p.a.
 respectively
 PORTSMOUTH ROYAL PORTSMOUTH HOSPITAL—H.S. (male) Salary
 £130 p.a.
 PORTSMOUTH AND SOUTHERN COUNTIES EYE AND EAR HOSPITAL—
 H.S. Salary £150 p.a.
 PRINCESS BEATRICE HOSPITAL Earl's Court S.W.—Medical Regis-
 trar Honorarium £52 10s
 PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin
 Avenue W.—Hon. Radiologist
 QUEEN'S HOSPITAL FOR CHILDREN Hackney Road E.—(1) Clinical
 Assistant for Medical Out patient Clinics Honorarium 7s per
 attendance (2) H.S. Salary £100 p.a.
 READING ROYAL BERKSHIRE HOSPITAL—(1) H.S. (2) C.O. (3)
 H.S. to the Special Departments Males Salaries £150 p.a.
 each
 ROCHESTER ST BARTHOLOMEW'S HOSPITAL—H.S. (mal un-
 married) Salary £150 p.a.
 ROITHURMAN HOSPITAL—Hon. Anaesthetist
 ROYAL CHEST HOSPITAL City Road E.C.—Medical Registrar
 Honorarium £50 p.a.
 ROYAL FREE HOSPITAL Gray's Inn Road W.C.—As is ant P. in the
 Department of Physical Medicine

ROYAL FREE HOSPITAL AND LONDON (R.F.H.) SCHOOL OF MEDICINE
 FOR WOMEN Hunter Street W.C.—Full time Resident Assistant
 in the Pathology Unit Salary £150 p.a.
 ROYAL WATERLOO HOSPITAL FOR WOMEN AND CHILDREN Waterloo
 Road, S.E.—(1) R.C.O. (2) H.P. Males Salaries £150 p.a. and
 £100 p.a. respectively
 RUGBY HOSPITAL OF ST CROSS—R.M.O. (male) Salary £100-
 £25-£150 p.a.
 SALISBURY GENERAL INFIRMARY—R.M.O. (male) Salary £250
 p.a.
 SHEFFIELD CHILDREN'S HOSPITAL—H.S. (male unmarried) Salary
 £100 p.a.
 SHEFFIELD JESSOP HOSPITAL FOR WOMEN—H.S. (male unmarried)
 Salary £100 p.a.
 SHEFFIELD ROYAL HOSPITAL—Whole time Clinical Assistant to the
 Ophthalmic Department (non resident) Salary £300 p.a.
 SHEFFIELD UNIVERSITY—Assistant Bacteriologist and Demonstrator
 Salary £500 p.a.
 SHREWSBURY ROYAL SALOP INFIRMARY—R.H.P. (male unmarried)
 Salary £160 p.a.
 STOCKTON-ON-TEES STOCKTON AND THORNABY HOSPITAL—H.P.
 (male, unmarried) Salary £150 p.a.
 SUNDERLAND ROYAL INFIRMARY—(1) C.O. Salary £150 p.a. (?)
 Two H.S. (males) Salaries £120 p.a. each
 SWANLEY HOSPITAL CONVALESCENT HOMES Parkwood—R.M.O.
 (female) Salary £200 p.a.
 SWANSEA GENERAL AND EYE HOSPITAL—C.O. (male unmarried)
 Salary £150 p.a.
 SWINDON BOROUGH—Deputy M.O.H. and Assistant School M.O.
 (male) Salary £600-£25-£700 p.a.
 TAUNTON AND SOMERSET HOSPITAL—H.S. Salary £100 p.a.
 TORQUAY TORBAY HOSPITAL—(1) H.P. (2) H.S. Salaries £175
 p.a. each
 TYNEMOUTH VICTORIA JUBILEE INFIRMARY—H.S. (male) Salary
 £150 p.a.
 VICTORIA HOSPITAL FOR CHILDREN Tite Street S.W.—C.O. Salary
 £200 p.a.
 WALLASEY VICTORIA CENTRAL HOSPITAL—J.H.S. (male) Salary
 £150 p.a.
 WESTERN DISPENSARY Rochester Row S.W.—Vacancy on Attending
 Medical Staff
 WESTERN OPHTHALMIC HOSPITAL Marylebone Road, N.W.—
 J.R.H.S. Salary £100 p.a.
 WINCHESTER ROYAL HAMPSHIRE COUNTY HOSPITAL—H.S. (male)
 Salary £125 p.a.
 WOLVERHAMPTON COUNTY BOROUGH—R.A.M.O. (male unmarried)
 at New Cross Hospital Salary £200 p.a.
 WOLVERHAMPTON ROYAL HOSPITAL—H.S.s (unmarried) Salaries
 £100 p.a. each
 WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill
 S.E.—(1) H.P. (2) H.S. Males Salaries £100 p.a. each

CERTIFYING FACTORY SURGEONS—The following vacant appoint-
 ments are announced Newport (Monmouthshire) Edgware
 (Middlesex) Paisley (Renfrewshire) Kilbride (Renfrewshire)
 St Austell (Cornwall) Applications to the Chief Inspector of
 Factories Home Office Whitehall S.W.1, by April 20

MEDICAL REFEREE UNDER THE WORKMEN'S COMPENSATION ACT
 1925 for the Dewsbury Leeds Otley and Wakefield County
 Court Districts (Circuit No. 14) Applications to the Private
 Secretary Home Office Whitehall S.W.1, by April 26

Notifications of offices vacant in universities medical colleges and
 of vacant resident and other appointments at hospitals will be
 found at pages 53 54 55 56 57 58 59 60 61 64 and 65 of
 our advertisement columns and advertisements as to partnerships
 assistantships and locumtenencies at pages 62 and 63

To ensure notice in this column advertisements must be received
 not later than, the first post on Tuesday mornings

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and
 Deaths is 9s which sum should be forwarded with the notice
 not later than the first post on Tuesday morning in order to
 ensure insertion in the current issue

BIRTH

JAMES—On March 25 to Dorothy wife of T G Hild James
 F.R.C.S. a son

MARRIAGE

BATT—MURPHY—On April 7 1937 at the Methodist Church
 Cambridge Road King's Heath by the Rev. H. Percival Harris
 assisted by the Rev. G. H. Bainbridge Alan Michael Ferens
 M.R.C.S. L.R.C.P., D.C.O.G., younger son of Mr and Mrs
 G F Baily of Grove Avenue Moseley to Kathleen Joan only
 daughter of Mr and Mrs A. H. Murphy of Greenhill Road
 Moseley Birmingham Home address—103 Main Street
 Thurston Leicester

the surrounding hills is obtained and the extent of the city can be appreciated.

The foundation stone of the Parliamentary Buildings was laid by His Grace the Duke of Abercorn, K.P., the first Governor of Northern Ireland, in 1928 and they were formally opened by H.R.H. the Duke of Windsor (then Prince of Wales) in 1932. The architectural style is Greek Classical, Portland stone being used for the facing of the exterior and unpolished Slieve Donard granite for the basic plinth. The interior is constructed on the principle of the Houses of Parliament at Westminster, two chambers being provided—a house for the Senate another for the Commons. The interior decorations are carried out in modern style and for the panelling English walnut is used. The electrolier suspended from the ceiling in the main hall was the personal gift of His late Majesty King George V. The Government of Northern Ireland will hold an afternoon reception at Stormont in honour of the visiting members of the Association so that visitors will have an opportunity of inspecting the buildings.

The King's Hall, Balmoral

The Royal Ulster Agricultural Society had its origin in 1826, and has been closely bound up with the agricultural life and development of Ulster. The annual show held in May attracts a larger attendance than any agricultural exhibition in Great Britain or Ireland. The society has made remarkable progress, and in 1933 showed its enterprise in erecting a magnificent exhibition hall the King's Hall, opened in 1934 by H.R.H. the Duke of Gloucester. The dimensions of the building are surprising and it is only when one is told that the floor space is equal in size to that of the National Hall at Olympia that one realizes the truth of the statement. It is proposed to hold the Annual Dinner and Dance in this hall a special dance floor the size of a large ballroom being laid in the centre, with tables to accommodate 1100 diners round the floor. The most modern system of sound amplification is available for what promises to be a unique and memorable occasion.

Stranmillis Training College and Schools

A record of the buildings associated with the establishment of the Government of Northern Ireland would be incomplete without reference to the changes instituted by the Education Act of 1923. Ireland as a whole was at one time notorious for the inadequate provision of schools both primary and secondary, and for their poor equipment. One of the earliest undertakings of the new Government after its establishment in 1920 was to remove this reproach, for which there never had been opportunity (nor an agreed policy) at Westminster. The reorganization of primary education involved the building of a Training College for teachers at Stranmillis, and of a series of new public elementary schools throughout the province. The Training College, which is in the Georgian style is fully equipped to provide a staff of trained teachers under the supervision of the Ministry of Education. Regional education committees have been set up, and are given a certain degree of local control of the schools in their area, they are responsible for the provision and maintenance of schools. Throughout the countryside and in the cities the visitor cannot but be impressed by the modern buildings which now serve as educational centres. They are all of much the same general architectural style, and are models of their kind. The provision of the Training College and of these schools has cost upwards of two million pounds and a further million is required to complete the scheme.

The Cave Hill, Hazelwood, and Bellevue

Belfast is fortunate in that as the city extended all the green areas have not been encroached upon by the builder. The result is that many open spaces and parks have been preserved for the amenities of the citizens within easy reach of the city centre. The Royal Botanic

Gardens, just over a mile from Castle Junction and close to Queen's University are notable for their tropical house. Ormeau Park is one of the largest of the parks covering 175 acres and stretching along the banks of the River Lagan.

The outstanding feature of Belfast's open spaces, however is the development of the Cave Hill area. From many of the city streets the surrounding Antrim Mountains are visible, Divis, the Cave Hill and the Black Mountain forming a welcome background. Best known to the citizens is the Cave Hill, from which a magnificent view of Belfast Lough can be obtained. The tramcar on the Glengormley route travels along the gradual ascent of the Antrim Road, on the left being the rugged mass of the Cave Hill and on the right the well-wooded country slopes down to the sea 300 feet below. Sheltering under the Cave Hill are the estates of Belfast Castle, Hazelwood and Bellevue. The former was the residence of the Earl of Shaftesbury, who has recently presented it to the City Corporation together with 200 acres of demesne. Close by is Hazelwood which is connected to the pleasure grounds of Bellevue by a miniature railway. The natural appeal of Hazelwood has been largely retained and its beauties have not been unduly commercialized. The Floral Hall is used for concerts and dancing and from its refreshment lounge on the first floor one of the most spectacular views of sea and country is obtained. On a fine bright day the charm of Nature lies unfolded before the gaze the pleasing view of sea the distant hills of Down and the nearer view of the rugged mountains of Antrim are presented in a vivid panorama. Bellevue is an amusement park and lacks the quiet appeal of Hazelwood but the Zoological Gardens are well worth a visit as they contain an interesting collection of animals accommodated in accordance with the most modern practice so that they enjoy a considerable degree of freedom in their pseudo natural surroundings.

Other Buildings

The Custom House, from the famous steps of which noted street orators harangued their audiences in the best traditions of Hyde Park, the Belfast Harbour Office the scene of many brilliant receptions, the offices of the Belfast Water Commissioners in Royal Avenue, and the newly constructed Telephone House are but a few among many other buildings which add to the dignity and importance of the city. The huge electricity works at the harbour entrance, the mammoth silo for storing grain the large flour mills, and the magnificent 400 acre aerodrome at which the largest marine and land aircraft can be moored or land are all indications of the up to date outlook of a modern city. Perhaps the ardent motorist may be interested to visit a veterinary establishment in May Street, and to stand upon the very spot and amid the surroundings where J. B. Dunlop conceived the idea of the pneumatic tyre. Here he can picture to himself the scene as the familiar bearded gentleman experienced the thrill of his experiments which have revolutionized transport throughout the world. A simple plaque erected in 1930 records the facts.

JOHN BOYD DUNLOP

Born 5th February 1840 Died 23rd October 1921

MEMBER OF THE ROYAL COLLEGE OF VETERINARY SURGEONS PRACTISING IN THIS CITY INVENTOR AND PATENTEE OF THE PNEUMATIC TYRE IN 1888 THE PURCHASE OF THIS INVENTION AND THE SUBSEQUENT DEVELOPMENT BY THE DUNLOP RUBBER CO. LTD. INAUGURATED ONE OF THE LARGEST INDUSTRIES IN THE WORLD

[The four photographs reproduced are by W. and G. Baird Ltd., Belfast.]

According to a report recently received by the Women's Zionist Organization of America, the mortality among Jewish infants up to 1 year of age in Palestine was reduced in 1935 to nearly half that recorded in 1923.

WATER SUPPLIES AND RIVER POLLUTION

In the annual report of the Water Pollution Research Board issued by the Department of Scientific and Industrial Research (H.M. Stationery Office 1s) it is emphasized that unless satisfactory methods of treatment and disposal of sewage and industrial effluents are more widely adopted there will be considerable difficulty in providing the large volumes of water of good quality necessary for domestic agricultural and industrial purposes.

On the one hand the demand for water of the highest chemical and bacteriological quality is increasing. This increase is due partly to improved conditions of housing with more general provision of public water supplies, baths, modern sanitary appliances and hot water and central heating systems. It is also due partly to the development of modern factories in which large quantities of clean water are used in the manufacture and preparation of beverages, foods and other products under more hygienic conditions. On the other hand recent improvement in the trade of some of the older industries, the introduction of new processes and industries and the development towards centralization in certain industries, particularly those dealing with agricultural products, have increased the quantities of polluting effluents discharged into rivers in many parts of the country. Difficulties which could have been avoided have arisen here and there because in choosing sites and planning factories adequate consideration was not given to the quantity and quality of the water required for the processes nor to the problems of disposal of the waste waters.

The investigations in progress under the Board deal with certain aspects of water supply with methods of treatment and disposal of sewage and trade waste waters, and with problems of river pollution.

Water-softening Materials

Experiments have been continued on the preparation and properties of materials suitable for softening water by the base-exchange process. This process is the basis of the water softeners in use in many households; it is also employed on a large scale by several water supply undertakings. Base-exchange materials on the market include treated minerals and synthetic zeolites. Though some of the synthetic products are made in this country the minerals are all imported. The investigation has shown that satisfactory water softening materials can be prepared from certain British clays and the material prepared from British fuller's earth is in fact superior to the imported treated clays.

Earlier work under the Board had led to the discovery that synthetic resins prepared from phenolic substances and tannins possess marked base-exchange properties and can soften comparatively large quantities of hard water. Unlike synthetic zeolites and treated clays now in commercial use, many of these resins are not detrimentally affected by solutions of acids and alkalis. It had also been discovered that resins possessing acid-exchange properties can be prepared from certain aromatic bases. By treating natural waters first with a base-exchange resin and then with an acid-exchange resin the salts in solution can be wholly removed. These important discoveries have opened a new field of investigation and experiments on the properties of many examples of the resins have been continued.

Lead in Drinking water

The method previously devised as a result of the Board's work for determining the true average concentration of lead in the drinking water withdrawn from a household service over a period of several weeks has been improved. In its improved form it has been tried on household services in several towns. According to this method the water passes through a meter and then through a filter containing magnetic iron and chalk which takes up the whole of the lead from the water. The quantity of lead taken up by the filter can readily be determined by analysis.

Milk Factory Effluents

An outstanding advance has been made in the Board's investigation of methods of purification of waste waters from dairies and milk product factories. Disposal of waste waters from the milk industry without causing serious pollution of rivers and streams or difficulties at sewage disposal works is a problem of great urgency at many dairies and factories. The importance of finding practicable methods of solving the problem is appreciated by the industry. Through the Milk Marketing Boards the industry is co-operating in the work. The experiments already carried out have proved that it is practicable to purify milk washings such as those from milk collecting and distributing depots, creameries and condensed milk factories by the activated sludge process or by biological oxidation in percolating filters operated under certain conditions. Several factories have already installed or are installing purification plants designed on the basis of the information obtained in the investigation. In addition to showing how the waste waters can be purified the investigation has drawn attention to unnecessary losses of milk, cream, buttermilk, skim milk and whey in the wastes.

The report includes a summary of the principal results obtained during the past few years in an investigation of the biology and biochemistry of the activated sludge process of purification of sewage. It also includes the results of recent experiments on physical and chemical aspects of sewage purification.

Nova et Vetera

ANNALS OF MEDICAL HISTORY

The first instalment of the *Annals of Medical History's* second year under the arrangement with Messrs Harper and Brothers contains continuations of two important articles—namely, the fourth part of Dr Joseph Walsh's account of Galen's writings and the influences inspiring them and the second part of 'The Doctor on the Stage: Medicine and Medical Men in Seventeenth Century English Drama'. In the latter article Dr H. Silvette gives many quotations from the dramatists and describes how in *Vulgar Errors* Sir Thomas Browne treated the subject of unicorn's horn with characteristic credulous skepticism. Dr F. Stenn contributes an extremely interesting account of the pioneer history of milk sickness, also called the puking complaint and the trembles, which a century or more ago proved fatal to nearly a quarter of the pioneers and early settlers in North America as well as to large numbers of their cattle. It was shown in 1838 to be due to drinking the milk of cows fed on *Eupatorium agetaroides* or white snake root, the active principle of which tremetol was isolated ninety years later by Couch; this is described as essentially a discovery of a discovery, a truth that is encountered again and again in the metamorphosis of disease.

Among the shorter articles Dr Cornwall deduces from a study of Homer and Aristophanes what the ancient Greeks ate. Dr J. A. Ross writes on the cholera epidemic of 1832 in New York, with copious extracts from Martin Payne's *Letters on the Cholera Asphyxia* as it appeared in the City of New York (1834) and Dr Lyle refers to the famous Daniel Drake as the first medical student of Cincinnati. The portraits of Sir James Paget and Sir Hermann Weber who are mentioned in an article on medical eponyms decorate the cover and the frontispiece. An editorial deals with the war journal of an army surgeon in 1776 and a full review is given of Harvey Cushing's *From a Surgeon's Journal 1915-1918*.

Annals of Medical History, New Series, vol. 9, No. 1, January 1937. Edited by Francis R. Packard, M.D., New York: Paul B. Hoeber, Inc., Medical Book Department of Harper and Brothers, London: Baillière Tindall and Cox. (Pp. 139.) Illustrated. Volume of six numbers £2 10s. Single numbers 10s. 6d.)

THE DIET OF THE PEOPLE

FIRST REPORT OF ADVISORY COMMITTEE ON NUTRITION

Is there sufficient food in this country produced or imported to ensure for everyone a diet in conformity with the principles of modern knowledge?

Are the diets of different sections of the population adequate in every respect in the light of recent advances in the knowledge of nutrition?

Is the state of nutrition (taking the term only in relation to food) of every section as good as it could be made by the application of modern knowledge?

These are the questions to which the Advisory Committee on Nutrition set up by the Government in 1935 addresses itself in its first report.¹ Although the committee, under the chairmanship of Lord Luke, has held forty meetings, it is far from completing its task. Provision is made in the terms of reference for its continuance after 1938, and the present report is little more than an attempt to get the problem into focus.

The issue which the committee has to try is a matter partly of fact and partly of opinion—of fact as to what foods and what amounts of each are consumed and how the total is distributed, and of opinion as to the changes desirable in view of the findings of recent nutritional science. The stimulus to such inquiry comes not from any revelation of widespread malnutrition but on the one hand from the new aspect of the situation which has been opened up by research on food values, and on the other from the revolutionary advances which have been made in production, transport, storage and distribution of foodstuffs. This is believed to be the first occasion in history that a comprehensive survey statistical and physiological, of the diet of a whole nation has been set on foot by any Government.

The Fallacy of Aggregates

This preliminary report naturally begins with some calculations based on national totals of production and consumption. The fundamental unit however, is not the nation but the family. It was the family which was taken in the BMA Committee Report on Nutrition and the future work of the Advisory Committee will be based largely on family budgets and dietary surveys of families. The report does not overstate the case when it declares that it is by no means easy to say what is the total quantity of each food consumed by the population of the United Kingdom. The total quantities of food produced imported and distributed may be worked out and found to be largely in excess of minimum requirements and yet for anything such figures show a large part of the nation might be living under famine conditions.

We are told in this report that the national food supply on the average of the years 1934 and 1935 contained many thousand million calories more than the estimated requirements for the population, it is therefore a reasonable deduction that there is no lack of energy-giving foods in the national supply but that is far from meaning that the entire population is on a proper calorie basis. Similarly, the total protein supplies of animal and vegetable food are estimated at some 300,000 metric tons in excess of the requirements, nevertheless the committee thinks it probable that there is some shortage of this constituent—as also of fat—in the diets of the poorest.

Ministry of Health, Advisory Committee on Nutrition. First Report. London: H.M. Stationery Office (1s net).

A table showing the foodstuffs available for consumption in the United Kingdom, again based on the average of the years 1934 and 1935, is given in the report. We extract the principal items.

	Total 000 Tons	Per Cent Imported	Per Cent Home Produced
Flour	4 427	87	13
Meat (including bacon)	3 062	51	49
Sea fish	953	12	88
Liquid milk (million gallons)	910	—	100
Fruit	2 432	77	23
Potatoes	4 629	3	97
Other vegetables	2 425	25	75
Sugar	1 958	73	27

Fresh milk and potatoes are the only foods produced almost entirely in this country. In terms of energy value or calorie equivalent home production represents about 40 per cent of total consumption, but reckoned in terms of retail value it is estimated that home-produced food is nearly half the total supply.

Individual Consumption

The committee has felt it was no part of its task to show how the changes which it thinks desirable can be brought about by economic or political action. Nevertheless economic considerations dominate the picture. The report is issued at a time of rising bread prices with bread now dearer than at any time since 1925 and it is on bread and flour that the poorer families—those who perhaps are not obtaining the full amount of calories they require—lay out one fifth of their total expenditure on food. The consumption per head of the more expensive foodstuffs, which are those specially important for health—namely, butter, fresh milk, meat, fresh eggs, fruit, and vegetables (other than potatoes)—rises progressively with income, that of the cheaper staple foods such as flour and potatoes, remains nearly constant while the consumption of margarine and condensed milk decreases as income rises.

In addition to spending capacity the choice of food is influenced by questions of age, occupation, habit, locality and not least by personal preference and the amounts consumed are below the amounts provided to an unknown extent owing to wastage in distribution and domestic preparation. Some figures for individual consumption are given, however, which may be useful not for their absolute value but because they can be compared with earlier determinations and thus show tendencies in food selection.

Consumption per Head per Week in United Kingdom	1909-13	1924-28	1934-5
	lb	lb	lb
Cereals including wheat and flour	4.45	4.11	4.04
Meat including poultry etc	2.58	2.56	2.81
Fish	0.79	0.80	0.87
	pts	pts	pts
Milk and cream	3.46	3.35	3.26
	lb	lb	lb
Fruit	1.19	1.75	2.23
Potatoes	4.68	4.43	4.25
Other vegetables	1.38	1.81	2.22
Sugar	1.52	1.60	1.79

The figures for the two earlier periods are the estimates of Sir Alfred Flux, formerly assistant secretary of the statistics department of the Board of Trade. In the first period the Irish Free State was included in the United Kingdom and although of course the necessary correction has been made for the difference in total population, it has not been possible to estimate the effect on consumption habits of the transference of the Irish Free State, a predominantly rural area, from the rest of the country.

The largest proportionate increases since the war have been in condensed milk the consumption of which has increased fourfold—fruit, which has increased by 87 per cent, butter which has increased by 63 per cent and eggs in shell which were consumed to the number of not quite two per head per week before the war, and are now consumed to the number of not quite three per head

Nutritional Needs

The view is taken by the committee that the diet of the people is now more in conformity with physiological principles than it was before the war, one of the reasons for this advance being the educational work on nutrition carried out in health clinics and schools but much remains to be achieved before the general health and physique of the population reaches optimum level. The committee finds itself in general agreement with the Technical Commission appointed by the Health Committee of the League of Nations to define nutritional needs. Three members of that Commission are also members of the Advisory Committee—namely Professor Mellanby its chairman Professor Cathcart, and Sir John Orr. But the Advisory Committee makes certain reservations. It considers that the allowance which the League Commission makes of two grammes of protein per day per kilogramme of body weight for the nursing mother is on the high side and that one and a half grammes would be a more suitable allowance. It also deprecates the irradiation of milk which the Commission appears to recommend or at least not to condemn.

The committee endorses the League Commission's suggestion with regard to the importance of sea fish. For an island people our sea fish consumption is comparatively low less than one third of the consumption of meat. An extended dietary use of the potato is also endorsed for the replacement of part of the sugar and highly milled cereals in the ordinary diet. Potatoes provide extra vitamin C and more readily available calcium and phosphorus than are present in cereals. The present ration of potatoes is 8 oz a day at all income levels; it might well be increased. With regard to sugar it is considered that an excessive amount of sugar is detrimental to the extent that it dulls the appetite for more valuable foods and by leading to a deficient consumption of them may affect nutrition adversely. At the same time there is no quantitative evidence showing what amount of sugar is adequate and what amount is in excess. As for energy and protein foods where the energy content needs to be augmented it is considered preferable to increase the intake of bread rather than of sugar since bread contains some protein appreciable quantities of important minerals and some vitamin B and where the diet is modified by increasing the protein intake in the form of milk, eggs, fish or meat any excess of energy that may result therefrom should be brought down to the standard requirements by reducing the intake of bread and sugar.

The Nutritive Value of Milk

But it is the value of milk that is underlined again and again in this report. The consumption of a sufficient quantity of milk is regarded as the key to proper nutrition. As will be seen from the table given above the milk consumed per head has declined during the last twenty-five years or it is as there is some reason for believing the earlier estimates are unduly high it has remained stationary. The total consumption of liquid milk even adding its equivalent in condensed and dried milk amounts to not more than half a pint per each

person per day—a low figure compared with the estimated milk consumption in some other countries. The requirements suggested by the League Commission are equivalent to a daily allowance of seven eighths of a pint more than double the present consumption of liquid milk.

Incidentally the committee combats the widespread belief that skimmed milk possesses little or no nutritive value. In fact skimmed milk stands next to whole milk in the order of nutritive foods, and differs from it only in so far as it contains very little of the fat with its attendant vitamins A and D. All the remaining materials required for the nutrition of the body—namely protein, carbohydrate, vitamins B, C, and E and inorganic elements—are to be found in skimmed milk, and just as in whole milk, there are left unmentioned nutritionally important physico-chemical and biological characteristics. Unfortunately little of this valuable food is available for sale in liquid form in this country. Some of the skimmed milk produced is dried and sold as such, some is incorporated in foods such as bread, cakes, and confectionery, some is fed to farm animals, and much is wasted. The conditions governing the sale of milk products which render such a highly nutritious food as skimmed milk not readily available to the public cannot be regarded with satisfaction. It is of course not an appropriate food for infants because of the absence of fat with its attendant vitamins, but for all other members of the community it is little inferior to whole milk in a mixed diet if this contains adequate amounts of butter and other fats. In a memorandum published a year ago the committee stressed the need for making milk safe by efficient pasteurization or other heat treatment and it now declares that no other single measure would do more to improve the health development and resistance to disease of the rising generation than a largely increased consumption of safe milk.

Projected Investigations

The committee has studied the various methods which have been tried for the assessment of the nutritional state and finds none of them reliable. The clinical method given in detail in an administrative memorandum of the Board of Education is the most promising. Research should be continued to establish if possible a reliable test or group of tests. It also notes that efforts are being made to remodel diets in Poor Law institutions so as to put in practice modern knowledge of the science of nutrition. Finally it proposes certain further investigations. It recommends that the Ministry of Labour should take steps to obtain further information concerning the distribution of working-class earnings and that the Registrar General be asked to carry out an inquiry into the constitution of families by age, sex, occupation and locality and the distribution of family incomes, also that early steps should be taken to collect family budgets and undertake dietary surveys on a comprehensive scale to show the ratio of food expenditure to total expenditure and the allocation of food expenditure between particular foods. A cognate inquiry will be into the proportion of domestic wastage for each kind of food descending even to such details as the amount given to the cat and dog. In some unpublished results of a dietary survey of fifty families in Newcastle upon Tyne it was found that bones and other portions of meat not eaten amounted to about 10 per cent of the quantity prepared for consumption and inedible portions of potatoes, other vegetables and fish to 20 per cent.

The report contains four appendices. One is a general analysis of the amounts of foods available for home use.

consumption, the second a reproduction of the committee's memorandum issued a year ago on the nutritive value of milk, the third an abstract from the report of the League Commission giving dietary schemes for pregnant and nursing women and for children of various ages, and the fourth an account of some investigations still proceeding with a view to a revision of the conversion factors for meat. This shows so far as it has gone that there is a higher proportion of protein and a lower proportion of fat in the bacon and ham supply of this country than was indicated in earlier analyses, made in 1906 and 1918.

The Ministry of Health has lost no time in taking action on the main recommendation of the report. Maternity and child welfare authorities are being requested to review their arrangements for assuring to pregnant women, nursing mothers, and young children a sufficient supply of milk. Some authorities supply milk to expectant mothers only during the last two or three months of pregnancy, some limit the supply in every case to one pint a day, some only supply milk for children up to the age of 18 months or 2 years. In the interests of the health of mothers and children the Ministry regards it as undesirable to adopt any such limitations. With regard to the recovery of cost from the recipient, the scales should not be such as make it difficult for any mothers to take advantage of the arrangements. It is added that wherever possible efficiently pasteurized milk should be provided and where this is not practicable the medical officer of health should approve the source and quality.

Reports of Societies

NUTRITION AND INFECTIOUS DISEASE

At a meeting of the Section of Comparative Medicine of the Royal Society of Medicine on March 24, with Mr G. W. DUKKIN in the chair, a discussion took place on nutrition and its effect on infectious disease.

Observations on Dietary Habits

Professor S. J. COWELL said that it was notoriously difficult to establish the truth regarding the effect of any individual hygienic factor in health and well-being, one great difficulty being that it was impossible to exclude, in observations on large groups of persons, factors other than the one which was being deliberately varied. While it was the general medical experience that some connexion existed between imperfect nutrition and susceptibility to infectious disease, the actual evidence of the relation of specific variations in diet to changed resistance to infections was extraordinarily conflicting. Attempts had been made to correlate the incidence and course of infections with characteristic or habitual diets used by different races or social classes. The observations of Orr and Gilks on the physique and health of two African tribes which showed that bronchitis, tropical ulcer and malaria were much more common amongst the cereal-eating type than amongst the meat-eating came into this category, but of course the evidence was not conclusive because various social differences came in. Spence of Newcastle had made observations which suggested that bronchitis and pneumonia were something like eight times as common among poor children as among the well-to-do, concluding that faulty nutrition played a part though not the only part in making the poorer children less resistant to respiratory infections. On the other hand, McGonigle of Stockton-on-Tees had not been able to correlate definitely the incidence of respiratory infections with poorer quality of diet. Fried at Christ's Hospital had

been able to show some connexion between infections of the skin and the amount of carbohydrate in the diet. But in all these cases many social, racial and environmental factors must enter, as well as dietary habits.

A second type of observation was to determine the effect of changes in the diet of a population or isolated sections of it on the incidence of infectious diseases. There seemed a fair measure of agreement that the increased incidence of tuberculosis in Central European countries towards the end of the great war was due in great measure to severe quantitative and qualitative restrictions on food. On the other hand, the great influenza epidemic of 1918-19 appeared to ravage the comparatively well-fed troops as much as the less well-fed civil populations. An attempt had also been made to define the part played by food constituents in determining resistance. Severe degrees of deficiency in vitamin A in laboratory animals were practically always associated with bacterial invasion. But when an investigation was made to show whether additional supplies of this vitamin could confer increased resistance to infection on individuals whose diets were not deficient the results were on the whole negative. Two such investigations with which he had been associated—one to discover the effect on the winter sickness rate in one of the Services of giving supplements of vitamin A concentrate, and the other to determine whether there was a lessened incidence of otitis media as a complication of scarlet fever after giving the same concentrate—had shown no dramatic positive results. As for vitamin D, it was probably true that children with active rickets succumbed more readily to pneumonia than others, but this might be explained by the mechanical resistance to respiration offered by the deformed chest wall. There was some evidence that vitamin C played an important part in protecting guinea-pigs against tuberculosis, but the results in human beings had been indecisive. It had been suggested that rheumatic lesions might be caused by vitamin C deficiency together with some specific bacterial infection, but this had not so far been substantiated by observation on children.

Altogether it was exceedingly difficult to prove the relation of any food factor to resistance to infection. One was left with the feeling that in so far as the state of nutrition was connected with resistance to infection, the connexion was that nutrition might determine the course an infection would rather take than decide whether infection would occur. The evidence available in the case of man did not seem to warrant the view that one isolated food constituent was responsible for maintaining the resistance of the body to infection in any general sense. On the other hand, there was suggestive evidence that gross malnutrition or a state of definite food deficiency might lower the resistance to established infections. The possibility had to be considered that in optimum state of nutrition lasting for a longer time in the life of an individual than in most of the tests so far reported might be necessary to secure the maximum degree of resistance.

Anti-infective Factors in Diet

Miss HARRIETTE CHICK, D.Sc., said that although there was a very general feeling that the state of nutrition must influence the degree and course of infection, and even susceptibility to it, this was difficult to prove on the human level. Infection was influenced by (1) the nutritive state of the subject, (2) other conditions such as chill, fatigue and anxiety, (3) the degree of infection, and (4) the virulence of infection—and (2), (3) and (4) might have as great an influence as or greater than (1). In an acute disease (1) could hardly be expected to have any influence, but in a slow chronic infection taking a much longer time to get started (2), (3) and (4) would remain fairly constant over a long period but (1) would eventually become more important. An influenza or measles epidemic would run through a public school as devastatingly as through an elementary school, where the feeding and other conditions of the children might be

inferior. The higher mortality and incidence of pneumonia in the 1918-19 influenza epidemic might have been due to the fact that the population was in a poorer state of nutrition. In the recent influenza epidemic there was nothing like the same disastrous effects or high incidence of pneumonia. In the slower and more chronic type of infection proof could be seen of the influence of nutrition. Many years ago it was a common thing to see children in Poor Law schools suffering from infective conjunctivitis, due to the low level of diet prevailing. With regard to tuberculosis she had compared for one pre-war and four war years the mortality in Vienna, which suffered greatly from malnutrition soon after the war started with that in the province of Salzburg which did not suffer to anything like the same extent.

	Vienna		Salzburg	
	Deaths from tuberculosis	Per 1 000	Deaths from tuberculosis	Per 1 000
1913	5,957	3.0	527	2.4
1915	6,873	3.4	539	2.5
1917	8,548	4.2	549	2.5
1918	11,531	—	588	2.7
1919	11,490	—	670	—

Turning to experimental work, where other variables could be removed, she thought that any essential dietetic factor could be an anti-infective factor. In severe vitamin A deficiency the fact that so many infections were obtained with laboratory animals was due to structural defect, which made its appearance with the deficiency—the mucous membrane became unhealthy, and it was by way of the mucous membrane, especially of the respiratory tract, that most infections took root. She described a series of experiments not yet published which had been performed in the Department of Experimental Pathology at Cambridge with a view to investigating the nutritive defects of maize, the idea being to arrive at some knowledge of the aetiology of human pellagra in populations subsisting very largely on that cereal. Litters of pigs were fed on three diets, one of which consisted of 83 per cent. of maize, while in the second a mixture of wheat and barley was substituted for the maize, and in the third the maize was restored but 8 per cent. of yeast was added. The pigs receiving the first diet became very sick in about six weeks with a lowered haemoglobin content, anaemia, diarrhoea, and great loss of weight, dying in about eight or nine weeks if the diet was not changed. At post-mortem they were found to have a very inflamed caecum and ulcerated colon. All the animals had what the veterinary specialists described as necrotic enteritis, but all attempts to isolate pathogenic organisms in the blood or stools failed. The group fed on the second diet also showed diarrhoea and several died, but the third group which had had yeast from the start showed no sign of diarrhoea and prospered, the yeast apparently making the imperfect diet right and very nutritive for these pigs. Other experiments had shown that the factor in the yeast which made the maize diet wholesome was a water-soluble extract of the yeast which was heat stable.

Vitamin C and Resistance to Infection

Dr LESLIE HARRIS dealt with the relation between vitamin C and infection. He had first become interested in this relation by reason of some observations he had made on the excretion of vitamin C by normal control subjects. It was found that the amount excreted in the urine suddenly dropped when any of the subjects had a feverish cold or an attack of influenza and this diminished excretion of vitamin C ran parallel with the infection. It appeared as if in an acute infection the body reserves of vitamin C became depleted. It seemed proved that vitamin C was concerned—with other factors no doubt—in increasing resistance to infection though it was not determined whether this deficiency was the result of the fever or the cause. In some observations on cases of osteomyelitis while the controls excreted the standard amount of vitamin C every day, the acute case excreted

only half the amount. In active cases of phthisis very little vitamin C was excreted and one could go on giving repeated test doses over a long period before it appeared in the urine. With recovery the patient became better saturated. Some experiments had been done on rats showing again that animals with various infections including diphtheria, had smaller reserves of vitamin C post-mortem than controls fed on the same diet. There appeared to be an increased usage of vitamin C in infections. Vitamin C was needed for formative cells—osteoblasts, odontoblasts and new tissues such as scar tissue—it also stimulated the reticulocyte response. There was very little conclusive evidence that vitamin C would help once an acute infection had started, but the prospect in prophylaxis was more hopeful.

Nutrition and Infection in Animals

Dr J. T. EDWARDS presented a short summary of work done on the relationship of nutrition to foot and mouth disease. Experiments on small animals—rats and hedgehogs—confirmed the observations of others that foot and mouth disease infection was most severe in animals that were well grown and well nourished. In fact the animals which appeared to be most susceptible were those in prime condition and in the prime of life. Rats fed on a theoretically complete diet (diet N of Korenschewsky) had been compared with an underfed group fed on bread and milk. All the rats were afterwards inoculated in the skin of the hind foot with the virus of foot and mouth disease. The conclusions were opposed to much current opinion regarding infectious disease in general. The view commonly held and apparently more widely applicable was that low physical condition as in the undernourished made them an easy prey to infection. But in these experiments it was the properly fed animals which developed the infection more strikingly. Similar experimental work had not yet been carried out upon the larger naturally susceptible animals but for some time it had been the common experience in research laboratories that when cattle and the other larger animals were in low condition they did not react well to inoculation with the virus. The records of field observations in temperate countries gave little information upon the relationship under discussion though it was often observed by veterinary surgeons who had to deal with tuberculosis that high class stock fed and kept in the best conditions suffered more severely than lean beasts when disease was allowed to run its course. Strong well-grown cattle were more susceptible to blackleg and anthrax and perhaps the same was true of sheep in their susceptibility to braxy. Whether any component of the diet was particularly concerned in causing increased susceptibility to foot and mouth disease infection had not been determined. The addition of raw liver and carrot to the poor (bread and milk) diet produced a distinct increase in susceptibility in rats probably because it prevented the occurrence of anaemia which was associated as a very constant symptom with the decreased susceptibility to foot and mouth disease among the animals on a poor diet. The impression gained from observations upon the smaller animals was that susceptibility to infection was influenced not so much by any specific ingredient in the diet as by the degree to which nourishment promoted the metabolism generally in the animal body. One curious thing noted was a decrease in the metabolic needs of the sexes. A diet adequate for the female was found to be inadequate for the male. When rats were placed on a good diet after a period of underfeeding the males showed an increased susceptibility to infection within five days, in females the response was slower. Dr Edwards suggested that the greater rapacity of males and the greater fastidiousness of females might have something to do with this.

Conflicting Evidence

Dr H. H. GREEN spoke on the influence of diet on bacterial infections. It was generally believed that mal-

nutrition predisposed to such infections though much of the evidence was indirect and confusing. Some observations in the Transvaal, where much of the vegetation was deficient in phosphorus had shown that sheep suffering from phosphorus deficiency suffered also more from worm infestation than sheep which received a supplementary dose of phosphorus. In the case of organisms of high virulence food deficiency did not seem to make any difference. Thus a disease like swine fever had the same incidence in animals badly or well nourished. Dr DAGMAR WILSON mentioned certain experiments among children in the Punjab which had shown no close connexion between vitamin deficiency disease and malaria.

Dr H WARREN CROWE referred to an experimental production of arthritis in rabbits by the injection of streptococci. It was suggested to him that the results would be even more striking if the rabbits were fed on a non-vitamin diet. Accordingly a cereal was used which was superheated by steam and the rabbits became avitaminosed but on injecting them with streptococci which were known to produce arthritis the rabbits on the non vitamin dietary did not broadly speaking, develop arthritis at all. The explanation which his clinical work suggested was that arthritis or rheumatism was a disease of reaction of the tissues the tissues reacting against some noxious influence, and tissues which were weakened would not react. It was also shown that patients who were in bed, undernourished and anaemic with a high blood sedimentation rate did not suffer severe pain with their arthritis but when their general health improved the pain was much worse. The 1918 influenza epidemic had been mentioned, but it was a mistake to suppose that that was worse because of prevailing malnutrition. The old creaking gates at home did not die to the same extent as officers and men in the trenches who were fighting fit. That was because the latter reacted so tremendously to a highly virulent organism.

Mr A L BACHARACH said that if the correctness of Dr Chick's general observation that all the so called minor constituents of diet might play an anti infective part were assumed it must be remembered that the total of their collective action was not a sum but an integration and it was quite possible to be misled, as had often happened in the laboratory by inability to control that fact. It was conceivable that the response to an organism might be lowered by the absence of two or more factors but that the effect of the absence of Y was so immediate that no amount of Z added would produce any effect at all. He had the impression from examining some of the studies made in which specific constituents had been added to the diet of groups of experimental subjects that were obviously undernourished in more than one direction that only a purely negative conclusion could be drawn from the results. This was because account had not been taken of the integrated effect of all the necessary factors in the diet. With regard to the question raised by Dr Harris there were other conditions besides those he had mentioned not ordinarily to be regarded as pathological in which there was a very marked depletion of vitamin C storage certainly a typical situation. One of these was benzene poisoning and others were pregnancy and lactation. It seemed to him possible that the benefit from the administration of ascorbic acid in febrile and possibly other conditions was not to be shown by its effect on those conditions at all. If one of the functions of ascorbic acid as such was that it acted very much more vigorously during febrile and certain other conditions and so got depleted it became necessary to build up the reserves not in order to deal with the particular condition associated with the depletion but as a kind of insurance policy against that or any other condition the next time it arose. Dr LESLIE HARRIS said that while it was uncertain whether low reserves of vitamin A as of other vitamins were a cause or a result of infection it did appear that in certain diseased states there was faulty preservation and use of vitamin A.

FULL-TERM EXTRA-UTERINE PREGNANCY

At a meeting of the North of England Obstetrical and Gynaecological Society on February 26 Dr F J BURKE of Liverpool reported two cases of full term extra uterine pregnancy.

The patient aged 45 was admitted to hospital with severe abdominal pain. Her last menstrual period seven months previously was followed a month later by an attack of abdominal pain with retention of urine. The local distension subsided but the abdomen became progressively enlarged. When she was admitted to hospital the abdominal tumour was as large as a full term pregnancy with a firm hard and rounded mass on its right. Radiography revealed a single large foetus presenting by the vertex. Extra uterine pregnancy was diagnosed and laparotomy was performed. The omentum was adherent to the anterior abdominal wall. The presenting mass was incised, foul liquor amnii escaped and a macerated foetus was extracted. Exploration of the left broad ligament revealed a gestation sac with a large piece of degenerated placenta. This was removed without haemorrhage and the remainder of the placenta was left in position the sac being marsupialized. The patient died one hour later and necropsy showed that there had been profuse haemorrhage into the gestation sac. The macerated foetus weighed 51 lb but had no congenital deformities.

The second patient was a primipara aged 27 when she first attended the ante natal clinic the abdominal tumour corresponded in size to that associated with the period of amenorrhoea. It became evident later that the pregnancy was abnormal and at the thirty fourth week a large foetal head was found to be firmly fixed in the right upper pole. She was admitted to hospital with a brownish vaginal discharge. The foetal heart sound could not be heard and foetal death was confirmed later by radiography. Extra uterine pregnancy was suspected and laparotomy was performed a macerated foetus being removed from a transparent sac. The placenta was lying on top of the uterus but was connected with it only by a thin pedicle. This was divided the abdomen was closed and the patient made an uneventful recovery. The pedicle was found to be a small uterine horn. The foetus weighed 5 lb it was a case of talipes equinovarus.

Mr MILES H PHILLIPS (Sheffield) said that in his experience the management of the placenta was the important point at the operation. He thought it best left alone. He had had six cases one of which had a subsequent laparotomy for another condition only a few adhesions were then found. Dr R NEWTON (Manchester) questioned the advisability of taking no action if the foetus were dead. Mr J ST GEORGE WILSON (Liverpool) showed an x ray film of a woman aged 80 who had died from a broken femur. In the abdomen was a large calcified foetus. Dr J H WILLET (Liverpool) condemned free exploration of the abdomen owing to the risk of severe haemorrhage from the separation of the placenta. Surgical intervention should take place at once when the foetal heart had stopped. Professor FITCHER SHAW (Manchester) mentioned a personal case in which a living foetus had been removed.

Dr BURKE in reply said he thought that his first patient would have died from septicæmia if no operation had been performed. In both his cases there had been diagnostic difficulty, since no foetal limbs could be felt.

Varicocele in the Female

Professor W FLETCHER SHAW (Manchester) read a short paper on this condition and reported six cases. He said that while all textbooks mentioned this condition not one gave a satisfactory account. Emge had attributed it to damage to the fibro-elastic suspensory mainly only a small amount of the lesion being due to changes in the walls of the veins. Carlos Castano had described it as the disease with the most marked subjective and the fewest objective symptoms. Graves had mentioned that it was often erroneously diagnosed as inflammatory adnexal

disease. The speaker's attention had first been directed to this condition by the late Dr W. E. Fothergill in 1921 and he had at the outset been rather sceptical about the essential nature of a complaint which could only be recognized when the patient was in the erect position, but in 1923 he had had three cases in one month.

An unmarried woman aged 26 with dysmenorrhoea, menorrhagia, and backache had been cured by him in 1922 and had had a laparotomy in 1923 because of suspected chronic salpingitis. He had found however a mass of veins in the left broad ligament which had been ligatured and excised. A year later severe right-sided abdominal pain had necessitated a second opening of the abdomen when the right ovary was found to be cystic and there was a mass of veins in the right broad ligament. The right tube and ovary were removed with this mass; the patient recovered completely and had a family.

A primipara aged 31 had aching pains in both iliac regions and a matted left appendix was diagnosed. A mass of veins was removed from the left side but one year later the symptoms had returned. A similar mass of veins was then removed from the right broad ligament and panhysterectomy was performed.

An unmarried woman aged 35 had had recurrent acute abdominal pains; the uterus was ante-flexed and there was a mass felt on its right side. A matted left appendix was diagnosed but at the operation a mass of veins had been ligatured and excised and the patient had had no further trouble.

Professor Fletcher Shaw remarked that some writers had stated that retroflexion was a probable cause of this condition but in only one of these three cases had a retroflexed uterus been found. Pressure on the left broad ligament by the sigmoid flexure or rectum seemed to be a factor. In 1924 he had had two further cases.

A married woman aged 40 who had given birth to two children complained of pain in the left iliac fossa; a mass was felt on this side and was diagnosed as a matted appendage. On laparotomy a mass of veins was removed with the left tube and ovary. Recovery followed.

A primipara aged 29 had had a left oophorectomy one year previously. She had aching pain on the left side where a tender mass was felt. The left broad ligament contained a mass of large veins and hysterectomy was performed.

After an interval of fifteen years Professor Fletcher Shaw had now seen another case.

A married woman aged 42 with three children had complained of severe pain in the right iliac fossa; no operation was undertaken but five years later the pain had continued and a mass was felt in the pelvis suggesting a fibroid. A large mass of distended veins was found on operation in each broad ligament. Supravaginal hysterectomy was performed and both appendages were removed with consequent return of good health.

Professor Fletcher Shaw said that in each of these cases the mass was large enough to suggest the presence of a pelvic tumour. In five instances the pain was left-sided. In the first three cases he had excised the veins without curing the patients but in the others a more drastic procedure had proved successful. The aetiology of this condition was obscure; retroflexion was present in only one of the cases and there was no marked laxity of the pelvic floor. He thought that the condition was more common than was generally supposed and that the treatment usually tried was unsatisfactory.

Mr J. E. STACEY (Sheffield) agreed that the condition was very common and attributed it to coitus interruptus. Examination of the patient in the erect position was essential to correct diagnosis. Only hysterectomy would cure a severe case. Mr T. F. TODD (Manchester) thought that these cases were due to unsatisfactory sex life. Mr MILES PHILLIPS said it was noteworthy that the patient complained of the pain when stepping out of bed. He had rarely excised the veins in older women with any prelude; he performed vaginal hysterectomy. Professor FLETCHER SHAW

replied that he doubted whether coitus interruptus was the main aetiological factor, two of his first three patients had had no coitus.

Locked Twins

Dr W. S. WRIGHT (Stoke-on-Trent) showed a case of locked twins, and discussed the aetiology.

A primigravida aged 21 at the thirty-eighth week of pregnancy had a uterus the size of which was that of full term. The presenting foetal part was in the breech. The external pelvic measurements were large. Radiographic examination revealed a twin pregnancy: the first foetus presenting by the breech and the second by the vertex. Labour followed the morning after admission into hospital; the buttocks of the first foetus being born and expulsion continuing naturally as far as the umbilicus when the circulation in the cord stopped and traction was unsuccessful. The chin of the first foetus was found to have locked with that of the second, both heads being firmly wedged in the lower uterine segment. The chins could not be freed and the first one was eviscerated and decapitated; the floating head being pressed back into the uterus. The second foetus was then delivered with forceps without difficulty; it was in a state of white asphyxia and did not recover. The head of the first foetus was next delivered by a vulsellum. The placenta of the fused binovular variety was expelled eight minutes later. The patient was in excellent condition after the operation, had an uneventful puerperium and was discharged on the twelfth day.

Dr Wright said that von Braun had estimated the frequency of locking as 1 in 90,000. It might occur in four ways: (1) both foetuses presented by the vertices entered the pelvis side by side and became arrested; (2) the first child presented by the breech and the second by the vertex, the chins locking; (3) the first child presenting by the breech might become locked by the chin on the body of the second foetus lying transversely; (4) both foetuses presenting by the feet might enter the pelvis together. Mr MILES PHILLIPS thought that a possible cause for such interlocking was a deficiency of liquor amnii. Dr MARSHALL (Liverpool) said that for purposes of decapitation a saw could be passed round the foetal neck with the thumb and forefinger using a Blond Heidler thimble.

Malignant Tumours in a Child

The president Dr J. W. BRIDE (Manchester) showed specimens of malignant tumours of the right ovary and left lung in a girl aged 12.

For some months she had had loss of weight and a rapidly swelling abdomen followed by pain in the left side of the chest, cough and slightly blood-stained sputum. Menstruation had not commenced. The abdomen was found to be filled by a painful and cystic tumour and the diagnosis seemed to lie between tuberculous ascites with pleurisy and an ovarian dermoid or sarcoma. A soft ovarian tumour the size of a football was removed without difficulty and the patient was much relieved but died on the eleventh day after admission to hospital from profuse haemoptysis. The ovarian tumour was encapsulated, lobulated and semi-solid; it had a white brain-like appearance with a number of cystic areas. The left lung showed many hard, irregular and raised nodules, two of which had almost penetrated the pleura and were invaded by haemorrhage. The secondary processes had spread throughout the lung. One ovarian tumour section revealed fibrous tissue mixed type cellular elements; considerable variation in the size and shape of the cells and nuclei and mitosis. The second section taken from the centre of the tumour suggested the appearance of a cystadenoma owing to the presence of glandular spaces. The main structure was, however, definitely fibrous with cells similar to those in the first section. A section of a lung nodule showed cellular elements of a mixed type, small and large brown cells being seen with multinucleated cells. Mitosis was present and there was much haemorrhage and necrotic invasion.

Dr BRIDE thought that this was a case of a multicellular sarcoma of the ovary with secondary deposit in the lung.

He referred to the series of ovarian tumours in girls under the age of 15 which had been collected by Bland Sutton and to the case recorded by S B Hurd who had removed at necropsy a round-celled ovarian sarcoma from a girl aged 17. Dr Bride added that sarcomata occurred much earlier in life than did carcinomata, most being detected at the age of puberty. They were usually bilateral, round-celled and extremely malignant. Solid ovarian teratomata contained embryonic tissues from all the layers of the blastocyst; they were often malignant, with sarcomatous metastases. Chorion epithelioma of the ovary might represent a form of teratoma.

The Interposition Operation

Mr J ST GEORGE WILSON (Liverpool) who showed an illustrative cinematograph film said that the interposition operation was specially indicated in the case of patients with a large cystocele which was difficult to cure by Fothergill's operation without undue narrowing of the vagina resulting. A second important indication was that the patient must have passed the menopause. If the cervix was elongated it should be amputated in the usual way. The technique of the operation was that described and practised by the late Professor Blair Bell.

Professor FLETCHER SHAW thought that a reasonable criticism of the operation was that after it had been completed the cervix could still be pulled down to the vulva. The operation must be restricted absolutely to post-menopausal cases. Dr S B HURD (Liverpool) defined two indications for the operation: a previous failure with colporrhaphy and the presence of a retroflexed uterus needing suspension. He had experienced more difficulty with metrorrhagia in his cases after this operation than after colporrhaphy. Mr J E STACEY reported that he had known pregnancy to occur after the operation but Caesarean section had been necessary for delivery. Mr W GOUGH (Leeds) stated that he had seen one case of carcinoma of the body of the uterus after this operation. Mr ST GEORGE WILSON added that a bulky uterus constituted a contraindication. Even with a small uterus this operation was useful since cystocele was the main trouble in most cases and the technique which had been indicated obviated making the vagina too small. He always amputated the cervix in these cases.

Mucocoele of the Appendix

Mr J W BURNS (Liverpool) showed a case of mucocoele of the appendix in a woman aged 42, the only clinical symptom of which had been a feeling of stretching in the right side. There was a sausage-shaped tumour in the right iliac fossa on the outer side of the caecum from which it had become sealed off. It was filled with translucent fluid. Mr Burns stated that great care had been taken during the operation to avoid rupturing the cyst. He thought that if this had occurred a general pseudo-myxoma peritonii would have ensued with the appendix as the original focus. Dr BRIDE remarked that so large a mucocoele (7 by 3 by 2 inches) must be very rare and raised the question whether there was any connexion between pseudo-myxoma peritonii and mucocoele of the appendix.

TRAUMATIC RADIAL PARALYSIS

A meeting of the Royal Medico-Chirurgical Society of Glasgow was held on March 19 when the president Mr GEORGE H. EMMERTON showed a case in which the radial nerve was operated on two years ago for traumatic (fracture) paralysis.

A schoolboy aged 14 had been admitted to his ward in the Western Infirmary on January 2, 1935 with a fracture of the middle of the shaft of the right humerus due to his

having been knocked down by a motor car a few hours previously. Examination on the following day showed marked musculo-spiral paralysis. The fracture united and he was discharged in a splint. Two months later the paralysis had not improved and on March 28 the radial nerve was exposed through a lateral incision and was found to be nipped between the fragments of the bone. The nerve was divided and freed above and below the fracture through a medial incision. The proximal part was displaced to the front of the arm (as recommended by Stiles) and was sutured to the distal part under cover of the brachialis anticus. Recovery of power was very slow when the boy was seen towards the end of July 1935 there was little if any chance and electrical testing of the muscles involved showed no response to the faradic and weak to the galvanic current. Early in October 1936 he had recovered fair use of the hand and arm. The limb was much thinner than its fellow. Paralysis of the extensor ossis metacarpi and the primi internodii pollicis was noted. By the middle of February 1937 power was greater; he was able to play ping-pong but doubted his ability for tennis. If he tried to manipulate a heavy object a train was felt at the wrist. Thumb paralysis persisted and extension of the metacarpo-phalangeal joint of the index finger was not so complete as in the left hand. Numbness was present down the radial side of the second metacarpal and index and more slightly on the adjacent side of the thumb and first metacarpal.

The points illustrated by the case were as follows: Diagnosis of the precise cause of the paralysis had not been made out before the operation. There had been slow recovery of power. There was still persistence of implication of the deep extensors.

Hip Lesions

Mr ALEXANDER MILLER discussed lesions of the hip and their treatment considered under a clinical classification with lantern slides illustrating the primary and secondary deformities encountered from lesions in this region. He said that aetiological and prognostical controversy existed with regard to certain stages of hip disease and the diagnosis was only established in doubtful or early cases by a careful observation and follow-up. The term toxic arthritis was reserved for cases manifesting the hip joint syndrome which following rest and extension cleared up with neither clinical nor radiological evidence of disease. The classification adopted was: (1) toxic arthritis, (2) tuberculous disease, (3) infective arthritis (now tuberculous), (4) pseudo-coxalgia, (5) traumatic and (6) flail-hip. In treatment the relative values of manipulation, extra and intra-articular arthrodesis and osteotomy were considered, and examples of each were illustrated.

Rapid Histology in Diagnosis

Mr G T MORAT discussed cases in which errors of diagnosis as to malignancy or otherwise had been made at the time of operation. In some instances radical operations had been performed and had subsequently proved unnecessary while in others malignant tissue had been incised and an interval had been allowed to elapse while a paraffin section was being made before adequate treatment was instituted. Results from experience in the Glasgow Royal Cancer Hospital of a system of quick histological examination were discussed. In most of the cases definite information had been obtained while in a minority an intelligent lead had been given to the surgeon. Routine paraffin sections showed that in no case had the diagnosis of malignancy or otherwise to be revised. It was found most helpful in doubtful breast cases but was also used in lesions of the gastro-intestinal tract and the oropharynx. In suspected carcinoma of the body of the uterus curettage scrapings were successfully used for diagnosis. The chief methods used were the frozen section, the Dudgeon and Patrick method and the ultrapak illuminator. The average time taken for diagnosis was five minutes. The results left little doubt as to the general efficiency of the methods or of the practical help given to the surgeon.

Hyperthyroidism and the Basal Metabolism

Dr A B ANDERSON discussed the relation of the basal metabolism to the clinical signs of hyperthyroidism. In a series of 140 patients of various ages and both sexes who were clinically hyperthyroid or were suspected of hyperthyroidism the basal metabolic rate had been compared with the occurrence of the clinical signs: enlargement of the thyroid, exophthalmos, tremor, tachycardia, sweating and loss of weight. The tentative conclusions reached were as follows. When enlargement of the thyroid was accompanied by exophthalmos or any other of the clinical signs the basal metabolic rate would be high in nearly all cases. When enlargement of the thyroid was not accompanied by exophthalmos but all the other signs were present the basal metabolic rate would be high in nearly all cases but when only two or three signs were present the rate would be normal in a number of cases. When enlargement of the thyroid was present alone or with only one other sign the rate would be normal. In cases of tachycardia without enlargement of the thyroid gland the rate would be normal in nearly all cases.

SEDIMENTATION RATES IN RHEUMATOID ARTHRITIS

A meeting of the Committee for the Study and Investigation of Rheumatism took place at the Red Cross Clinic, Peto Place W1, on February 9, with Dr FRANK HOWITT in the chair. Dr LESTRANGE ORME opened a discussion on sedimentation rates in rheumatoid arthritis.

Dr Orme drew attention to the vast amount of material available at the Clinic and the information that could be obtained by a comparison of sedimentation estimations from such a variety of cases. He compared the regular estimation of rates in chronic disease with the temperature readings in acute conditions. Both were valuable indices of the severity of the infection, the progress under treatment, and the probable prognosis but such observations must be compared with the clinical condition and too much attention should not be paid to minor variations. He did not think that more valuable information would be obtained by increasing the complexity or accuracy of the test. He preferred the standard Westergren technique as being in more general use and giving fully as accurate conclusions as the biological basis of the test warranted. Sedimentation curves were shown from a number of cases under treatment at the Clinic: these had been automatically recorded by the photographic method devised by Dr Shackle. Attention was drawn to the characteristic shape of these curves and also to the secondary sedimentation (revealed by the photographic method) of the opalescent particles in the serum. The significance of this was not known but it was interesting to note that it did not run parallel with the sedimentation of the blood cells thus indicating that suspension stability was not merely a question of specific gravity. A series of estimations extending over several years was reported in one or two severe cases of rheumatoid arthritis. A very chronic course and slow response to treatment was indicated when the rate was over 50 mm in the first hour; the rate remained remarkably constant in such cases for two or more years. There was very close correlation between the sedimentation rates and such x-ray evidence as de calcification where both had been available regularly during the course of the disease. The curves of a number of rheumatoid patients who had responded well to gold therapy were shown. The most favourable rate for treatment seemed to be 15 to 25 mm in the first hour but good results were sometimes obtained with higher rates. The sedimentation rate returned to normal more slowly than the patient's clinical condition improved. Normal curves were always found in neuritis and fibrositis but one rapid curve was shown in connexion with a case sent

up as lumbar fibrositis but which on investigation proved to be a secondary carcinoma of the spine. A rapid curve in such a case would give rise to suspicion even in the absence of any physical signs of bone disease. Curves were also shown from cases of infective arthritis and gout.

Dr J W SHACKLE asked for helpful suggestions with regard to the nature of the secondary curve and also as to the sedimentation of opalescent bodies at a much slower rate than the red corpuscles. He questioned whether corpuscles ever did really "pack down" and described an experiment made with talc when he found that this substance went right through the red corpuscles which settled, but never really "packed down" on the top. His main question was: What caused apparent packing? Dr M B RAY criticized the technique and expressed the general opinion that at best the experiment was messy, capable of wide margins of error and dependent on the types of tubes employed. Dr FRANK COKE agreed that the test was not simple. In a general way it was capable of yielding misleading results with quite small variation of the angle at which the Westergren drop tube was held. The most intriguing problem was why the drops showed changes in the blood. He had recently discovered a protein larger than fibrin particles, which might account for the secondary curve. Differential diagnosis between rheumatoid or infective arthritis could not be based on the sedimentation rates. Every worker in this field should use the same apparatus if comparative data of any value were to emerge.

Dr W S C COPEMAN raised the question of the sedimentation rate of tungstic acid in various strengths and Dr COKE replied that tungstic molybdic and vanadic acids were the most easily standardized. His method was to record an acidity curve of twenty-four hours of the vanadic acid and serum reaction. The difference between the heated and the unheated curve gave a marked indication of the patient's response to treatment, implying the patient's general resistance. This test differentiated between the osteoarthritic and rheumatoid groups of cases. Dr GILBERT SCOTT pleaded that only cases showing decalcification should be labelled rheumatoid. He demonstrated some charts of Dr Coke's vanadic acid test which were intended to display the clinical progress of cases under treatment.

ENDOMETRIOSIS

A meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland was held on February 26 with the president Dr J F CUNNINGHAM in the chair.

Dr N M FALKNER showed a case of multiple fibroids associated with pregnancy. X-ray examination had not shown any evidence of pregnancy although there was a history of three months amenorrhoea. A subtotal hysterectomy was done and the specimen was found to have a foetus inside it; both ovaries were removed. Dr Falkner next showed specimens from a case of early ovarian endometrioma. He outlined the views of Sampson, Everett and Novak on the origin of endometriosis. Everett had suggested a tubal origin while Novak and Meyer believed that the condition arose as a result of serosal heteroplasia. The fact that the lining mucous membrane of the tubes, uterus and vagina were all derived from the coelomic epithelium supported this view. Dr Falkner suggested that there were deficiencies both in Sampson's original theory and in the view put forward by Novak. In the first there must be some added factor causing the endometrial fragments to implant and in the second there was no explanation of what stimulated the heteroplasia. It was possible however that scattered areas of the pelvic peritoneum possessed special sensitivity to ovarian influence since islands of decidua were known to appear on the posterior surface of the uterus and broad ligaments. The case Dr Falkner described was that of a woman aged 26.

She had been married for eight years and had had three children and no miscarriages. Her last pregnancy had been five years previously. She complained of loss of weight over a period of three months and pain in the left side. Her menstrual periods were normal and there was no intermenstrual discharge. On examination the cervix was found to be torn and rather hypertrophied. The uterus was retroverted and there was some tenderness in the region of the left ovary. At operation a Gilliam suspension was done and both ovaries were found to have small purple blob like structures on their surfaces. These were easily wiped off and a small wedge of the left ovary was resected.

Encysted Endometrioma

Dr J F CUNNINGHAM, the Master of the National Maternity Hospital showed an encysted endometrioma of the broad ligament. The patient was aged 41, and had been married for seven years.

Before marriage her health had been good and she had not had any serious illness. Her menstrual history had been normal. After marriage she had had three normal deliveries at term, the most recent one being some two years previously. For the past twelve months she had had pain in the region of the left groin and in the sacrum with a sensation of pressure in the pelvis. The pain was not severe but became worse during menstruation. There was a slight non-purulent leucorrhoea.

On examination the cervix was thickened and showed some shallow laceration. The uterus was small retroverted and lying in the right side of the pelvis. Through the left lateral fornix a tense cystic swelling as large as a tangerine orange could be felt in the base of the left broad ligament. It did not bulge into the vagina. At operation a radial incision was made through the vaginal wall in the left posterolateral fornix. The cyst was under considerable tension and contained a quantity of dark red fluid. On exploring the cavity it was found to be in the lower part of the left broad ligament below the level of the uterine vessels. It had no connexion with the peritoneal cavity or with the cervical canal or the uterine cavity. A soft mass was felt in the cyst and on removal presented the appearance of a mucous polypus. The report of this specimen was:

This specimen was a mass of tissue about the size of a walnut containing several small cystic cavities. Sections prepared from it show a stroma of fibro-connective tissue containing numerous glandular remnants many of which were dilated. There is some infiltration with chronic inflammatory cells more especially near surface. The specimen is a mucous polypus. The epithelium is columnar. There is no evidence of the presence of placental remnants.

The cavity in which this was found however contained some old blood which was not clotted. Dr Cunningham said that he believed the specimen to be an endometrioma encysted in the base of the left broad ligament. In the discussion which followed Dr A H DAVIDSON, the Master of the Rotunda Hospital said that cases of endometrioma were few and in the last year he had only seen one. Dr C C DOCKERTY said it was interesting to note that in India for instance far more cases of this condition were seen than in Ireland. In some of the cases there was an associated salpingo-oophoritis and he thought that where this existed a leucocyte count might be of value. In replying to the discussion Dr FALKNER said that he wondered whether endometriosis might not be due to gynaecological procedures such as dilating the tubes. He thought there was no doubt that sterility and endometriomata were associated. A few cases would respond to conservative surgery but in most instances cure could be achieved only by removing the endometrium or the uterus or else by producing an artificial menopause.

Dr ANDREW HORNE showed a radiograph of triplets and described their successful delivery.

Vaginal Hysterectomy

Dr A H DAVIDSON, the Master of the Rotunda Hospital, read a paper on vaginal hysterectomy which was

illustrated by a coloured film. Dr Davidson said that he had adopted vaginal hysterectomy as the operation of choice in those cases in which the uterus was sufficiently small and was not bound by adhesions or extensive endometriosis. He had been impressed by the absence of post-operative complications and the smooth and rapid convalescence of his patients. He outlined the contraindications and the technique of operation under local spinal anaesthesia. He had performed this operation on ninety patients of whom one died from peritonitis. Forty-six patients in this series replied to a follow-up questionnaire. In forty-one the general health was good, it was indifferent in five, some vaginal discharge was complained of by three patients, four had symptoms of prolapse, and two of pain. Marital relations were satisfactory in all but three cases. In the discussion which followed Dr T M HEALY, Dr R E TOTTENHAM, Dr BETHEL SOLOMONS and Dr O DONNELL BROWNE took part.

Local News

ENGLAND AND WALES

Dickinson Scholarship Trust

A most interesting follow-up study has been published by the trustees of the Dickinson Scholarship Trust. It was in 1920 that a bequest of some £8,000 was received by the Royal Infirmary and the University of Manchester jointly to provide for an annual scholarship in anatomy, an annual travelling scholarship in medicine and in alternate years a scholarship in pathology and surgery. The trustees have reviewed the progress of those men and women to whom awards have been made since the first scholarships were given some fifteen years ago. It is remarkable how the Dickinson scholars have in their subsequent careers, risen to places of distinction in the clinical, academic and research departments of different universities. This review shows the great value of these grants and the care and discrimination that must have been exercised in awarding them, and gives point to the trustees' appeal for subscriptions, donations or legacies for the further endowment of clinical research. The scholarships are open to graduates of any university who have received the three final years of their medical training at Manchester. They are advertised normally in April in the *British Medical Journal* and the *Lancet* but the trustees are empowered to consider applications at any time for a scholarship or grant in aid of any research in any subject approved by them.

Treatment of Venereal Disease in London

The London County Council has given its approval to the continuance during the year 1937-8 of the arrangements for the diagnosis and treatment of venereal diseases in which six adjoining counties and three county boroughs also participate. During 1936 the number of new cases seen at the clinics was 26,077 but of these 12,817 proved to be non-venereal. Of the total number of new cases those of syphilis numbered 2,921, gonorrhoea 10,043 and soft chancre 296. It is pointed out however that these figures do not fully indicate the extent to which venereal diseases come under treatment in London as a not inconsiderable number of patients receive treatment from private medical practitioners. The number of new cases of ascertained venereal disease is lower by 2,000 than in 1935 when the figure again represented a reduction on the immediately preceding years. But the large decrease is largely accounted for by the fact that for 1936 the Minister of Health altered the form of return and omitted from that part showing allocation to areas certain cases which were formerly included—in other words patients who had formerly received treatment at some other venereal

diseases clinic are no longer regarded as new cases. Actually the figures on the old allocation would show a decrease of only 248 on 1935. Last year 37,748 examinations of bacteriological specimens were made at the request of and free of cost to medical practitioners, and the number of practitioners on the approved list for the supply of salvarsan or its substitutes was 556.

Grimsby and District Hospital

It has been decided to inaugurate at the Grimsby and District Hospital a special clinic for the treatment of patients suffering from fractures deformities and injuries of bones and joints, along the lines suggested in the British Medical Association's report on fractures. The hospital serves an area comprising the county borough of Grimsby, the borough of Cleethorpes and northern parts of Lindsey, Lincolnshire. The Grimsby Corporation has arranged to assist in providing an honorarium to be paid to the surgeon in charge and will pay the cost of maintenance of those patients for whom the local authority is financially responsible. Mr R. Guy Pulvertaft, F.R.C.S., has been given charge of the new clinic. Mr Pulvertaft has held appointments at St. Thomas's Hospital, the Norfolk and Norwich Hospital and the Robert Jones and Agnes Hunt Orthopaedic Hospital. At present he is surgical registrar to the orthopaedic and fracture department of Liverpool Royal Infirmary.

Deaths from Influenza in March

According to a return supplied by the Ministry of Health the number of deaths recorded as due to influenza in 122 great towns of England and Wales and the number included in the totals which were recorded in London for each of the four weeks to March 27, was as follows:

Week Ending	122 Great Towns	London
March 6	181	16
March 13	144	12
March 20	171	21
March 27	98	17

The total for the week ending March 27 was the lowest since December, 1936.

SCOTLAND

Jubilee of University Hall, Edinburgh

To celebrate the fiftieth anniversary of the opening of halls of residence for students at Edinburgh by the Town and Gown Association it is proposed to hold a dinner on Saturday May 29 in the North British Station Hotel, Edinburgh University Hall, which includes the houses of Ramsay Lodge, St. Giles House and Blackie House. This was the first attempt to institute corporate residential life in the Scottish universities and was largely the outcome of efforts on the part of the late Sir Patrick Geddes. Residence in these halls, although open to all students of Edinburgh University, has been almost entirely taken advantage of by medical students and has therefore in the past half century played an important part in the life of the Edinburgh medical school. Those old residents who desire to be present at the dinner should communicate with Sir David Wilkie, 9 Ainslie Place, Edinburgh 3.

Edinburgh Royal Infirmary Appeal

At a meeting in Edinburgh on March 23 Sir Thomas Whitson, chairman of the Board of Managers of the Edinburgh Royal Infirmary, said that an appeal for £500,000 had been made in 1920 and £300,000 had been raised but the balance of £200,000 was now required to meet the cost of the work. There was not a county in Scotland which did not send patients for treatment to this institu-

tion, and last year patients came from no fewer than ninety-two counties in England as well as from the furthest corners of the world. To-day the Infirmary had 1,100 beds and was treating 20,000 in-patients and 90,000 out-patients each year. It was very necessary to keep up to date with apparatus for both diagnosis and treatment, and Edinburgh was one of the half-dozen places in Great Britain which could give highly specialized treatment for cancer. In its radiological department 23,000 examinations had been made in 1936 and 8,915 therapeutic applications of x-rays had been made; it was estimated that in the present year the latter figure would rise to 15,000. With regard to the present appeal, it had been found fifteen years ago that the need for a new maternity hospital in Edinburgh was imperative, and the managers of the Royal Infirmary, recognizing the advantages of associating this with a general hospital, had agreed to take over the functions of the Simpson Memorial Hospital and to erect a new maternity building adjacent to the Infirmary. A new nurses' home had also become necessary, and these two buildings were now approaching completion. Professor R. W. Johnstone also spoke in support of the appeal, and mentioned that the work at the Maternity Hospital had more than quadrupled in the short period of twenty-five years. The new site of this hospital, facing south over the meadows, was one of the best in the city.

Physical Fitness in Scotland

At the inaugural meeting of the National Advisory Council for Physical Training and Recreation held in Edinburgh on March 20, Mr. Walter Elliot, Secretary of State for Scotland, said that special applications for grants would be considered by the Grants Committee, and the work being done by a similar council in England would be of the greatest importance to the subject of physical fitness in Scotland. It had been suggested that there should be five regional councils, but the scheme differed to some extent from the English scheme. Local organization would be based in Scotland on wider areas, and the scheme must in its early stages be experimental. Only experience would teach them what the ideal machinery was, and how they could best pool resources and work together until the scheme was in operation. Sir Iain Colquhoun, who presided, said that the members of this council had been chosen from men and women who were interested in physical recreation as a whole, and the services of specialists in various branches would be enlisted as the scheme developed. The first thing to do would be to provide the necessary facilities, leaders, and instructors for physical training and later to engage in propaganda to persuade the Scottish people to take part in the movement. There were many organizations, some large and others small and local in character, that were doing admirable work, but it was exceedingly difficult to assess the extent of the field which was already covered by such voluntary endeavours, although they were at least justified in saying that from a national point of view it was lamentably small. Scotland appeared to have lagged behind in the sphere of physical recreation.

Diet and Health

At a meeting of the Edinburgh Women Citizens Association held on March 20, Dr. Isabel Leitch of the Rowett Institute, Aberdeen, gave an address on diet in relation to health. She said that up to the early part of last century the food problem had been complicated by the seasonal nature of plant growth; man had been dependent on local produce and the standard of diet had been little more than that necessary for survival. The first standard of diet formulated in this country in 1863 had been for sufficient food to avert starvation diseases. Great advances had been made since then, and the standard to-day was for food required to maintain perfect health. It was a general fact that eaters of animal food had always excelled plant eaters in physical powers of endurance and enterprise, but the eaters of

mixed diets had in their turn excelled the meat eaters in all these respects. The populations of the Far East on a diet of rice and beans were all of relatively poor physique and subject to deficiency diseases. In Europe the pattern for diet and health varied greatly. The peasant populations of the Near East with a diet of cereals, beans, and olive oil were of poor physique, had high mortality rates, and pellagra was epidemic. In the industrialized countries there was a definite social gradient in the matter of diet, for the poor could buy only the cheapest foodstuffs which were not capable of supporting healthy growth without substantial supplements. Even in this country scurvy had tended to reappear nearly up to the end of last century whenever there was a potato famine, and gross rickets was common up to the beginning of the present century, while perfect teeth were still almost unknown. The present position might be summarized as follows: gross deficiency disease, except for rickets, had been eliminated, but the diet of the poorest people was still dangerously near the deficiency line. Dr Margaret Martin said that malnutrition in this country was largely due to economic factors: there was abundance of food, yet many people were unable to obtain sufficient to keep them in health. Dr G. L. Linklater, Medical Officer of Schools, Edinburgh, said that diet was not a panacea, although he did not underestimate its importance. He believed that the health supervision of children from 1 to 5 was still far from adequate, and he urged voluntary associations to undertake nursery schools in new housing areas. We should make sure, he said, that the pre-school child and the mother had adequate diets, and people required to be taught how to buy, prepare and serve food. Miss Grace Drysdale, Warden of the Edinburgh University Settlement, said that education in food and diet ought not to be confined to one sex, but in the last years of school life lectures on food values should be linked up with physical training. The particular taste of the Scots for solid and simple meals should be studied and popularized. Mr David Lubbock, of the Rowett Institute, Aberdeen, pointed out that to meet the needs of all the people with regard to optimum diets, milk, eggs, green vegetables, potatoes and fruit should be produced in greater quantities and the superabundance of cereals for which a market could not be found might well be checked. The problem of raising the purchasing power of those unable to afford an optimum diet should be tackled.

Edinburgh Post-Graduate Courses

The syllabus of the post graduate courses in medicine to be held in Edinburgh during the summer contains particulars of the instruction obtainable in July, August and September. From July 12 to 31 there will be a course in obstetrics and gynaecology at the Royal Maternity Hospital and the gynaecological wards of the Royal Infirmary, fee £8 8s. A general practitioners course will be held from August 16 to September 11, fee £10 10s for four weeks or £6 6s for two weeks. A general surgical course will be held concurrently. An eight weeks course on internal medicine will be held from October 18 to December 10, fee £15 15s. Graduates may obtain the syllabus from the secretary of post-graduate courses in medicine, University New Buildings, Edinburgh.

A. B. Fortes and A. Austregesilo (*O Hospital*, Rio de Janeiro, February, 1937, p. 127), who record two cases in a man aged 33 and a girl aged 19, state that the syndromes of cataplexy and narcolepsy usually appear simultaneously, thus showing the close connexion between the centres of muscular tonus and sleep. In exceptional cases such as that of the girl described by the writers, these syndromes may occur separately. The cause of the syndromes is almost always encephalitis lethargica as was exemplified in the present cases. In the second case cataplexy was associated with the Erb-Goldschlag symptom-complex of bulbar myelitis.

Correspondence

Food and Nutrition

SIR.—In reference to the report on the dietary survey by Professor E. P. Cathcart (*Journal*, February 27, p. 435), I would like to record agreement with one opinion expressed—namely, that the main causal factor of inadequate diets in many households is ignorance of how to buy, what to buy, and how to use the material bought. I have also discovered that there is ignorance of how to persuade the child to eat what is put on the plate. Father may bring home sufficient money, mother may have sufficient knowledge of how and what to buy and how to use, and yet both may fail in the last stage of dieting—that is, to get the food from the plate into the child's stomach.

I have records of children who refuse to eat butter but prefer margarine or even dry bread, of children who chew meat and spit it out again, of other children and adults who habitually leave fat and green vegetables. Some time ago a girl 15 years of age suffering from tuberculosis of the lungs came under my care. Her father said, "I have bought the best food money can buy, yet she won't eat meat, fat and green vegetables; she only likes potatoes and gravy and puddings." A youth of 16, suffering from pleurisy with effusion, stated that green vegetables were served three or four times a week, yet he had never eaten them nor had he eaten fat. In conversation with his mother the value of these foods was emphasized, and she remarked, "My fault is that I have given afters (puddings) when they have left the first course." Parents need education in the understanding and guidance of the child.

Inadequate dieting has a psychological aspect. Many members of the medical profession do not yet seem to have realized the importance of the protective foods. I have records of children who have had out-patient treatment at general and children's hospitals, and yet mothers report that no question was asked about the habitual diet of the child and no advice given as to diet, and yet these children have been in the habit of leaving fat and green vegetables. In Hippocrates is written: "A physician must know what man is in relation to foods and drinks and to habits generally." Is not this just as important for us in A.D. 1937 as it was for Hippocrates in 400 B.C.?—I am, etc.,

P. A. GALPIN,
Tuberculosis Officer.

West Ham, March 24.

A New Treatment for Chronic Leucorrhoea

SIR.—Before adopting the treatment by zinc chloride advocated by Drs. Alcock, Bourne, L. T. Bond and K. A. McGarrity under the above heading in the *Journal* of January 16 (p. 116), I earnestly hope surgeons will give the proposal careful consideration. Forty years ago German surgeons (Duhrsen and others) advocated the same treatment using a 1 in 4 solution—that is, much weaker than that recommended in the above paper—applied for only a few minutes once weekly on a very limited number of occasions. Yet even in this form it brought about more serious troubles than the one it was designed to cure.

By destroying the intra-cervical tissues this treatment leads to contraction, stenosis and interference with normal drainage, followed by the infection which in

variably follows on blocked drainage from any of the bodily reservoirs. The authors do not refer to these evil results, probably because sufficient time has not elapsed for them to become evident but I can assure readers that I have seen them on a number of occasions and have also noted the sterility which followed, if it did not originate in, the procedure. Similar untoward results have followed the modern treatment by diathermy and electric cautery. Simple erosions of the os uteri in nulliparous women due to proliferation of the intracervical glandular epithelium over the squamous epithelium of the portio can be cured by one or two applications of zinc chloride 1 in 4 solution at fortnightly intervals, but the application should not be passed into the cervix for the reasons stated above. Endocervicitis of not too long standing can be cured by applications every five days of a solution of

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Sig Shake the bottle

A little pledget of sterile wool soaked in this solution and held in a long sinus forceps is thoroughly rubbed into the whole length of the cervical canal. If vaginitis is present a larger quantity is applied to the vaginal surfaces held apart by the vaginal speculum. As the solution comes in contact with the sensitive vulva more or less smarting is produced relieved instantly by the use of a fan which should be in readiness. This solution is very effective for pruritus vulvae and an and dry eczema. I introduced it for the treatment of these conditions some thirty five years ago and its value was testified to by several speakers at a meeting of the Gynaecological Section of the British Medical Association last month. When endocervicitis is chronic or associated with injuries to or degenerative changes in the cervix the treatment should be surgical either the Sturmdorff operation or the ordinary resection according to the conditions present gives excellent results—I am, etc

RALPH WORRALL, M.D., M.Ch.,
FRACS Hon F.A.C.S.
Consulting Gynaecologist to the
Sydney Hospital

Sydney February 23

Open-air Treatment for Pneumonia

SIR—I have read with great interest Dr H L Wallace's article on continuous open air for pneumonia in children (*Journal* March 27 p 657). We have used the method he advocates—placing the child by a widely open window and allowing the cold air to play directly on its face—at Alder Hey for some years. On looking at our results I find that they approximate to the results obtained by Dr Wallace and give herewith a table showing the results obtained in the treatment of 1880 cases of pneumonia by this method.

Age Period	Cases	Deaths	Per Cent
Under 12 months	85	40	4.11
12-23 months	451	87	19.73
2-3 years	27	27	10.43
3-5 years	306	12	3.95
5-8 years	367	13	3.61
8-10 years	353	23	6.34
Total	1880	202	10.7

These figures are crude the mortality rate not having been corrected in any way for deaths occurring shortly after admission. Unfortunately I have no controlled series as we use the open air method of treatment for all cases. I can fully endorse the view expressed by Dr Wallace on clinical impressions of the treatment. In this hospital it is the exception for oxygen to be administered to cases of pneumonia, and there is hardly ever any difficulty in persuading the patients to take sufficient nourishment. One is also impressed by the fact that children treated by this method sleep so much during the acute stage.

It is interesting to note that we have treated some cases of pneumonia on an open air balcony and find that they do remarkably well. The objection mentioned by Dr Wallace—namely the lowering of the ward temperature for other children—is a real one. Perhaps when we realize to the full the value of fresh air in the treatment of children and the value of segregation of patients in cubicles this objection will be met by having children's wards divided up into cubicles of various sizes with facilities for open air treatment in each cubicle.

I think we owe a debt of gratitude to Dr Wallace for bringing to our notice a method so effective and yet so simple in the treatment of this serious infection of childhood—I am, etc,

Alder Hey Children's Hospital
Liverpool March 30

W E CROSBIE
Medical Superintendent

Blood-sugar Worship

SIR,—May I congratulate Dr Oliver Walker upon his definite reply he gives to Dr Guy Bolsfield's question.

Are they to be allowed to run high blood sugars throughout the day as long as they remain free from ketosis and glycosuria when he writes. The answer is Yes for how few diabetics are consistently sugar free. No doubt his reply is based upon a ripe experience of diabetic patients treated in that manner over a period of many years, and he is satisfied that the treatment protects against the many complications of that disease. If this be so his experience is very different from mine, which extends over more than thirty years.

He asks: How few diabetics are consistently sugar free? I cannot reply to that question but if he had asked: How many diabetic patients are consistently free from glycosuria? my reply would have been: Of those with normal renal thresholds for dextrose well over 90 per cent of the cases under my care.

In the early days of insulin many physicians were satisfied when their diabetic patients presented neither glycosuria nor ketosis but at the present day surely our aspirations are higher and we aim at the development of remissions at a metabolism approaching as nearly as possible to that of the average normal hoping thus to protect our patients from neuritis arteriosclerosis and the many complications of diabetes mellitus. Since the renal threshold for dextrose in a diabetic may rise to 0.22 per cent it is obvious that the examination of the urine will not ensure the sugar content of the blood being kept within normal limits and will not protect against complications.

I have seen remissions develop in more than thirty cases—that is to say improvement which has continued until insulin has no longer been necessary and in some cases ordinary food has been taken—and these remissions have lasted from six months to ten years. I have attributed these improvements (perhaps incorrectly) to regeneration of the pancreas following a long period of

comparative rest, accomplished by keeping the sugar content of the blood below 0.15 per cent and by the patient's abstaining from alcohol. The treatment should be designed for the individual.

The physician should decide which is the lesser evil: the frequent examination of the urine by the patient, with the attendant alarm when sugar is found, or the examination of the blood four times a day at intervals of a few months, combined with the order that should any symptoms of any kind develop, however trivial, medical advice should be sought without delay—I am, etc.,

London W 1, March 25

O. LEYTON

SIR—I was pleased with Dr Oliver Walker's letter in the *Journal* of March 27 (p. 684) because, like some others, I have long felt that occasional blood sugar estimations do not help in the treatment of those attending a diabetic clinic; in fact, they have proved a confusion to me and have not led me in the direction of better treatment.

In the very large majority of cases I am now content with the ordinary test-tube examinations of the urine for with such help alone I am able to avoid severe ketosis and to help those attending towards that sense of returning well being which, as Dr Himsworth has emphasized is the real object of treatment. I find this improvement follows when an acceptable diet is prescribed arranged qualitatively and fixed quantitatively, even though the urine contains a fair amount of sugar from time to time during the twenty-four hours. The test-tube warns me of the approach of danger but I do not allow it to dictate an unnecessary or even harmful diet—I am, etc.,

Portsmouth April 1

H. FARNCOMBE

SIR—In reply to Dr Oliver Walker (*Journal* March 27 p. 684) I must point out that I do not form opinions on the condition of diabetic patients on the evidence of single blood sugar estimations nor did I say so. I am prepared to do as many blood sugar estimations as he would make urine examinations if necessary. I always use urine examinations myself in following up the crude stages of my treatment. The only difference is that at the end of my work I have a true idea of the behaviour of the patient's blood sugar throughout the day, whereas the urine method unaided tells only of the difference between glycosuria and hypoglycaemia. In the case of a raised renal threshold therefore urine estimations alone tell one say that the patient's blood sugar is not lower than probably 0.100 per cent and not higher than shall we say 0.280 per cent. I am afraid this will not satisfy me.

People who have a raised renal threshold will of course develop hypoglycaemia if their blood sugar is suddenly brought to normal but not if the sugar level be trained down. Such patients can ultimately run normal blood sugars without fear of hypoglycaemia—I am, etc.

London S.E. 5 March 26

GUY BOLSFIELD

Transfusion Fatalities

SIR—I read with interest Dr N. S. Plummer's article in the *Journal* of December 12, 1936 (p. 1186) on blood transfusion. I have been practising blood transfusion in India for some time and I appreciate the candour with which Dr Plummer has reported his fatalities as a result of transfusion. His article encourages me to add my single case to his group of six.

A woman 30 years old suffered from severe pregnancy anaemia during her second pregnancy. She delivered normally and responded to liver therapy to some extent. During her next pregnancy about a year and a half later there was a relapse of anaemia. She gave birth to a stillborn baby and the anaemia showed no signs of improvement even under liver treatment. Blood transfusion was proposed and after cross-matching 100 ccm of blood were given by Braun's apparatus. More blood was not given because the patient had slight dilatation of the heart. The patient appeared to bear the transfusion well and seemed to be happy after it. About five hours after the transfusion she was reported to have suddenly collapsed and died. Post mortem examination was not available.

I attribute the fatality to a degenerated myocardium as a result of long-standing anaemia which could not cope with the transfused quantity of blood.

With reference to his case No. 5 Dr Plummer cautions against the danger of using the same donor for a second transfusion, and refers to serious reactions recorded by other authors. I beg to differ from him on this point. In three of my cases I have used the same donor for three or more successive transfusions without any bad effect on the recipient. The amount given each time was above 150 ccm. Dr Plummer explains the death in his case No. 5 by assuming that as a result of the first transfusion the recipient has become sensitized to his donor's blood. Probably he is right. In my cases of mono-donor-transfusion the sensitization was perhaps obviated by the fact that the transfusions were performed every fourth or fifth day. As the subsequent transfusions were done within a week of the first one they helped to desensitize the recipient and no untoward results followed. In conclusion I believe that the danger of using the same donor for a second transfusion is unnecessarily exaggerated provided the transfusion is repeated within a week—I am, etc.

Poona City India March 18

P. L. DESHMUKH M.D.

SIR—May I take the opportunity of replying to the correspondence which has arisen out of my article in the *Journal* of March 6 (p. 496). While I agree with Dr Loewy (March 20, p. 641) that morphine is of great value in quieting the anxieties of any patient before an operation I do not think that atropine given before a transfusion would prevent the occurrence of pulmonary oedema four hours later—as happened in my second case.

Dr Howie Wood's criticism (March 20, p. 641) of my omission to refer to the drip transfusion as an alternative mode of treatment is to some extent justified. I have one suggestion to make which extenuates it to some extent. Does not the passage he quotes from Marriott and Kekwick's article imply that the method is not quite without risk in patients in a weak condition or in subjects of cardiovascular disease? To raise the haemoglobin of a patient from 20 to 50 per cent in an adult involves transfusing about three pints of blood. This is a very considerable amount of fluid to add even slowly to a damaged cardiovascular system.

In answer to Dr Shera (March 27, p. 686) may I say that the patients' blood was grouped against stock sera and a donor of the same group obtained from a blood transfusion service. The donor's group was confirmed by testing his blood against the stock sera and finally both donor's and patient's blood were mixed directly. I think the possibility of cross-agglutination being responsible for the fatalities may be ruled out. By anaphylaxis in connexion with blood transfusion I mean reaction not due to the agglutinating cells of the blood but due to the action of some poison in the plasma of the

donor to which the patient has been sensitized—such as might follow a previous transfusion from the same donor. The time taken over the transfusion of one pint of blood by the indirect (citrate) method was about forty five minutes. It is impossible under ordinary circumstances to take more than one third to one half this time using the direct Joubert method on account of clotting oftenest on the patient's side of the syringe.

Lastly may I thank Drs Loewy, Howie Wood and Shera for their kind appreciation and most stimulating criticism—I am etc.,

Birmingham March 27 FRANK PYGOTT M.B., D.P.H.

Accidents and Diabetes Mellitus

SIR—In view of the interesting problems associated with the above may I recount a case at present under my observation.

A middle aged man came to me with a painful forefinger. He stated that a few days previously he had bruised it. The finger was slightly swollen with some infection under the matrix of the nail. Within a day or two the pulp of the finger became infected. Appropriate incisions were made but it did not improve. I referred him to the Birmingham General Hospital and the surgical staff very kindly treated him.

A week or so later he saw me and I learned with some surprise that the finger had been amputated. The stump was unhealthy. I remembered that some years ago he had had a gastro-enterostomy done for gastric ulcer and that he had then had a slight degree of hyperglycaemia. This cleared up with a short course of insulin and he remained quite well, being free from the condition when I had examined him on several occasions subsequently. I informed the hospital of this fact in the man's previous history. A slight hyperglycaemia was again found to be present and small doses of insulin have brought about a wonderful alteration in the finger showing I think that the chemical changes in the tissues consequent upon injury in individuals with a high sugar threshold are profoundly different from those in the normal person.

Whether it is the toxins or bacteria from the damaged tissues acting upon the blood direct or on the higher centres one cannot say but such is the factor in this case—first a surgical operation secondly a small bruising of a finger causing a vicious circle delay in normal healing and necrosis of the finger bone which clears up when the balance is restored by small doses of insulin. The other interesting point—for the employer—is that such an injury is the result of an accident and comes under the Workmen's Compensation Act. One can readily visualize the difference such an accident will make to a hyperglycaemic man or woman in the time such a disability takes to resolve and from a legal point of view the difficulty that may be caused in the way of compensation—I am etc.

Birmingham March 28

CLEMENT BELCHER

Angina Innocens

SIR—The paper on angina innocens by Dr Geoffrey Bourne (*Journal* April 3 p. 695) is one which will be of interest to students of cardiac affections and also to medical practitioners. May I be allowed to refer to a case which I saw lately (and the only one I have ever seen) which seems certainly to be an instance of this malady.

It is that of a middle aged woman who was under my care long ago for asthma. She got over the asthma and was for years quite clear then it recurred and after treatment it again disappeared. In September of last year she was well for most of the summer she had been very ill. She

said "I am in bed and sometimes but especially at night, I have a stab like that of a knife going through my chest shoulder and left arm. It is very painful and lasts for hours. She asked me to come and see her as a friend and in doing so I found she had a doctor attending her and that he came three times a day and occasionally during the night if sent for. I found her heart and lungs perfectly normal to percussion and auscultation. Her blood pressure also seemed quite normal. Palpitation came on severely during the attack and sometimes she vomited. There was practically no nervousness nor had she any asthma. Her married daughter who attended her said it was supposed to be angina. I told them I found no sign of it. I wrote her doctor but gave no expression of opinion. In his reply he said he suspected the liver or gall bladder and thought she ought to have an x-ray examination.

The case fulfils Dr Bourne's criteria of there being no pain after exercise no evidence of cardiovascular disease palpitation common with attacks sometimes in bed. The same attacks continued for about four months, then they became less and finally practically disappeared. She called for me lately and was in good health but occasionally she has some pain. It will be interesting to see how she continues—I am etc.,

London W1 April 3

A. G. AULD

Effects of Radium Treatment

SIR—In the article which appeared in the *Journal* of March 27 (p. 651) under the heading 'Effect on the Eye of Radium Used for Treatment of Malignant Disease in the Neighbourhood' stress is laid upon the damage done to the eye.

The cases mentioned in the article were all of extreme malignancy and the question arises whether by surgery alone or by surgery combined with any method other than radium treatment damage to the eye could have been avoided. There is unfortunately at the present time a growing tendency in the public mind to regard all radium treatment with dread. When death follows malignant disease this is looked upon as the sad but natural termination of the disease. If however death occurs after radium treatment it is the treatment that is remembered to the extent that it is almost the radium treatment that comes to be looked on in the lay mind as the cause of death. On the other hand, the fact that many a cure in cases which have been diagnosed as malignant has been effected by radium treatment is accepted quietly hardly attracts attention and is indeed soon forgotten. Such is human nature.

It is now some thirty five years since radium came into use as a remedy in the treatment of disease. There is no doubt but that in its early employment too great hopes were raised and have been followed by a corresponding feeling of disappointment. The same may perhaps be said of the hopes raised by the employment of continually larger and longer doses by the insertion of needles and of radon seeds the endeavour being to make radium a sufficiently powerful destructive agent.

In all new treatments there is a tendency to run to the extreme and as larger supplies of radium became available so the tendency to use excessive doses—partly to hasten results and partly as a means of reaching deep-seated tissues—would appear to have become the chief objective. But one of the undoubted effects of radium is continually seen in its power to convert abnormal tissue back to the normal. The normal tissues would appear to be stimulated by the rays to counteract and overcome and gradually to restore to the normal those tissues in the cells of which nerve control has been lost.

or modified. To obtain this result excessive doses are not required but are contraindicated.

Can we improve upon the *vis medicatrix naturae*? I would enter a plea for the application of radium not as a destructive agent but in more moderate doses employed in such a way as to assist the natural forces which the human body is capable of exerting giving time and patience and depending less upon large doses as a destructive agent with the object of obtaining speedy and spectacular results.

At the present time there seems to be a general impression in the public mind that radium treatment is painful. This is not the case. When applied in the manner suggested radium treatment is painless and in the article referred to occurs the statement, "pain is not a feature, even of a severe conjunctival reaction or even of corneal necrosis." Pain in radium treatment occurs when it is used in excessive doses and as a destructive agent also in conditions which may be brought about by its use in that manner. I would quote the case of a lady who had an innocent tumour in front of the shoulder. Into this half a dozen radium needles were inserted and left for six days. The result was interference with the circulation in the axilla.

In conclusion being myself a firm believer in the efficacy of radium as a remedial agent my letter is written with the object of attracting attention to the good work which is being done in many directions and to the good results which are being obtained so that the apprehension of the public, which is undoubtedly largely existent at the present time with regard to radium treatment, may be allayed—I am, etc.,

RALPH H. BROWNE-CARTHEW, M.D.

London, S.W., April 5

Acquired Haemophilia

SIR—Mr C. V. Braimbridge's case of acquired haemophilia described in the *Journal* of February 6 (p. 301) is indeed very interesting. Though acquired haemophilia is not known to occur it is very difficult to explain the case in any other way particularly in view of the fact that the patient was operated on in 1927 without any untoward effect.

With regard to the treatment I would suggest the use of styphen which is a preparation of Russell's viper venom put on the market by Messrs Burroughs Wellcome and Co. It can be used either by local application in a dilution of 1 in 10,000 or by intradermal injection in a dilution of 1 in 100,000 the dose for injection being 1/2 to 1 ccm. Dr Hance of Bangalore has even used the preparation for intravenous injection without any ill effect. For further information I would refer readers to a paper on the subject by Dr J. B. Hance in the *Indian Medical Gazette* of February, 1937 in which he describes three cases of severe post-operative bleeding in haemophiliacs treated by styphen used in three different ways—namely local application, intradermal injection and intravenous injection. In one of the cases bleeding occurred after tonsillectomy—I am, etc.,

Norwich, March 5

K. A. ADAMS

The Birching of Children

SIR—The letter in the *Journal* of March 27 by Dr Maple is somewhat amazing. He would have us believe that the ceremony of birching young offenders approaches that of the grim ritual portrayed in the film *Mitins en la Berta*.

I have myself witnessed about a dozen birchings of young children and although it is not a pleasing spectacle I have no hesitation in saying that in not a single instance was there any sign of that physical and mental anguish that Dr Maple would have us believe afflicts the unfortunate victim. In every case the victim left the prison as if nothing had happened. In every case the birching was administered with the consent of the boys and there is an alternative to imprisonment.

Every boy who is worth his mettle, no matter to what class he may belong, knows that when he does a mischievous thing he may, if he is unlucky enough, be found out, be called upon to pay the penalty. A mischievous spirit is part of every healthy boy's character and if punishment is given painful though it may be he accepts it as part of the game—that is the essence of sportsmanship. If, as Dr Maple says, a birching damages a boy's mental make up for six weeks then I fear that all the English public schools must be full of potential nervous wrecks. Nothing is further from the truth.

The growth of psycho-analysis in the last few years has been amazing but it is a double edged weapon and should only be applied to certain chosen cases. Applied haphazard it can do the most incalculable harm and turn healthy young people into hypochondriacs and incurable neurotics. The increase of juvenile crime during the last ten years has been a difficult problem to tackle but I am of the firm opinion that corporal punishment carried out humanely and with every consideration for the particular case in point is a far better method of controlling crime than a lot of indiscriminate dabbling with a science about which so few of us know so very little—I am, etc.

P. G. BENTLEY, M.D., M.R.C.P.

Medical Officer H.M. Prison, Jersey

Jersey, March 31

Milk and the Health of the Cow

SIR—After reading Dr Brockington's article on compulsory pasteurization of milk (*Journal*, March 27, p. 667) I feel that if all the intellectual energy of the M.O.H.s expended on behalf of milk pasteurization had been directed into channels for the prevention of disease in cows the whole problem ere now would be well on the way to a satisfactory settlement. He like all his colleagues has been vigorously advertising the value of milk drinking and thereby encouraging an increased production of milk at the expense of the poor old cow.

All the milk-registering societies are of the devil because their great aim is to record a pathological disturbance of the cow's udder resulting in an increased flow of milk which is only fit to drink when still further damaged by pasteurization. These pathological udders indicate a lowered vitality of the cow and a predisposition to further disease whereby the tubercle bacillus *Brucella abortus* and streptococcal organisms are able to flourish all the more abundantly.

It is bad enough for a strong healthy cow to struggle against adverse conditions when fed on food grown on an impoverished soil but when cows with pathological udders have to struggle against the market on limited soil Dr Brockington is silent. We can hope to have a healthy nation only when we realize that man and land and soil are inseparably interdependent and that they rise and fall together. If we do not realize this we are in a race which these days is ravenous—we can expect to have to get good food and if the cow does not do all the become predisposed to so many diseases that he may and he must suffer. No more of pasteurization and gone to hell the cow to recover in a few years.

reduce even good milk from a first class food to one of mere subsidiary value necessitating a variety of specially prepared adjuncts wherewith to try and deceive Nature

It is as long ago as April and July, 1906, that I was allowed in the *British Medical Journal* to point out the great value of the lime salts for human beings. Fortunately a few of my colleagues had hearing ears and my only regret is that I did not then point out their importance for animal health as well—I am, etc

Swansea March 27

G ARBOUR STEPHENS

Compulsory Pasteurization of Milk

SIR—While naturally agreeing with Dr C Fraser Brockington that compulsory pasteurization is imperative may I be permitted to ask about cream butter and cheese. I understand that these products of milk simply teem with microbes of all kinds and I presume that eating them is just as harmful as drinking. Does Dr Brockington propose that no butter or cheese should be made except out of pasteurized milk and if so can he tell us whether this is practicable?—I am etc

Stoke-on-Trent April 3 PAUL BERNARD ROTH, F.R.C.S.

Combined Universities Election

SIR—I am constrained to endorse the sentiments so well expressed by Dr Manson in your issue of April 3 relating to the appalling apathy of medical graduates who omitted to take advantage of such an excellent opportunity of returning Sir Henry Brackenbury in the recent contest. As one of the representatives present at the Annual Representative Meeting in Oxford last July I well remember heartily concurring with the expressed need for adequate representation in Parliament and the desirability of securing someone who would be able to speak with authority on medico-political matters. There is surely no more able, efficient and well-equipped candidate in the profession for this purpose than Sir Henry and when one realizes the prodigious energy, devotion and enthusiasm with which he has served the profession for so many years the epithet of Dr Manson applied to his colleagues shallow-pated amnesia is more than justified.

It is much to be deplored that blind loyalty to party politics should have resulted in the loss to the House of Commons of such a distinguished leader of the profession particularly at this critical juncture when the legislature is in such need of strengthening with men of experience and practical knowledge of our public health services and administration. What is the use of grousing and then failing to seize opportunities of redress?—I am etc

Bournemouth March 4

WALTER ASTEN

Why "Nocifensor"?

SIR—I hope I shall be forgiven for butting into an argument which is really none of my business nor would I presume to take the word for Sir Thomas Lewis who is obviously quite capable of defending his nocifensor system of nerves with his superior Latin erudition. But I fear that all of us who have learnt the Latin of the ancient Romans must blush for them since they ignored the rules which Dr F J Allen's classical scholars have established for their language. The fact remains that *nocce* turns into *noctis*, *prohibeo* into *prohibitio*, *medior* belonging to the same group into *mediculis* and *medicatio* and even the monument of Dr Allen begins to shake when we find in brackets in some of the larger handbooks the spelling of *monumentum* cut off *monu*. The examples can be multiplied by anybody who cares to turn the pages of a Latin

dictionary. I trust a man of Dr Allen's learning will not take amiss this little attempt to rescue the pleasanter word for our tongues—I am, etc,

London W1 March 31

LUCIFER.

Radiograph or Skiagram

SIR,—I am disappointed to learn of the objections which can be stated against the word *skiagram* as detailed by Dr R Boulton Myles (*Journal* April 3 p 731) and I am indeed sorry that he finds it has no case. Of course this is simply a matter of opinion but what appeals to me about the word *skiagram* is that it suggests—remotely at least—the real nature of an x-ray photograph—namely, that it is a *shadow picture*. And to this extent and for this reason it seems to me to have more meaning and to be a more expressive word than its rival *radiograph* which faced the starter in its company in those murky days of 1896.

If this argument appears to Mr Boulton Myles to be merely trifling or whimsical there is nothing more that I can add but must leave the matter to the judgement of subtler minds and tastes than my own—I am etc

Broadstairs April 5

R S LAWSON

The Services

AUXILIARY R.A.M.C. FUNDS

The annual meeting of the members of the Auxiliary R.A.M.C. Funds will be held at 5.15 p.m. on Friday April 23 at 11 Chandos Street Cavendish Square W., when the annual report and financial statement for the year ended December 31 1936 will be presented and the officers and committee for the current year elected.

DEATHS IN THE SERVICES

Lieut Colonel ROBERT GALE, D.S.O. R.A.M.C. (ret.) died at Southsea on March 14 aged 49. He was born on August 16 1887 and was educated at Glasgow University where he graduated M.B. Ch.B. in 1909. Entering the R.A.M.C. as lieutenant on July 31 1909 he got a brevet majority on June 3 1919 became lieutenant-colonel on May 1 1934 and was placed on temporary half pay on account of ill health on March 20 1936 retiring very shortly afterwards. In 1913-14 he was on special duty in Egypt which he left to enter the war of 1914-18 when he was mentioned in dispatches in the *London Gazette* of June 29 1915 and January 1 1916 and received the D.S.O.

Colonel FERBERD RICHARD BUSWELL, C.M.G. late R.A.M.C. (ret.) died in Kensington on March 13 aged 72. He was born at Brixton on November 3 1864 was educated at the Midsex Hospital and took the M.R.C.S. and L.R.C.P. London in 1887. After filling the posts of house surgeon and hospital physician at his hospital he entered the Army as surgeon lieutenant on January 30 1893 became colonel on December 20 1917 and retired on March 20 1920. He served in the China War in 1900 gaining the medal and in the war of 1914-18 when he was mentioned in dispatches three times in the *London Gazette* of June 23 1916 January 4 1917 and December 24 1917—and received the C.M.G. in 1917.

Colonel PHILIP JAMES LUMSDEN, Bengal Medical Service (ret.) died at Fleet Hant on February 27 aged 73. He was born on February 2 1864 at Gorakhpur where his father was then magistrate and was educated at Aberdeen where he graduated M.B., Ch.B. in 1886. Entering the I.M.S. as surgeon on September 29 1888 he attained the rank of colonel on October 15 1918 and retired on November 27 1920. Most of his service was spent in the political department where he was agency surgeon for the States of Kohat and Jalhwar and subsequently agency surgeon and administrative medical officer in Baluchistan. He served on the North West Frontier of India in the Miranzai first expedition of 1891 and also during the war of 1914-18 when he was mentioned in dispatches in the *London Gazette* of June 26 1916. His younger brother, J. S. S. Lumsden entered the Bengal Service in 1891 and died in 1906.

Obituary

C C CHOYCE, M.D., F.R.C.S.

*Late Professor of Surgery and Director of the Surgical Unit
University College Hospital*

We regret to announce the death on April 2 after a long illness of Professor C C Choyce, who had lately retired from the post of director of the surgical professorial unit at University College Hospital London.

Charles Coley Choyce was born in Auckland in 1875 and graduated B.Sc. of the University of New Zealand at the age of 21. He then came to this country and studied medicine at the University of Edinburgh graduating M.B. Ch.B. in 1901 and proceeding M.D. three years later after holding house appointments at the Leicester Infirmary. In 1904 he became clinical assistant in the surgical department of the London Hospital and after taking the F.R.C.S. Eng. diploma, was appointed to the surgical staff of the Albert Dock Hospital and medical superintendent of the Dreadnought Hospital, at which institution he later served as assistant surgeon and surgeon to in-patients. He was also for four years surgeon to out-patients at the Great Northern Central Hospital and teacher of operative and clinical surgery at the London School of Clinical Medicine, Greenwich.

On the outbreak of war in 1914 he applied for a temporary commission in the R.A.M.C. and for nearly two years was officer in charge of the surgical division of the 19th General Hospital. In 1917-18 he was consulting surgeon to the Egyptian Expeditionary Force with the rank of Colonel A.M.S. He received the C.M.G. and C.B.E. for his war services and soon after the Armistice was appointed director of the newly formed surgical unit at University College Hospital and professor of surgery in the University of London. Among other posts held by Professor Choyce in recent years were those of consulting surgeon to the convalescent home for officers at Osborn and examiner in surgery to the Universities of London, Durham and Bristol. When he retired from active work, on account of ill health, he was elected consulting surgeon to University College Hospital.

His chief literary work was the editing of Choyce's *System of Surgery* (now in its third edition) for which he wrote several articles; he also contributed to Carson's *Modern Operative Surgery* and to the *Dictionary of Medicine* and edited the seventh and eighth editions of Treves's *Surgical Anatomy*. His wife Gwendolen, daughter of J. C. Dobbin J.P. of Chislehurst, Kent, survives him with a son and a daughter.

Mr Julian Taylor writes:

The death of Professor C C Choyce on April 2 was unfortunately no surprise to his colleagues and other friends who had watched with concern the progress of his long illness so bravely borne that none of them ever heard a complaint. Already a graduate of the University of New Zealand he first came to Europe in 1896 to study medicine in Edinburgh where in 1901 he graduated at the age of 26. Almost at once he came South and after holding various junior appointments he was elected surgeon to the Seamen's and the Great Northern Hospitals in London. He quickly settled down into successful consulting practice with a facility that derived from his already mature and balanced judgement as well as from a kind heart and he was soon well known to a large circle of friends in general and consulting practice. His teaching at the Dreadnought Hospital became a London institution

and he quickly gained a large post graduate clientele among those preparing for the higher examinations as well as those just wishing to learn surgery. Large numbers of whom to-day remember with gratitude his well organized operative surgery class far more comprehensive in its scope than its title suggests. Contact with post graduates showed him the then existing need for a large modern textbook of surgery more fully informative than the students' books of the day and this need he set himself to meet. Collecting a large number of eminent contributors including himself he undertook the formidable task of editor and in 1911 Choyce's *System of Surgery* in three volumes was published by Messrs Cassell which as medical director he later became. Success was immediate and was due at once to his efficient editorship and to the wide cast of his net in catching his writers not all of whom could completely forget even in the presence of his disarming good nature compression and correction of their contributions. Choyce's early education had given him the command of our language; he had an ear for a good sentence and a hawk's eye for indifferent syntax.

The war took him to Egypt where he soon became consulting surgeon to the Mediterranean Expeditionary Force where he earned well his C.M.G. and C.B.E. But it took from him a large London practice which, though the task would have been he was not anxious to bring together again in 1919 having become greatly interested in the projects of some of the London medical schools to found professorial units staffed by officers giving their whole time to hospital and school. At University College Hospital where he was made director of the surgical unit Choyce began work early in 1920 and seemed at home from the first. He not only directed his unit but so completely identified himself with his new hospital that no stranger would have guessed his recent coming. To his students he was P.P. Choyce; to his colleagues he was a central figure to whose administrative help they could always turn and to his patients he was what he had always been kind, gentle and level-headed. To each he had the right approach that is born of sympathy and in his daily round he never deprived himself of his greatest pleasure—his visits to the children's ward. He had lost a son from osteomyelitis. A sportsman to the end he had played Rugby football and cricket for which he cherished an affection that would sometimes lead him to Lord's on a summer afternoon. The enlargement of the hospital following on the Rockefeller benefactions gave him an opportunity to exercise another of his gifts and he would pore over plans at all hours; it is largely due to his care and forethought that so excellent a use of the available space was made cramped as the site proved to be in the expanding needs of modern medicine. Necessarily a member of a large number of committees he rarely missed a meeting and he was never impatient of their sometimes boring routine. As director of the unit he took on the responsibility for the organization of the whole of the surgical teaching of the hospital his colleagues as well as his own. His ward visits were crowded yet the latest joined students were always his especial care and as with many other famous teachers if his stories had sometimes been heard before they were received with an appreciation that showed that the meaning had gone home. His surgical lectures were wide and intense and ranged from the blunty passages to the delicate tongue and the delicate. He clinically demonstrated thus of an insight by his medical colleagues and students never of a more technical and less practical in current demand.

In 1926 the first sign of his ill-health appeared, and during the next ten years his physical forces gradually deteriorated until almost the whole of the operative work of his unit was done by his assistants, to whom the loyalty of their chief was a secure possession. Throughout this time, however, until his enforced and deplored retirement his whole mind and personal capacity were at the disposal of the hospital and school its organization and its students, but it is not only in University College and his earlier hospitals that his loss from the company of surgeons is felt.

JOHN ARNOLD JONES OBE

MB ChB., F.R.C.S.Ed

The death occurred suddenly on March 23 of Dr Arnold Jones of Manchester at the age of 57. Arnold Jones, known to many of his colleagues as 'Jimmy Jones,' was a Manchester student taking the MB ChB Vict in 1903 and the F.R.C.S.Ed in 1905. During his student days Jones was a keen follower of university politics, and cultivated the habit of public speaking, which he retained throughout his career and he could always be relied upon to make a clever, interesting, and witty speech. After being house surgeon at the Manchester Royal Infirmary he showed leanings towards specialization in ear, nose and throat work and was in turn house surgeon to the Royal Ear Hospital London, and to the Birmingham and Midland Ear and Throat Hospital. His further education he completed in Vienna. During the war he early joined the R.A.M.C. and saw service with the 29th General Hospital in Salonika where he was made consulting aural surgeon and laryngologist to the British Expeditionary Force. For his services he was awarded the OBE, and returned with the rank of major. At the time of his death he held various appointments including those of consulting aurist to St Mary's Hospitals, aurist and laryngologist to the Royal Manchester Children's Hospital and honorary surgeon to St John's Hospital.

Jones was a well known figure in aural surgery and his contributions to the subject whether written or delivered before some society, always brought to light a new angle of approach and stimulated discussion. He brought his volatile temperament into all he did, and whether in social or in professional circles he was usually the centre of an animated conversation. His professional work was characterized by great care and thoroughness in all he undertook and he achieved a reputation of which any surgeon could be proud. His chief recreations were reading and golf; the latter however, had been denied him for some time owing to poor health and one can only regret that rather against medical advice he returned to work earlier than he should.

One of Jones's chief characteristics was his capacity for friendship. A good raconteur, bubbling over with vivacity, he was the life and soul of a party in his younger days, while in his later years nothing pleased him so much as a quiet reunion with friends of old standing. With characteristic dislike of pretence and convention he left instructions that the time and date of his funeral were not to be published and so his passing was witnessed only by a small group of his old friends, most of whom dated their friendship back to student days. He leaves a widow and two children with whom and his many friends much sympathy is felt.

C. P. L. and H. T. A. write: Arnold Jones had a record of long, efficient and unselfish service to the Royal Man-

chester Children's Hospital. He regularly attended the out-patients on two days a week until his recent illness and also had ward duties and operations on other days. He made a special investigation into the tonsil and adenoid services of a children's hospital, and expressed his views in the *British Medical Journal* of February 1931. His election to the Board of Governors was a mark of recognition of his special interest in the welfare of his patients and of the value of his services as an administrator. 'Jimmy' was a stimulating colleague, strong in his convictions and fearless in his pursuit of them, a loyal friend, and one who will be missed by his patients and their parents and also by his fellow medical men, many of whom were indebted to him for professional services to themselves or their families.

F. GARLAND COLLINS, M.R.C.S. D.P.H.

Medical Officer of Health for West Ham

The county borough of West Ham has suffered a grievous loss by the death of its medical officer of health Dr Francis Garland Collins at the age of 55. He succeeded Dr Charles Sanders the first full time M.O.H. (who is still living) in 1924, and under his regime the public health department has made great progress. Dr Collins gave the whole of his professional life to the service of West Ham after qualifying M.R.C.S. L.R.C.P. and filling a house appointment at the London Hospital. In 1907 he entered the service of the old West Ham Guardians as assistant medical officer at Whipps Cross Infirmary under the superintendency of Dr Muir. Three years later he became an assistant medical officer at Plaistow Fever Hospital, and in 1913 was appointed tuberculosis officer for the borough, after having served for a short period as assistant school medical officer. He did valuable work in the former capacity until 1915, when he joined the R.A.M.C. in which he attained the rank of major. He served throughout the period of the war at a military hospital in England, and later in Salonika and with the Serbian Forces. On his return he resumed work as tuberculosis officer, and in 1924 was selected from a long list of applicants for the position of M.O.H. for West Ham. He pursued a progressive policy in all branches of public health work, especially in the development of maternity and child welfare service which under his enthusiastic guidance, has reached a high state of efficiency in the borough.

To the many schemes involved by the Local Government Act 1929, Dr Collins brought a stimulating and vigorous mind. His activities backed by a progressive council which does not stint its public health service have borne fruit in many directions and on more than one occasion have elicited commendation from Government Departments. Under his supervision a remarkable improvement has been achieved in the matter of infant mortality. When he took office in 1924 the infantile death rate was 78 per thousand, last year it was 45. The maternal mortality rate has also shown a gratifying decrease and last year was the subject of comment by the Minister of Health in the House of Commons who pointed to West Ham as an example in this respect to the rest of the country. Ante-natal and post-natal work claimed a large share of Dr Collins's attention and besides the four council clinics in the borough others run by independent organizations are subsidized by the Corporation. Dr Collins was also school medical officer a plus of service which is regarded as one of extreme importance in the borough. He joined the British Medical Association

tion in 1910 and was chairman of the Stratford Division in 1927-8 and its representative at the Annual Meeting of 1930

Dr Collins contracted dysentery on war service, and during the last few years had been in poor health, for the last five months he was confined to bed. The funeral took place on March 31 in the presence of a large and representative gathering at Buckhurst Hill Churchyard Essex.

RICHARD WHITTINGTON, M.D.

It is with regret that we have to record the death of Dr Richard Whittington at Hove on March 30 at the age of 68. Dr Whittington was educated at Kings College London afterwards proceeding to Merton College Oxford and St Thomas's Hospital. He took his M.A., M.D. and B.Ch. at the University, and the M.R.C.S. and L.R.C.P. Lond. and later settled in practice at Brighton. He was for many years a loyal member of the British Medical Association and held the posts of chairman of the Brighton Division 1922-3 representative at Oxford last year, and at the annual meeting at Brighton in 1913 was vice president of the Section of Climatology and Balneology. Dr Whittington took a very active interest in the local government of the town, and was a member of the Brighton Education Committee and later of the Hove Education Committee of which body he was chairman for three years. He was an alderman of the East Sussex County Council and also served on the Brighton Board of Guardians. His activities in social matters were very numerous. He was chairman of the local branch of the N.S.P.C.C. a governor of the Brighton and Hove Grammar School of the Brighton Technical College of the Brighton School of Art of the Hove County School for Girls and of the Brighton Girls Club. Dr Whittington was physician to the Hove Hospital and consulting physician to the Brighton Municipal Hospital. He wrote only occasionally his articles including a paper on Prophylactic Measures against Enteric Fevers in Armies (*Treatment* 1902) and Stimulation of Abdominal by Thoracic Disease (*Lancet* 1907). He had served as a civil surgeon in the Boer War and during the great war was a major in the R.A.M.C.(T). He married Miss Ridsdale who was a sister of Mrs Stanley Baldwin and daughter of the late E. L. J. Ridsdale of Rottingdean. His wife died some years ago and Dr Whittington leaves one daughter.

Dr Whittington was of a singularly retiring nature, loyal, trustworthy and courteous. His death leaves a gap in the ranks of his colleagues which it will be difficult to fill. If there was one characteristic in him which especially predominated it was his scrupulous accuracy and care for details. He would sign no document till he was fully aware of its contents. His standard of honour and truthfulness was very high; he was absolutely to be trusted in any statement he made or in any work he undertook. Only less than twenty-four hours before the start for the Annual Meeting had to be made one of the Brighton representatives was taken ill and Dr Whittington, at this short notice, took his place. His colleagues knew they could trust him to carry out his duties with care and skill and they were not disappointed.

DAVID JAMES WOOD, M.B., C.M.

Ophthalmic Surgeon, New Somerset Hospital, Capetown.

News has reached this country of the death on March 18 at Capetown of Dr David James Wood for many years a leading ophthalmologist and a well known figure in the medical world of South Africa. A native of Scotland, he was educated at Edinburgh Royal High School and the University of Edinburgh graduating M.B., C.M.E.d. in 1888. After three years as house surgeon to the Royal London Ophthalmic Hospital he went out to South Africa and settled in Capetown as an ophthalmic surgeon becoming lecturer in ophthalmology at the University and a member of the visiting staff at the New Somerset Hospital.

Dr Wood has a long and honourable record in the British Medical Association; he was honorary secretary of the Cape of Good Hope Branch from 1895 to 1911, then for two years a member of the Branch Council; in 1905 he held office as vice president of the Cape of Good Hope Western Branch and in 1906 was elected president. From 1902 to 1915 he served as a member of the Colonial Medical Council and again in 1922 to 1925, and from 1928 to 1933 he was a member of the Union of South Africa Medical Council. During the war he held a commission as major in the South African Medical Service. He maintained contact with fellow workers in his specialty by membership of the Ophthalmological Society of the United Kingdom.

ROBERT GORDON MCKERRON, M.D.

Dr Herbert R. Spence writes:

In the *Journal* of April 3 appeared an excellent account of the career and delightful personality of Professor McKerron whose death is a severe blow to his many friends. I would like to add a few words on his obstetrical and gynaecological work. He published in the *Obstetrical Transactions* two valuable papers on Antero-posterior Positions of the Head as a Cause of Difficult Labour and on Suppression of Urine after Labour and in 1897 the most important treatise on the subject up to that year on Obstruction of Labour by Ovarian Tumour in the Pelvis. This he enlarged and published in 1903 as a small octavo volume of 282 pages under the title of *Pregnancy, Labour and Childbed with Ovarian Tumour*. As the author of this work which is a classic McKerron's name will endure for ever; subsequent writer on the subject must refer to it. It is based on a series of 1290 cases 704 of which had been collected by the author and is a monument to his industry, wide reading, sound judgement and clear statement. As an old friend of nearly fifty years standing I am anxious that this *maumet opus* should appear in the record of his life's work.

on the subject. It was for these contributions to surgical progress that he was awarded the Liston prize by the Edinburgh College of Surgeons, a distinction which gave him great and legitimate satisfaction.

As a surgeon Malcolm was methodical and painstaking and he never attempted any spectacular or ultra-rapid technique. He appreciated, earlier than many of his contemporaries, the great importance of complete haemostasis and his diagnosis was founded on such careful investigations that he was rarely confronted at operation with an unforeseen difficulty. If he had a fad it was an inveterate hostility to the vermiform appendix, and he rarely missed an opportunity of removing it when doing any kind of laparotomy. It was said at one time (and probably truly) that there was only one member of his household in Wimpole Street whose appendix had not been removed. He was in many ways the typical Lowland Scot of Anglo-Saxon origin: fair hair, yellow beard, somewhat frosty and very blue eyes, cautious and canny, almost shy and outwardly not an easy man to know, but when one got through his shell of Scottish reserve a very loyal friend with a strong sense of pawky humour, and very definitely a gentleman.

Dr JOSEPH PEREIRA GRAY, who died recently at his home in Northernhay Place, Exeter, at the age of 68, had been in practice in that city for about forty years. His health had been failing for the last five years. He studied medicine at Charing Cross Hospital, and in 1894 qualified M.R.C.S., L.R.C.P. In 1903 he graduated M.D. Brux with honours. Besides conducting a large private practice he had been honorary surgeon to Exeter Dispensary for a quarter of a century, serving on its committee, and being subsequently elected consulting surgeon. He was well known and highly esteemed in the public life of the city, his appointments including those of police surgeon, visitor to licensed houses under the Lunacy and Mental Deficiency Acts, and medical officer to the City Hospital, the Exeter Children's Home, and the Southern Railway. He helped to found the Exeter City Division of the St. John Ambulance Brigade in 1901, which awarded him its long service medal, and the St. John Ambulance Association elected him an honorary life member in recognition of his services as lecturer and examiner. Dr Gray was also a member of the Medico-Legal Society, the Royal Medico-Psychological Association, and the Devon and Exeter Medico-Chirurgical Society. For many years he had represented the Exeter Division of the British Medical Association on the local committee of the Queen's Institute of District Nurses, and had been surgeon to the Exeter Lying-in Charity. He represented the local medical practitioners on the Exeter Insurance Committee, and contributed articles to various medical periodicals from time to time on clinical and administrative topics. He joined the British Medical Association in 1904. He is survived by his widow and by two sons, both of whom are in medical practice in Exeter.

The death is announced of Professor GASTON MICHEL, at the age of 62, after an acute illness. He was professor of clinical surgery at the Faculty of Medicine of Nancy, and an associate member of the French Academy of Surgery. He was president of the French Surgical Congress in 1935, when his address on the moral traditions of surgery made a profound impression on his audience.

The death is announced at Saint Germain, at the age of 71, of Dr PECKER, the founder of the system known as Assistance Scientifique à Domicile. This system, which since its institution has been copied by many communities, began with maternity and child welfare at home in country districts. Its success in this field having been assured, its activities were later extended to medical and surgical as well as to obstetrical cases, and some time after the war the system was expanded to include syphilis and tuberculosis.

Universities and Colleges

UNIVERSITY OF OXFORD

In a Congregation to be held on May 4 it will be proposed that Mr G. R. Girdlestone be constituted Nuffield Professor of Orthopaedic Surgery, while holding the office of clinical director of the Wingfield Morris Orthopaedic Hospital, subject to the general conditions laid down in December 1936 with special provisions permitting him to engage in private practice but not to receive emoluments as professor. It will also be proposed that Professor J. A. Gunn be constituted Nuffield Professor of Therapeutics while holding the office of director of the Nuffield Institute for Medical Research, subject to the general conditions of December 1936 with special provisions for a stipend of £1,200 a year and for the decree to come into operation on the day when he ceases to hold the Chair of Pharmacology.

UNIVERSITY OF CAMBRIDGE

The appointment is announced of S. D. Elliott M.B., B.S. (Lond.) as university demonstrator in the department of pathology for three years from April 1, 1937.

UNIVERSITY OF LONDON

ROYAL CANCER HOSPITAL (FREE)

The following candidates have been approved at the examination indicated:

ACADEMIC POST-GRADUATE DIPLOMA IN MEDICAL RADIOLOGY—
Part I: I. A. Abou Sinna, P. Arunachalam, C. S. Chatterjee, Phyllis M. Fraser, D. W. Smithers, R. C. W. Staley.

UNIVERSITY OF SHEFFIELD

The following candidates have been approved at the examination indicated:

FINAL M.B. CH.B.—Parts II and III: *Margaret G. Bell, †R. W. Elliott, †S. Schultz, †D. Shapiro, †† B. Sneddon, S. R. Adlington, G. K. Burton, H. Cullumbine, S. Dalliah, Khalil A. Naylor, M. J. Pivawer, G. E. Robinson.
* With first-class honours. † With second-class honours.

UNIVERSITY OF ABERDEEN

At the spring graduation ceremony on March 31 the honorary degree of LL.D. was conferred on Mr. Naughton Dunn M.A., M.B., Ch.B. (Aberd.) surgeon and lecturer in orhopedic surgery in the University of Birmingham.

The following diplomas were conferred:

D.P.H.—R. Fraser, S. T. G. Gray.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

Lectures

Professor Philip Wiles M.S., F.R.C.S. will deliver a Hunterian Lecture on "Postural Deformities of the Antero-Posterior Curves of the Spine" in the theatre of the College, Lincoln's Inn Fields, W.C., on Monday, April 12, at 5 p.m.

Two Anis and Gale Lectures on "The Anatomical and Physiological Relations of the Hypothalamus and Pituitary Gland" will be delivered by Dr. John Beattie in the theatre of the College on Wednesday, April 14, and Friday, April 16, at 5 p.m. each day.

SOCIETY OF APOTHECARIES OF LONDON

*The May examinations for the Diploma of the Mastership of Midwifery will be held on Tuesday, Wednesday, and Thursday, May 18, 19, and 20, instead of on the dates previously announced. This change is necessitated by the fixtures of the Gynaecological Visiting Society for the following week.

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

The following candidates have been awarded the Diploma of the College after examination: P. H. R. Anderson, W. G. Bigger, P. G. Buxton, Jane O. French, E. S. Gawn, V. W. Gerrard, R. E. Hiron, C. W. C. Karran, Max F. St. J. U. Villar, G. P. Milne, Elizabeth M. Newham, J. C. Payne, Margaret F. Robertson, Sophie Schiller, R. Sinha, Doris E. Stewart, C. Tetlow.

Medico-Legal

SILICOSIS IN COAL MINES

By workmen's compensation law the various symptoms due to the inhalation of silica dust are treated as an injury caused by accident arising out of and in the course of employment. The Workmen's Compensation Act 1925, provided by its Section 47 that the Secretary of State might draw up a scheme for the payment by employers of compensation to workmen who suffered in this way. Accordingly various schemes have from time to time been drawn up. They work smoothly thanks to the active co-operation of the members of the industries and nearly eliminate litigation. Mr Paul C. Davie read an interesting paper on them to the Medico Legal Society on February 25. The Various Industries (Silicosis) Scheme, 1931 provides that if a workman has been employed in any of certain processes for not less than five years his disease shall be deemed to be due to employment in those processes unless the employer proves the contrary. Various processes are set out in subparagraphs including drilling or blasting in stone in coal workings, handling or moving stone at the workplaces and operating any machine used for drilling, cutting, ripping or breaking stone in a coal mine. The particular subparagraph dealing with these processes has a proviso that the employer shall not be liable if he can prove that the workman during the employment to which the disease is attributed, has not been exposed to the dust of silica rock. In 1934 this scheme was amended by the addition of another process any operation in any coal mine.

House of Lords Judgement

In the case of *Wragg v. Samuel Fox and Co. Ltd.* tried on March 15 by the House of Lords, a workman was employed for a considerable time on heading and ripping underground and became totally incapacitated through silicosis. He applied for compensation in August, 1935 and in November the county court judge awarded compensation finding that he was constantly exposed to silica dust at his work and that the silicosis was due to the nature of his employment and could not have been contracted in any other way. He found however that the appellant had not been exposed to the dust of silica rock. The employers appealed saying that the new process 'any operation underground in any coal mine' must be subject to the proviso attached to the old processes in coal mines that the employer shall escape liability if he can show that the workman has not been exposed to the dust of silica rock. The Court of Appeal allowed this contention, but on March 15 the House of Lords declared that it was wrong. Lord Thankerton in whose judgement the other Lords concurred could not see any justification for this construction. The new process, he said must clearly be an additional subparagraph and was not to be included in the subparagraph which had the proviso attached to it. Accordingly the House held that the workman was entitled to compensation.

The point is a narrow one but the decision clearly shows that when a workman contracts silicosis in any employment underground in a coal mine he will be entitled to compensation even if the employer can prove that he has not been exposed to the dust of silica rock.

ANOTHER WARNING

Medical men in the North of England should beware of a person named Eaton Jones who has recently been calling upon doctors and dentists in the neighbourhood of Liverpool and offering them for sale a liquid preparation called *luminex* which he says will coat instruments and prevent them from rusting. He purports to represent The Metallurgists Company but in the course of cross-examination in recent court proceedings

he admitted that his wife was the head of the firm that he was her manager that they had no factory and did not employ a metallurgist and that he had frequently changed his address. His tactics have been to get doctors to sign order forms on a representation that the goods are supplied on trial, that repayment will be made if they are not satisfactory, and that he desires to introduce an important new product and not to force sales. When the doctor has signed the form it turns out to contain the printed term 'Cash on delivery'.

Unfortunately for him after succeeding with a certain number of doctors, he caught a couple of Tartars in Dr Hugh Smith and Dr D. L. Charters of Birkenhead. Dr Smith whom he had the hardihood to sue in the Birkenhead County Court on February 25, claiming £1 ls said that he had agreed to take a bottle but had refused to pay cash. Jones had asked him to sign a form to show that he had called and he had done so. On receiving a letter from Jones next day he left instructions at his surgery not to take delivery. Dr Charters said he agreed to buy a bottle, but noticed that the order form was made out for two bottles instead of one. Jones told him that it was to show that he had called and he could give the preparation a trial. He took a pair of disused forceps and coated them on one side but three days later noticed that a deposit was beginning to appear on the coated side. Jones denied that the order forms had been obtained by a trick but agreed that he had told Dr Charters of a three year guarantee and had filled in the order form for two bottles and the doctor had altered it to one. The test with the forceps was not a fair one, he said because the doctor had not cleaned them before applying the liquid. Judge Whitmore Richards dismissed the claim saying he was satisfied that Dr Smith declined to give the order or receive the goods and Dr Charters had purchased a bottle conditionally on trial. He added 'I am sure the public will appreciate the public spirit shown by the doctors in defending this action. It would have been far cheaper and far easier for them to have paid their guineas but I think they felt it was a public duty to refuse. Other Birkenhead doctors have paid up their guineas rather than go to the trouble of defending this man's impudent claims, but the judge's words may deter him from issuing any more summonses in that neighbourhood.'

Medical Notes in Parliament

The House of Commons resumed after the Easter Recess on April 6 and on that day gave a second reading to the Special Areas (Amendment) Bill. Documents presented to the House of Commons on the same day include accounts of the income and expenditure of the General Medical Council and of the Branch Councils for 1936; accounts of the income and expenditure of the Dental Board of the United Kingdom for 1936; annual report of the General Board of Control for Scotland for 1936; Unemployment Assistance (Periods of Occasional Sickness) Rules 1937.

The House of Commons Standing Committee on Scottish Bills will consider on April 13 the Methylated Spirits (Scotland) Bill.

Factories Bill in Committee

Consideration of the Factories Bill was resumed by a Standing Committee at the House of Commons on March 23. On Clause 38 (power of court of summary jurisdiction to make orders as to dangerous conditions and practices) Mr RHYS DAVIES moved to substitute the words 'risk of bodily injury' for the words 'danger to life' in the subsection which provided that a court or a justice might on an ex parte application by an inspector, prohibit the use of any works machinery,

or plant or the carrying out of any process or work involving imminent danger to life until a complaint had been heard and determined. The word shall was also substituted for the word may in the provision enjoining the court to issue orders under this clause. The committee accepted the clause as amended. Clause 39 (power of court of summary jurisdiction to make orders as to dangerous factory) was added to the Bill.

On Clause 40 (supply of drinking water) Mr BURKE moved to add a proviso that at every point of supply of water a reasonable number of clean drinking vessels should be provided and maintained when the supply of drinking water did not consist of a drinking jet. Mr GEOFFREY LLOYD agreed that it was important to have proper supplies of drinking vessels. Provisions similar to those in the amendment were contained in the Drinking Water Welfare Order which had wide application to factories but not to small factories. He suggested that the amendment moved by Mr Burke should be altered to read:

Except where the water is delivered in an upward jet from which the workers can conveniently drink, one or more suitable cups or drinking vessels shall be provided at each point of supply with facilities for rinsing them in drinking water.

The amendment was accepted and the clause as amended was added to the Bill.

WASHING FACILITIES

On Clause 41 (washing facilities) Mr MANDER moved to apply to all factories the provisions which the Bill would authorize the Home Secretary to order to be made for washing facilities in factories where dust or dirt was given off in the process or the materials were dirty or offensive in nature and a special need thereby existed for washing facilities. Mr Mander said the provision of washing facilities should be applied in every factory with not less than twenty employees. Facilities ought to include soap, towels, hot water and running water. Sir ERNEST GRAHAM LITTLE said washing was essential not only in factories where dirty or offensive materials or processes were used but in factories where cleanliness was of paramount importance—for example in the preparation of food. If the Minister accepted the requirements suggested by Mr Mander Sir Ernest proposed to move an amendment deleting the word washing and substituting the word cleansing.

Mr GEOFFREY LLOYD said that under the Dangerous Trades Regulations and Welfare Orders washing facilities were provided in a very large number of industries and the clause was an attempt to give a quick method of extending washing facilities but after listening to the views that had been expressed he thought the Government ought to consider the matter with a view to bringing forward wider proposals. If Mr Mander would withdraw his amendment the Home Office would go into the matter before the report stage and undertake to widen the clause. Mr BROAD was not prepared to agree to the amendment being withdrawn. No one had the right to employ an individual from morning until night unless facilities were provided for washing. People did not realize like those who were engaged in workshops the prevalence of boils, carbuncles and skin diseases which were due to lack of washing facilities.

Mr Mander's amendment was then negatived and on the motion of Mr Short the committee accepted amendments to ensure that the provision made for washing should include a sufficient supply of soap and clean towels conveniently situated. The clause was then added to the Bill.

PROTECTIVE CLOTHING

On Clause 42 (accommodation for clothing) Mr MANDER moved an amendment to apply the clause to all factories and not merely to those covered by an order of the Home Secretary. He said that workers could arrive soaked through at any factory whatever the process. Mr LLOYD said he was prepared to approach this proposition in the same spirit as he had the previous clause but the difficulty was in the case of workers such as men in the building trade who moved about in the course of their work. He would examine the

amendment before the report stage. Mr VIANT said it was not uncommon for men working on buildings to have no facilities for storing their clothing. Men on buildings ought not to be expected to work in wet clothes. Rheumatism was prevalent in the building trade. The amendment was withdrawn.

Mr ALFRED SHORT moved an amendment to provide that suitable protective clothing in a clean condition should be provided by the occupier and worn by the persons employed. He said that in many industrial establishments this practice was followed with good results. Mr LLOYD said the Government accepted the principle that protective clothing should be provided in all proper cases but that could be done under the dangerous trade regulations and welfare regulations to be made under Clause 45. Mr Short's amendment would require protective clothing to be worn where the workers took off a good deal of their indoor clothing because of the heat and it would be unreasonable to require them to wear protective clothing instead. In industries such as laundries, cement works etc., where the Home Secretary required provision of protective clothing the Home Office specified exactly the clothing to meet the particular case. It was better that the Home Secretary should have power on the advice of factory inspectors to lay down exactly what protective clothing was needed. Mr Short withdrew his amendment and the clause was added to the Bill.

SITTING IN FACTORIES

On Clause 43 (facilities for sitting) Mr GRAHAM WHITE's motion to leave out the word female so that the provision should apply to both sexes was negatived. Mr BROAD withdrew an amendment drafted to ensure that the use of seats should be permitted to female workers whenever this did not interfere with their work. Mr MANDER pointed out that the clause did not refer to seats but to suitable facilities for sitting. Mr LLOYD said the floor would not be regarded as a suitable facility for sitting. The phrase suitable facilities for sitting was used because in some factories the facility was in the form of a short hammock between pillars. It was unnecessary to ensure that the employer should allow the use of seats as had been done in the Shop Act because in the latter case employers thought that the public did not like to see the seats in use. The Factory Department had no evidence that such a prohibition had ever occurred in factories.

On a motion that the clause stand part of the Bill Mr FLEIS SMITH hoped that the Home Secretary would reconsider the clause to permit a more generous interpretation. Progressive employers now provided facilities for female employees to look after one another. Mr BROMFIELD said secretaries of textile trades unions could forward Mr Lloyd many complaints of refusal to allow the use of seats. He himself had known cases of young women who had been discharged for sitting down during working hours. Mr LLOYD replied that frequent refusal to allow female workers to use the seats provided would be an offence against the clause as it stood. The provision of rest rooms was possible in special industries under Clause 45. The clause was added to the Bill.

On Clause 44 (first aid) Mr BROAD moved to leave out the restriction to factories using mechanical power of the provision of first aid boxes. He said many dangerous operations were done in places where mechanical power was not used and where minor injuries might lead to septic poisoning. Mr LLOYD said that in factories where mechanical power was not used but where dangerous operations were done and there was special risk first aid boxes could be required under the safety or welfare regulations and the Home Secretary would require provision to be made. Mr BROAD withdrew his amendment.

Sir ERNEST GRAHAM LITTLE moved to provide that the first aid box or cupboard should be examined annually by a factory surgeon. He said the absence of adequate first aid was a fruitful cause of serious accident. He had a second amendment to ensure that persons could be available who were competent to use the first aid appliances and a third one that in

appliances should be in the charge of a person possessing a certificate of first aid. Mr LLOYD said the Home Office did not think it necessary that the first aid boxes should be examined by a surgeon. Their contents would be prescribed in detail by the Home Secretary and it was easy for the Factory inspectors to make certain that the right ingredients were in the boxes. There was not a great risk of deterioration of the contents of the boxes for a reasonable period and he would look further into the question of examination of the aseptic parts of dressing. In a large factory it might be reasonable to have someone proficient in first aid although the Home Office would advise that a reasonable person which was the term used in the Bill, would be capable of dealing with most of the minor first aid assistance necessary. If the amendment was withdrawn he would reconsider the question. Sir Ernest withdrew his amendment and the clause was added to the Bill.

On Clause 45 (welfare regulations) a discussion arose on the co-operation of the employees in welfare arrangements and after an amendment had been withdrawn the clause was added to the Bill.

Consideration of the Bill was then adjourned till April 8. Sir JOHN SIMON remarking that the committee had made good progress and he hoped to get the committee stage over before the Whitsuntide adjournment. The report stage of the Bill on the floor of the House was going to be important and he would be sorry to see it rushed.

Coroners No Legislation this Session

On April 6 Mr A EDWARDS asked Sir John Simon whether in view of statements recently made by coroners which seemed to be outside the function of a coroner he would consider expediting action on the report of the Departmental Committee which deplored the tendency of coroners to make animadversions on the character and conduct of individuals. Sir JOHN SIMON said there was no prospect of an opportunity being found during the present session for any legislation on the subject of coroners. He did not think there was any action which could conveniently be taken meanwhile to deal with particular recommendations included in the committee's report. He had no doubt that coroners had noted the recommendation in the report on the point referred to.

Health of Recruits—On April 6 Mr ERNEST BROWN told Miss Irene Ward that the results of the Aldershot experiment on recruits below the required standard for acceptance in the Army were being examined by his Department to see whether they pointed to the need of modifications in the treatment of unemployed men applying for a course of training.

Medical News

The spring dinner of the Queen's University Club, London will be held at Dorchester Hotel on Thursday April 22. Further information can be obtained from the secretaries 101 Harley Street W1.

Mr T Macara FIC, will lecture on Science and the Conservation of Food. Some Special Problems at the Royal Institution 21 Albemarle Street W on Friday, April 16 at 9 p.m.

The one hundred and seventeenth annual general meeting of the Hunterian Society will be held at Simpson's Restaurant Cheapside EC on Monday, April 12 at 7.15 p.m. After the business of the meeting is concluded a discussion on Air Raid Precautions will be opened by Dr L. Haden Guest.

The Society for the Propagation of the Gospel will hold its medical mission meeting in Caxton Hall, Westminster on Thursday April 15 at 3 p.m. The speakers include Drs K. E. D. Dauncey and F. S. Drewe who will give an account of their work in India and Africa respectively.

The British Health Resorts Association has arranged a conference at Skegness on Saturday, April 17. The programme includes a discussion on Industry and the Health Resort to be opened by a well-known employer, followed by Mr Ernest Bevin and by Dr Leonard P. Lockhart of Nottingham. There will also be a discussion on Games Sport and Sea Bathing in Relation to Health to be opened by Sir Kaye Le Fleming followed by Dr R. Cove Smith and Dame Louise Mellroy.

The annual medical congress at Lille will be held from May 7 to 9. Further information can be obtained from the Secretary Faculté de Médecine Rue du Port 56 Lille.

The sixth Italian Congress of Colonial Medicine and Hygiene will be held at Florence from April 12 to 17 under the presidency of Sir Aldo Castellani.

A tour in Sardinia organized by the Italian journal *Rassegna Internazionale di Clinica e Terapia* will take place from April 27 to May 9. The cost will be 400 lire. Further information can be obtained from *Rassegna Internazionale di Clinica e Terapia* Via San Felice a Piazza Dante Naples.

The paragraph of Irish news published last week (p. 729) stated correctly that Colonel Thomas Sinclair C.B. F.R.C.S. M.P. who has been reappointed Crown Nominee for Ireland on the General Medical Council has served in that capacity since May 1927. It should be added that Colonel Sinclair previously represented Queen's University, Belfast on the G.M.C. for more than eight years.

During the evening service at 5.30 p.m. on Sunday, April 18 in King's College Hospital Chapel a plaque will be unveiled to the memory of Dr Harold Wiltshire formerly one of the physicians to the hospital. At the same service the endowment of a bed in memory of Mr Albert Carless who was actively associated with the medical school and hospital for nearly forty years will be offered by his wife, and the address will be given by his friend, the Rev. Howard Banister, vicar of Wallington, Surrey.

The programme has now been issued of the celebrations of the centenary of the Medical Society of Vienna which will cover the period from May 19 to 29 and will be under the patronage of Chancellor Kurt von Schuschnigg. In addition to a large number of addresses and clinical demonstrations relating to all branches of medicine and surgery there will be numerous receptions in connection with kindred societies and also other social functions. Application for the copies of the programme should be addressed to the Kursbüro der Wiener Medizinischen Fakultät Allgemeines Krankenhaus, Vienna IX.

The National Radium Commission is to provide Bradford with a gramme and a half of radium, the estimated value of which is £12,000. The gift will ultimately pass to the Bradford Radium Institute which is to be built in the grounds of the new infirmary at Daisy Hill.

It was reported at the last quarterly Court of Governors of the London Hospital that in 1936 the total amount received at the hospital from in-patients and their societies reached the record figure of £46,264. It was stated that the new wards for patients of moderate means would probably be ready in the autumn.

The issue of *Le Bulletin Médical* for March 13 contains an appreciation of London hospitals by the well known Paris surgeon M. Andre Sicard.

Professor Fedor Krause the Berlin specialist in surgery of the brain, celebrated his eightieth birthday on March 7.

Mr Philip Franklin F.R.C.S. has been elected honorary vice-president of the American Institute for the Deaf-Blind.

The quinquennial prize of 30,000 francs of the Belgian Government for the best book on medical science has been awarded to Dr Heymans.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

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QUERIES AND ANSWERS

Wanted—A Patient with a Biliary Fistula

"X X X" asks us to publish the following request. I am anxious to find a patient with biliary fistula who would be willing to come to Harrogate to have some investigations done on the effect on the liver secretion of the various waters here. All expenses, etc. would be paid for anyone suitable.

Replies from medical practitioners will be forwarded to "X X X" at Harrogate.

Broken Sleep in Middle Age

"RELIEVED" writes. With reference to the question by Sussex on page 649 of the *Journal* for March 20 I think my own case may interest your correspondent. I am 46 years of age and had exactly the same trouble with no symptoms by day. Vague abdominal discomfort and some flatulence at night led to investigation by barium meal. This revealed a small gastric ulcer, some degree of enteropneumosis and a diverticulosis. Treatment by bismuth and sodium bicarbonate and liquid paraffin together with gastric ulcer diet, no alcohol and little tobacco has resulted in an almost complete cure of the broken nights after about six weeks. In my case the condition had grown gradually over a period of about eighteen months until I woke quite regularly at 4 a.m. every morning.

Sleep Rolling

"CHATHAM" sends the following reply to J.M.C. (March 27 p. 694) who asked how to cure his small boy of a habit of rolling from side to side in his sleep. I would suggest that a hammock should be tried. A naval sick berth attendant assures me that rolling in a hammock is physically impossible.

Income Tax

Replacement of Car

"T.H."—to whom a reply was given in our issue of September 12, 1936—asks how the expense of replacement of a car should be treated in his practice accounts.

As depreciation was charged year by year the special amount to be charged on replacement is the excess of the original cost of the car over the sum of (a) the aggregate of the allowances and (b) the amount realized for the sale of the car. In this case the car was given to a friend and consequently the amount to be substituted for the sale price is either the sale value or the balance of the written-down value—that is, cost less (a) above—whichever is the less.

Legal Defence Expenses

"X X X" was tried on a charge of perjury for medical evidence given with respect to an accused person. The case was stopped by the judge and an acquittal recorded. The pro-

fessional defence society bore part of the cost of the defence but X, X had to bear about £800. Can he treat that sum as a professional expense?

It is assumed that the evidence in question was given with regard to a patient or in some other way arose out of professional work. If so it seems clear that the cost of the defence in so far as it was borne by X, X should be regarded as an expense incurred in carrying on his practice. Where costs etc. are incurred in an unsuccessful defence against a criminal or quasi-criminal prosecution—for example, a fine on a trader for selling short weight—they are refused on the ground that the fine and costs are personal and are intended to be wholly borne as a punishment. That ground for refusal of the deduction does not apply to this case.

LETTERS, NOTES, ETC

Premedication in Minor Surgery

Dr M. J. PETTY (Buenos Aires) writes. Local anaesthesia in minor surgery has reached a considerable state of perfection but it is remarkable that premedication has not been insisted upon in this connexion. In the first place, in the most frequent minor surgical operations such as those carried out by dentists when with their drills they grind into the delicate nervous system of our teeth if they only troubled to recommend the taking of one or two aspirins five or ten minutes before submitting their patients to such distressing manœuvres they would earn gratitude. I have found that after taking one or two aspirins five to ten minutes before sitting in the dentist's chair I remained perfectly quiet for over an hour without tightening up my muscles or screwing myself into awkward positions during the drilling of my teeth. The last time this occurred the dentist remarked upon my passivity. Since using some mild premedication just before minor surgical procedures such as cystoscopy or the administration of local anaesthesia etc. I have been impressed by the tolerance shown by the patient.

Prevention of Peritoneal Adhesions

Dr SYDNEY PERN (Ballarat, Australia) writes in the course of a letter. In the *Journal* of December 5, 1936 (p. 1150) there appeared an annotation on the prevention of peritoneal adhesions. Having had considerable personal experience of abdominal adhesions I have formulated certain ideas which may be worthy of consideration. How often when an abdomen is opened are adhesions found round the region of the gall bladder and duodenum? Of a necessity these could only have arisen from bacterial infection deposited by the blood stream just under the peritonum. By now Rosenow's theory of the specific elective affinity of certain strains of organisms for particular tissues is fairly accepted. With the presence of a duodenal ulcer or infected gall bladder the organisms are blood borne but many are deposited in the surrounding tissues hence the adhesions and whatever is done in the way of operation the organisms will continue to be deposited in the same locality as long as the original focus from which the organisms are coming remains. Directly that focus is efficiently removed however all further adhesions cease and resolution of those present takes place. I can vouch for this personally. It has also been my experience to have treated several cases in which appendicectomy has been followed by great pain and disability owing to adhesion in the locality by removing infected tonsils or some other focus and applying diathermy, with eminently satisfactory results.

Traffic Light Drill

The Save the Children Fund in conjunction with the Ford Motor Company has produced an ingenious model for teaching children how the traffic lights work and therefore when they can cross the road in safety. Simple manipulation produces the three familiar colours in their order and each is accompanied by an appropriate legend. All who are interested in the safety of children on the roads may have copies of this instructive toy on application to the Save the Children Fund 20 Gordon Square London W.C.1.

Disclaimer

Mr W. E. TUCKER F.R.C.S. writes to disclaim any responsibility for the reference to an operation performed by him which appeared in the sporting columns of a London evening newspaper on March 29.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

271

Lead Poisoning

According to H. GELINAS (*Union méd Can*, February 1937, p. 164) diagnosis of lead poisoning is facilitated in children by radiological detection of lead in the juxta-epiphyseal zone of the long bones and in adults by the finding of a reticulocyte count of 2 to 40 per cent. Traces of lead (in America at any rate) appear to be present normally in the blood, urine and faeces so that quantitative tests only are valuable. In acute poisoning treatment aims at promoting fixation of lead from the circulating blood, in the bones for twenty-four to forty-eight hours 1 to 2 grammes of calcium gluconate are injected intravenously at three to four hourly intervals; this dosage is diminished during two to four days and subsequently calcium chloride or gluconate is given by the mouth. A lacto-vegetarian diet is prescribed. Subsequent elimination of lead may take up to two years; it may be accelerated—not less than a month after acute symptoms have gone and then only in hospital—by two to three days treatment at four to six weeks intervals by meat diet and exhibition of phosphoric acid and ammonium chloride. The use of potassium iodide, apart from occasional idiosyncrasy, is free from danger.

272 J. HARTMANN (*Münch med Wschr*, February 12, 1937, p. 252) stresses the importance of increased intra-colonic tension in the development of colonic diverticuli. Such increased tension occurs in chronic spastic constipation, which includes the constipation occurring in cases of chronic lead poisoning. The author then describes two such cases of lead poisoning which have gradually developed colonic spasm. He advises radiographic examination of the colon in every case of chronic plumbism with intestinal symptoms.

273 Pathogenesis of Multiple Sclerosis

B. DATNER (*Wien klin Wschr*, January 22, 1937, p. 87) attributes the conflicting theories regarding the pathogenesis of multiple sclerosis to the fact that a large proportion of obscure nervous diseases which do not belong to this category are labelled multiple sclerosis. The disease has been attributed by various authorities to chronic inflammation of unknown or specific origin, to degenerative processes, to a gliosis produced by a congenitally abnormal constitution, to trauma and to toxins such as lead. In the recent literature Datner finds researches along different lines which he believes will ultimately lead to an elucidation of the pathogenesis of the condition. (1) In the majority of cases of multiple sclerosis blood changes are in evidence. (a) A large proportion give a positive complement-fixation reaction for tuberculosis. In Datner's cases 68 per cent did so in contrast to 36 per cent of controls. (b) Lipolytic substances and high diastase values have been obtained in the blood of patients with multiple sclerosis. (c) In general the blood coagulation time is increased in this condition. (d) In a large number of cases anaemia of the hyper- or hypo-chromic type is found. (2) Datner examined the hydrochloric acid content of the stomach and found achylia or marked hypo-acidity in 31 per cent of cases (in contrast to 4 per cent among normal persons). (3) Finally Datner draws attention to marked resemblances between multiple sclerosis and the deficiency diseases. The resemblance to pellagra is seen in the frequent remissions, the greater mortality of both diseases in the north than the south, the age incidence of 25 to 45, the incidence in spring and summer, the deleterious effect of sunshine on both and the greater incidence of both in women than men. With beriberi it is seen in the deleterious effect of exercise on both and the occurrence in both of initial hyperacidity followed by achylia. All three conditions begin with polyneuritis and paraesthesiae. In all retrobulbar neuritis occurs. Spastic-

paretic and cerebellar-ataxic manifestations are common to pellagra and multiple sclerosis. The resemblance to scurvy is seen in the increased bleeding time and the early falling out of the teeth in both conditions. Datner does not believe that the identity of these various pathogenetic mechanisms is purely fortuitous, but that further careful analysis will lead to the right understanding of the pathogenesis of multiple sclerosis.

Surgery

274

Endarteritis Obliterans

W. BIRCHER (*Münch med Wschr*, January 29, 1937, p. 166) reports a case of endarteritis obliterans which had caused gangrene of the foot. The clinical investigation revealed four causative factors—namely chronic hypovitaminosis, particularly lack of vitamin C, intestinal toxæmia as a result of abnormal intestinal fermentations and constipation, abuse of tobacco, and chronic sepsis from infected teeth. A change to a predominantly vegetable diet, extraction of all infected teeth, physical therapy and the new ozone therapy improved the condition of the foot to such an extent as to render amputation unnecessary.

275

Decompression of the Small Intestine

A. OCHSNER and A. STORCK (*J Amer med Ass*, January 23, 1937, p. 260) discuss the advisability or otherwise of evacuating the contents of distended loops of intestine by performing an enterostomy and milking or stripping out the intestinal contents at the time of operation. An analysis of sixteen clinical cases of intestinal obstruction is given in which stripping was used. Ileus was due to a variety of causes, such as bands, carcinoma, faecalith, inguinal or ventral hernia, or volvulus. There were ten males and six females in the series, and of these eleven were negroes; the average age was 41 years. The duration of intestinal obstruction averaged 62.8 hours, the shortest time being twenty-four hours and the longest 120 hours. Cramping pain, nausea, and vomiting were present in nearly all cases and stercoraceous vomiting was noted in five instances. Purgation before admission had been attempted in three cases which ended fatally and of eight patients who had received enemas before admission six died. Abdominal distension was severe in most cases, with tenderness, abdominal rigidity and peristaltic activity as other common symptoms. Ten of the patients on whom some type of pre-operative gastric drainage was carried out died and two lived. Hypodermoclysis or phleboclysis was used pre-operatively in each case. Operative procedure consisted of the relief of the obstruction followed by an enterostomy, and evacuation of the intestinal contents by beginning in the region of the ligament of Treitz and stripping the entire small intestine. In certain cases the catheter was left in place after operation. The mortality rate was very high—68.7 per cent—and although the majority of patients in the group were poor operative risks, it is considered that the additional trauma caused by intestinal stripping further aggravated the ileus and caused surgical shock. Careful pre-operative preparation of patients suffering from ileus by means of duodenal decompression, replacement of electrolytes, and liberal doses of morphine, is advised.

276

Myositis Ossificans

C. ARTUS CHRISTIANI (*Lyon Chir*, January-February, 1937, p. 5) discusses the history and pathology of myositis ossificans and describes two personal cases of the disease. Traumatic myositis ossificans is an intramuscular bony formation which appears some time after the original injury. The trauma may be an external injury, a fracture or dislocation, or a sudden muscular contraction. On the other hand,

slight repeated traumatama may give rise to the disease in the thigh in cavalry soldiers, and in the biceps or in the muscles of the arm or shoulder following excessive exercise of these upper arm muscles. Ossification never arises in the muscles of the hand. It is most often seen in young people of the male sex. The thickening of the muscle usually occurs soon after the swelling caused by the injury and may be overlooked unless there is limitation of movement or pain or an x-ray photograph is taken. The growth may be joined to the bone by fibrous tissue or may be isolated in the muscle. It may vary in size from the thickness of the thumb to 20 cm. The first case described was in a man of 66 who in falling had fractured the right femur. The leg was put in extension and immobilized for three weeks. As a radiograph then showed that consolidation had not taken place and as reduction was not possible owing to a muscular growth, operation was carried out. This showed a haematoma with myositis ossificans extending into the vastus and adductor muscles. Osteosynthesis was performed but the patient died two days later from paralytic ileus shock, and uraemia. In the second case the tumour appeared in a man of 23 following a kick on the thigh from a horse. The growth increased in size until at the end of three months the knee function was affected. Operation was carried out and the tumour which was of bony consistency, was successfully removed.

Therapeutics

277 Diet in Graves's Disease

H LOHR (*Med Welt* January 23 1937, p 111) discusses the value of dietetic and vitamin therapy in Graves's disease. Both laboratory experiments and clinical experience confirm the usefulness of a diet rich in vitamins A B₁ and C to which the pure vitamins are added in cases of hyperthyroidism. The diet recommended is poor in meat. Milk and milk products are not restricted and twice weekly calf's kidney and once weekly calf's liver is given. Calf thymus once or twice weekly is also useful. The fat lipoids are supplied by olive oil almonds and nuts. On alternate days bone marrow and brain are allowed also one or two yolks of egg daily. The carbohydrates recommended are wholemeal bread porridge rice boiled potatoes in moderate quantities honey and malt extract. Vitamins A and D are supplied by yolk of egg and cod-liver oil, vitamin B by yeast extract and vitamin C by oranges and lemons also by the usual fruit and vegetables. Alcohol and tobacco are best avoided.

278 Treatment of Malignancy

SCHONBAUER (*Med Klink* February 5 1937 p 185) evaluates modern methods of treatment of malignant tumours with surgery x rays and radium by analysing in the literature the percentage of successful results achieved in tumours of various parts of the body. He points out that radiological treatment is only of value in malignant tumours of which the parent tissue is radio-sensitive. Into this category belong the seminomata folliculomata lymphosarcomata epitheliomata and carcinomata. All others are radio-insensitive unless they are anaplastic—that is completely differentiated from their parent tissue or through metaplasia converted into radio sensitive tumours. Surgical methods alone achieve success in the treatment of tumours of the brain (20 per cent.) gastro-intestinal tract (30 per cent. in radical removal) kidneys (25 per cent.) bladder (30 per cent.) and corpus uteri (60 per cent.). X ray and radium treatment is of no more value than operation in tumours of the tonsils thyroid penis testicle and bones of the extremities. Tumours of the skin are successfully treated in 95 per cent. of cases by any method. Cancer of the breast can be cured in 100 per cent. of early cases by operation but in its later stages irradiation in addition to surgery greatly improves the results. Combined surgical and radiological methods cure the sculps by 15 per cent. in tumours of the lips.

(72 per cent successes by operation alone), by 50 per cent in those of the tongue (15 per cent) and in those of the larynx and cervix uteri. Tumours of the oesophagus, gall bladder, liver, pancreas, lung, and prostate are at present outside the category of successful results by any method but the author is encouraged by the rapid strides made in radiological therapy to think that these and other inoperable tumours will eventually be successfully treated.

Diseases of Children

279 Sinusitis in Childhood

J. CROOKS and A. G. SIGNY (*Arch. Dis. Childh.* December, 1936, p. 281) state that in view of the prevalence of infection of the nose, throat and ears in childhood it is reasonable to suppose that disease of the nasal sinuses is common in early life. One hundred instances of nasal sinusitis are recorded and analysed. Any or all of the accessory air sinuses may be diseased in childhood, for these are all present in early life. The development of the sinuses and the scheme of investigation are described. The presence of inflammatory exudate in an air sinus is proved by aspirating fluid from the cavity and not by washing it out of the nose with a cannula in the sinus. Reasons which led to a decision to aspirate the antra in a series of children undergoing removal of tonsils and adenoids were that they had chronic respiratory complaints and that the antra could be easily punctured while under the anaesthetic. Only children who had a chronic infection of the upper air passages were subjected to this procedure. The technique of the puncture and the bacteriological examination of the antra are described. The main fact that emerges is that out of one hundred children having a tonsil and adenoid operation twenty four were found to have mucus muco pus or pus in one or both antra. Most of these cases cleared up with antral lavage. In children the nose is small and easily blocked and adenoids are frequent. The common conditions giving rise to sinusitis are colds influenza and infectious diseases particularly whooping cough. Bathing in infected water is another frequent cause. Sinusitis is more common in those climates where upper respiratory infections are prevalent, and is common in children who are in chronic ill health. X ray examination is a valuable aid in diagnosis and cases can be followed up by repeated examinations of this nature. A complete cure can be anticipated in most cases in several months.

280 Apnoea with Cyanosis in the Newborn

G LEBEVRE (*Echo med Nord* December 27 1936 p 1101) reports six cases of apnoea with cyanosis in the newly born. The prognosis is grave 50 per cent of reported cases were fatal. The conception of temporary failure of the respiratory centre is most generally accepted as a pathological basis. In these six cases no evidence of congenital syphilis or birth injury could be found and apart from the apnoea itself there was no indication that a meningeal haemorrhage of obscure origin was present. The children were normal and the births uncomplicated. The author postulates incomplete development of the brain stem with a temporary return to the foetal heart cycle and abeyance of pulmonary respiration following failure of the respiratory centre as an explanation of the condition. The respiratory and heart regulating centres are unstable and low temperatures in these cases have been recorded. The cerebral meningeal and visceral haemorrhages found at necropsy may be sequels to and not the cause of the apnoea. A state of atelectasis of the lung during apnoea has been observed though not in this series. Cyanosis itself a danger, actually aids recovery by stimulating the respiratory centre through excess formation of CO₂. Treatment by suspension of the infant upside down and mouth to mouth respiration acts in the same way. Between attacks anti syphilitic treatment aids infants with latent or apparent syphilis. Ultra violet rays and improvement of the general conditions are of value and some benefit was

obtained by the injection of lobeline (3 mg. daily) Oxygen inhalation and injections of camphor are useful in severe cases If meningeal haemorrhage is suspected the ocular fundi should be examined and lumbar puncture performed

281 Prognosis of Spasmophilia

J NORDENFELT (*Acta paediatr*, Stockh, vol 19, Fasc 2, 1936, p 187) has followed up a series of children who in early life had suffered from spasmophilia including tetany and convulsions The object of this investigation was to see if these children suffered from further nervous disorders such as mental defects or psychic troubles in later life The results show that there is a definite relation between spasmophilia and mental deficiency but not with epilepsy

282 Empyema in Children

F PONTIERI and F TECILAZIC (*Pediatrics*, Naples, February 1937, p 116) record their observations on seventy cases of empyema secondary to bronchopneumonia in children aged from under 1 to 10 years admitted to the Institute of Clinical Paediatrics of Milan University from 1932 to 1935 Forty-eight were boys and twenty-two girls In eight cases the empyema was bilateral In fifty-five cases twenty-four of which were fatal it was synpneumonic, and in fifteen, of which four were fatal metapneumonic In twenty-six of the twenty-eight fatal cases a necropsy was performed and showed the following phenomena (1) A tendency of the pleura to react in an unequal manner in the presence of micro organisms In some parts the inflammatory lesions were arrested in the stage of fibrino leucocytic effusion while in others there was a new formation of dense adhesions (2) Persistence of the primary lesions in the lung (3) Frequency of septic metastases especially in infants in the serous membranes parenchymatous organs and middle ear (4) Rarity of spread of the purulent collection to neighbouring organs The following methods of treatment were carried out (1) General symptomatic treatment or autovaccines (thirteen cases with four deaths) (2) Repeated aspiration without introduction of a therapeutic fluid (twenty-three cases with thirteen deaths) (3) Injection of sodium taurocholate according to Cocchi's method (twenty-two cases with seven deaths) (4) Operative treatment (eighteen cases with four deaths) The cases treated with taurocholate were chiefly infants while those which underwent operation were older children

283 Lobar Pneumonia in Childhood

S L ELLENBERG and A T MARTIN (*NY St J Med* January 15 1937, p 119) record a 5½ years clinical survey of 459 cases of lobar pneumonia in childhood Of these cases 50 per cent arose in children under the age of 4 years and only a few in the later ages of 10 and upwards The peak incidence was reached in the first years of life The greatest number of cases were recorded during the late winter months of March and April, while the fewest cases arose in July The mortality in this series was 8.6 per cent and this could have been reduced still further by an earlier admission to hospital as many children were sent in as a last resource This mortality rate compares favourably with the records of other writers The fact that the mortality is higher in children 2 years and under is also borne out by this study for the mortality in this age group is 24 per cent as compared with a mortality of 2.1 per cent in the age group above 2 years X-ray examination was useful and confirmed the diagnosis of lobar pneumonia in most cases Meningeal irritation was noted in twenty four cases and lumbar puncture showed increased pressure but no excess of cells and no organisms The five most frequent complications were otitis media, empyema meningismus furunculosis and abscesses Empyema was the most serious complication and the one most likely to influence the course of the illness Treatment consisted in the main in leaving the patient alone and in good nursing Abdominal distension needed to be carefully watched and treated with enemata at once Oxygen

is considered to be a very definite adjunct to the treatment of pneumonia, and should be used whenever cyanosis excessive restlessness, or severe toxæmia is present The old method of giving oxygen by the open method or through a nasal catheter is condemned as being of no value The oxygen tent only was used, and proved of much value

284 Folliculin in Gonorrhoeal Vulvovaginitis

R PONGRATZ (*Med Klink* January 15, 1937 p 93) has had poor results from the insertion of protargol bougies or irrigation under pressure in gonorrhoeal vulvovaginitis in children In four cases he has tried ovarian hormone treatment, as recently recommended (Hohorst and Gassmann (1936), *Derm Wschr*, 1) Folliculin was given intramuscularly in a dose of 10 000 units on the first day, and on this and twenty succeeding days dragées of 1,000 units were given orally thrice daily no local treatment was prescribed The discharge ceased rapidly, swabs were negative after the second week, and no effect on secondary sexual characteristics, such as swelling of the breasts or growth of pubic hair, was noted The treatment is said to be comparatively economical in view of the protracted course of the disease under other treatments Its purpose is to induce growth and thickening of the vaginal epithelium as well as to favour the appearance of Doderlein's lactic acid-producing bacillus—both being factors which are biologically unfavourable to the gonococcus

285 T DE SOUZA and H DA ROCHA PITTA (*Ann bras Gynec* December 1936 p 471) record their observations on ten cases of vaginitis in children aged from 2 to 9 years treated by intramuscular injections of folliculin in doses of 1 000 units daily The treatment lasted for at least a month and was sometimes prolonged for three or four months In nine of the cases gonococci were found No bad effects ensued from the use of large doses The writers came to the conclusion that in children folliculin constitutes the best treatment for vaginitis, whether gonococcal or not in origin

286 Congenital Pyloric Stenosis

P FIORI (*Arch ital Chir*, October 1936 p 389) summarizes the cases, some fifty in number, of congenital pyloric stenosis reported in Italy, he concludes that the condition is very much less common in Italy and France than in Anglo Saxon countries His own patients, four in number, all recovered—two after pyloroplasty and two after gastroenterostomy In one case diagnosed at the tenth week as congenital pyloric stenosis the operation showed unexpectedly a soft pylorus, smaller than normal together with much gastric dilatation and clear signs of a ligneous pancreatitis Here gastroenterostomy proved successful Although the possibility of a juxtapiyloric ulcer could not be excluded, this case was regarded as probably allied with Schäfer's syndrome of incomplete pyloric atresia

287 Prontosil in Paediatrics

E UNSHELM (*Arch Kinderheilk* Bd 110, Ht 2, p 76) considers prontosil of great value in the treatment of streptococcal infections in children particularly in the treatment of erysipelas, in spite of some undesirable effects of the drug Even in doses of three half-tablets a day prontosil may cause anorexia diarrhoea and exanthemata The author hopes to avoid the undesirable effects by reducing the doses

288 Epidemic Myalgia

G LINDBERG (*Acta paediatr* Stockh September 30 1936 p 1) records eighty cases of the condition variously known as Bornholm disease epidemic myalgia pleurodynia or devil's grip etc in children whose ages ranged from 7 months to 15 years The cases arose at Norrköping, Sweden between September and November 1934 and seventy occurred during the first twelve years of life and only ten during the next three years All made a complete recovery, the great majority within a few days

Obstetrics and Gynaecology

289

Urethrocele

B R YOUNG and L E MCCREA (*Urol cutan Rev*, February, 1937 p 91), who record an illustrative case in a woman aged 26 state that the terms urethrocele urethral diverticulum, false diverticulum urethral cyst and suburethral abscess have been used to describe a pouch or sac filled with fluid which originates in the female genitalia or the urethro vaginal septum. The pouch is filled with urine or pus and communicates by a narrow channel with the inferior wall of the urethra. The sac can be filled with an opaque solution and is therefore visible in the skigram at the level of the symphysis pubis just below the shadow of the bladder. The condition was first described by Sir Charles Mansfield Clarke in 1814. The aetiology is obscure but many patients give a history of a prolonged difficult labour. In nulliparous women it may be due to congenital defects of the urethra or back pressure in the urethra caused by a narrowed urethral meatus or suppurating urethral glands. The disease may occur between 5 and 60, the highest incidence being between 25 and 45. Although a number of cures have been reported after conservative treatment such as injection of sclerosing solutions (33 per cent silver nitrate or zinc chloride) operation is the treatment of choice. Simple incision usually results in complete recovery in from two to four weeks.

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Causation of Tubal Pregnancy

P ISIDOR (*Gynecologie* December 1936, p 705) comments on the frequency with which a topographical reconstruction of the Fallopian tube containing an early ectopic pregnancy shows a double lumen with one of the canals blind at its inner or outer end. In some of his preparations histological signs of antecedent inflammation were absent and the contralateral tube showed similar malformations. A decidual reaction was not always present. A double lumen was associated with two separate circular muscular coats. Isidor concludes that the arrest of the ovum in the blind end of an accessory (congenitally present) tube accounts for a certain proportion of ectopic pregnancies. He suggests further that such deformities by interfering with drainage in the tube, may favour inflammation—the malformation far from being the result of pelvic inflammation would thus impede its resolution.

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Dysmenorrhoea

DRS LEDA STACEY and ROSEMARY SHOEMAKER (*Amer J Obstet Gynec* January 1937 p 67) submit a study from the Mayo Foundation of 262 cases of dysmenorrhoea. 132 were single women. Pregnancy had failed to cure forty-seven out of the 130 married women. Of these, six gained relief after treatment plus a second pregnancy but six remained as before. Psychic and fatigue factors were noted in eighty-two cases. Results are tabulated according to type of treatment—(1) Drugs—antispasmodics analgesics sedatives chiefly benzyl benzoate barbiturates belladonna and calcium lactate alone or in combination. After a course of such treatment 51 per cent showed benefit some permanent. (2) Endocrines—alone or combined with drugs at least for a time primarily for cases showing menstrual irregularities. 60 per cent gained relief relapses occurring unless treatment was maintained or repeated in an uncertain proportion. Ovarian extract oestrin (prognon) placental hormone (emmenin) and sistomensin (lutco-lipoid of corpus luteum) are separately reported upon the last being chosen when excessive loss as well as pain was present. Complete relief was obtained in 54 per cent with improvement in 55 per cent but it is suggested that the endocrine preparations had very little effect. Irradiation of pituitary or ovaries was used in five cases with relief but the method is for expert radiologists only. Radium in doses to induce temporary menorrhoea or full menopause applied in sixteen selected cases was successful in 69 per cent. For patients with

disabling and otherwise incurable dysmenorrhoea resection of the pre sacral nerves is a possibility relief being considerable and generally complete.

Pathology

292

Active Immunization against Tetanus

P J GROULIER (*Thèse Paris* 1937 No 69) states that active immunization against tetanus was first carried out by Vallee and Louis Bazy in 1917 during the great war, when serum prophylaxis was sometimes ineffective. Although the latter is of considerable value in the campaign against tetanus it presents the following drawbacks. (1) In the case of wounds there is no hard and fast rule as to when serum should be given. (2) Repetition of the injections causes an increasingly rapid elimination of the serum and its efficacy progressively declines. (3) The action of serum is immediate but is of short duration. On the other hand the active immunity conferred by the use of vaccines though it is slow in developing lasts a considerable time. It is not permanent however, and requires to be regularly kept up by further injections once a year or on the occasion of any wound. The method of producing active immunity consists in giving three injections of 2 ccm of formol toxoid at three-weekly intervals. There are no objections to combining anti tetanic with anti diphtheritic or anti typhoid vaccination. Injections of tetanus anatoxin are not followed by any severe reaction. They can be repeated indefinitely and the more they are repeated the greater the resistance they confer. It is suggested that the use of anti tetanic vaccination which is compulsory in the French Army should be made general. In conclusion Groulier urges that active immunization should be used for the prevention and serum therapy for the treatment of tetanus.

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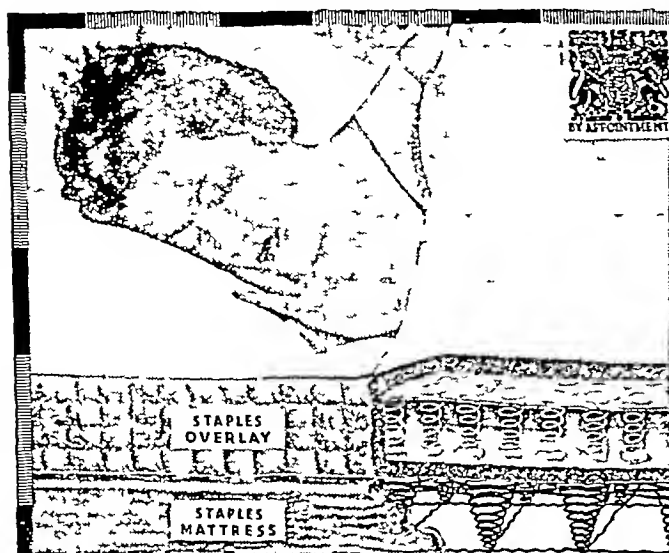
Gold Intoxication and Eosinophilia

D L HULST (*Nederl Tijdschr Geneesk* February 27, p 868) who records four illustrative cases in patients aged from 25 to 51 under treatment with solganol for chronic rheumatism maintains that a connexion between gold intoxication and basophil granulation of the red corpuscles has not been proved and is unlikely. Basophil granulation being probably a phenomenon of regeneration. Many cases of gold intoxication are preceded or accompanied by an increase in the number of eosinophils which disappear as the symptoms of intoxication subside. The appearance therefore of eosinophilia during gold treatment is an indication that the injections should be stopped.

294

Cerebro spinal Fluid in Active Syphilis

TEIZO UEDA (*Jap J Derm Urol* December 1936 p 219) found positive serological changes in the cerebro spinal fluid in 19 per cent of cases in the primary in 43 per cent in the secondary and in 32 per cent in the tertiary stage of syphilis. The positive reaction was more pronounced in tertiary syphilis as compared with the first and second stages but was at its highest in syphilis of the central nervous system. The proportion of positive reactions was greater in the papulous forms than in the maculous forms and greater in the recurrent than in the primary exanthemata. The proportion of positive reactions in alopecia syphilitica was smaller than the average for the second stage. Recent cases generally reacted well to treatment. The original Wassermann the Browning, and the Murata reactions were negative in the cerebro-spinal fluid in all cases of primary and secondary and only in one case of tertiary syphilis. The fractional determination of the albumins of the cerebro spinal fluid was carried out by the diaphanometric method and the following results were obtained. (1) there was an increase of the general albumin and of globulin already in primary syphilis. (2) the average quantity of albumin was higher in secondary than in primary syphilis. (3) in tertiary syphilis the increase in the quantity of albumin was more striking than the other serological changes in the cerebro spinal fluid.



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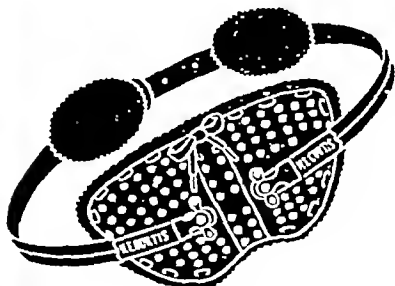
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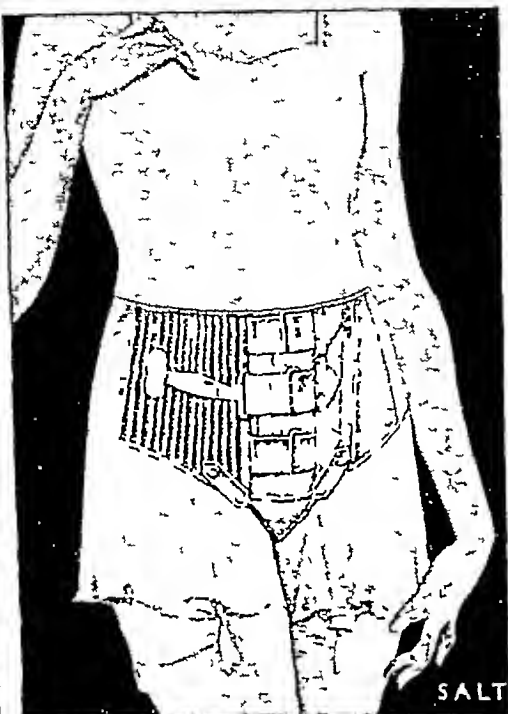
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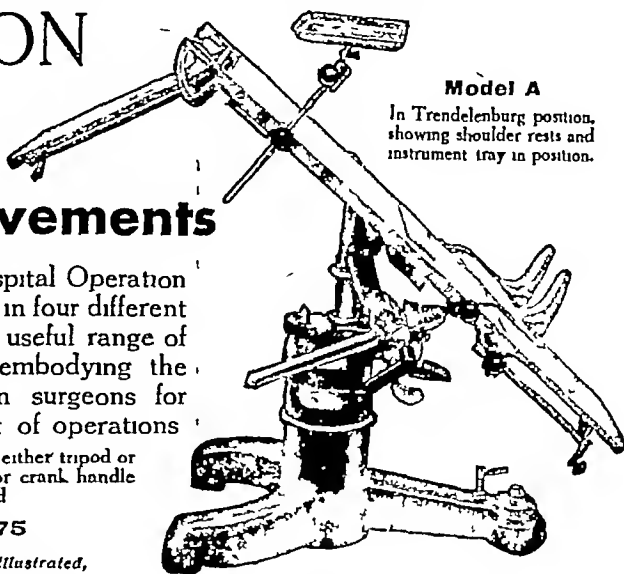
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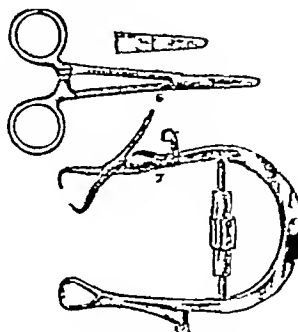
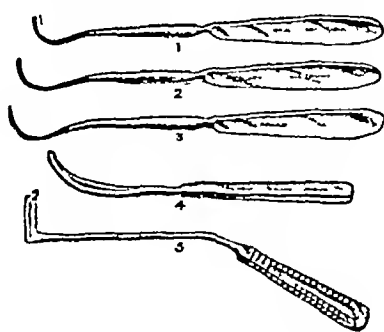


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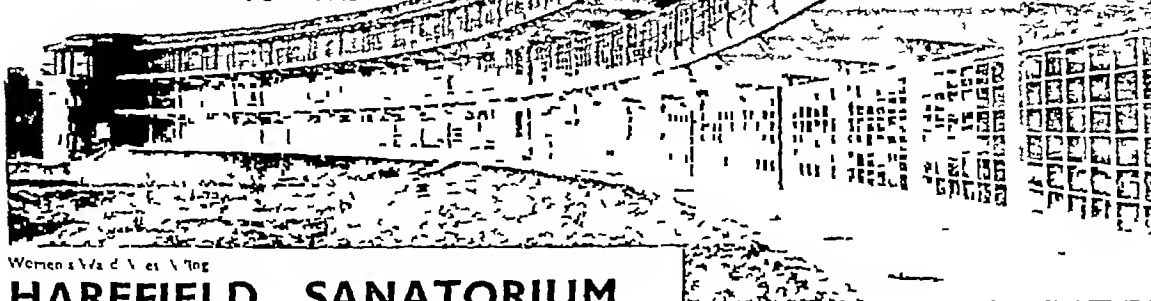
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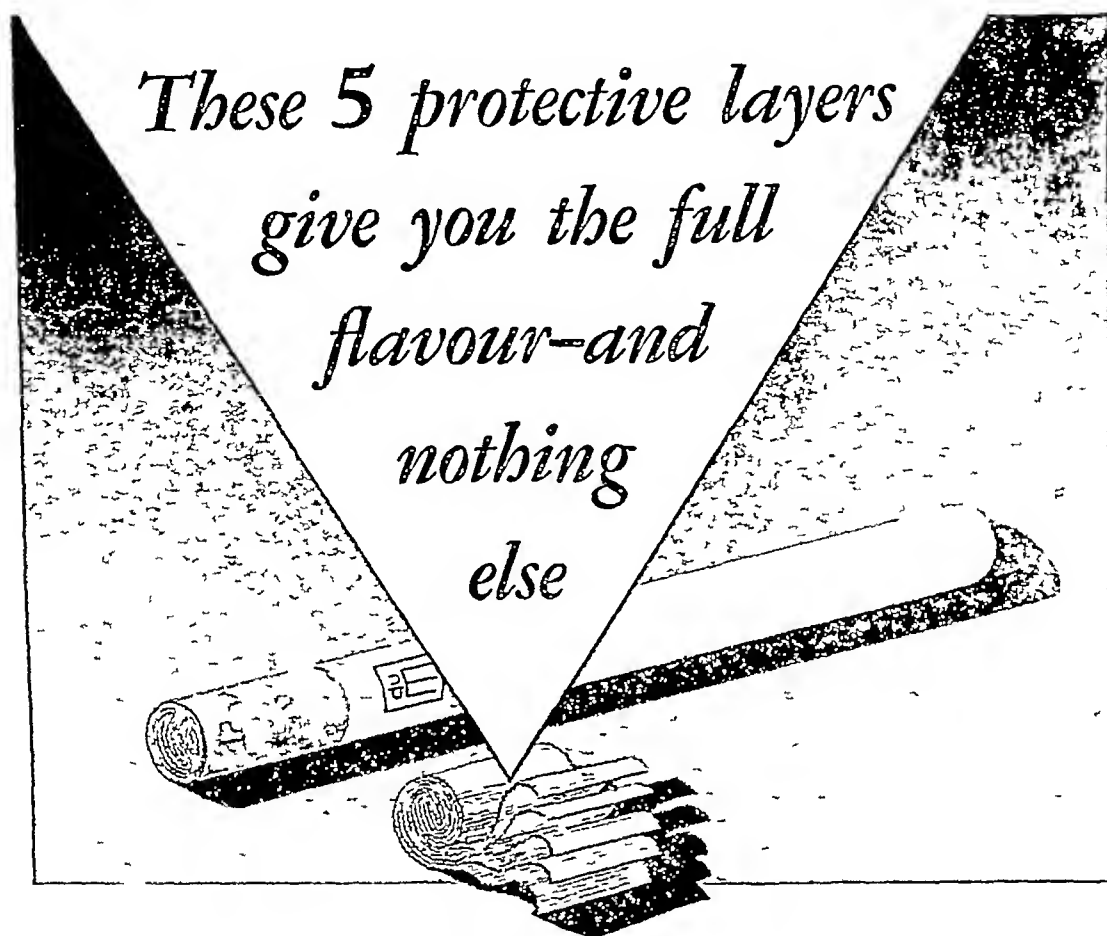
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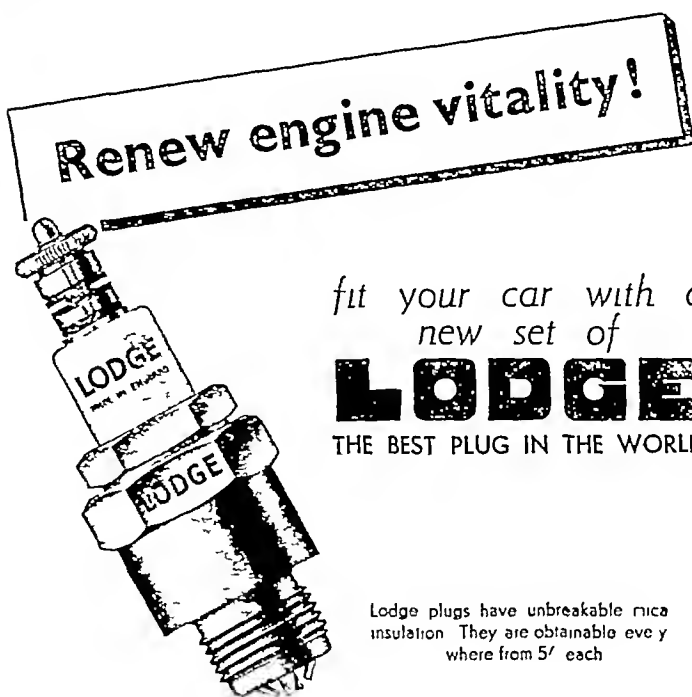


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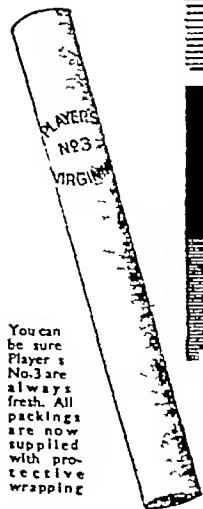
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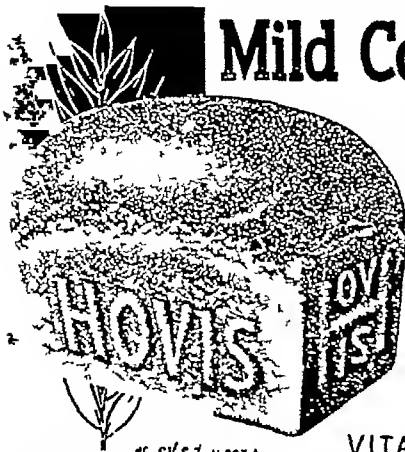
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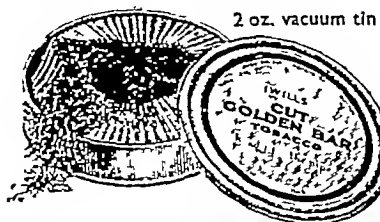
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This registered Hospital is situated in 120 acres of park and pleasure grounds. Voluntary patients who are suffering from incipient mental disorders or who wish to prevent recurrent attacks of mental trouble, temporary patients and certified patients of both sexes, are received for treatment. Careful clinical, biochemical, bacteriological and pathological examinations. Private rooms with special nurses male or female in the Hospital or in one of the numerous villas in the grounds of the various branches can be provided.

WANTAGE HOUSE

This is a Reception Hospital in detached grounds with a separate entrance, to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombières treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra Violet Apparatus and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological and pathological research.

MOULTON PARK

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit and vegetables are supplied to the Hospital from the farm, gardens and orchards of Moulton Park. Occupation Therapy is a feature of this branch and patients are given every facility for occupying themselves in farming, gardening and fruit growing.

BRYN-Y-NEUADD HALL

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres, Llanfairfechan, amidst the finest scenery in North Wales. On the North West side of the Estate, a mile of sea coast forms the boundary. Patients may visit this branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses and bowling greens. Ladies and gentlemen have their own gardens and facilities are provided for handicrafts, such as carpentry, etc.

For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton) who can be seen in London by appointment.

HAYDOCK LODGE, NEWTON-LE-WILLOWS, LANCASHIRE

Tele. Street, Ashton-in-Makerfield. Phone Ashton-in-Makerfield 7311.
For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases either voluntarily temporarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self supported by its own farm and gardens in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms prospectus etc. apply MEDICAL SUPERINTENDENT.

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for the treatment of eight Ladies, voluntary, temporary, or certified patients.
Large gardens and own dairy.

CLIFFDEN, TEIGNMOUTH for early and convalescent cases. A well appointed house, with spacious balconies and extensive views of the South Devon coast. Sub-tropical gardens, own dairy in 25 acres. Private road to beach.

Resident Physicians BERTHA M. MILES M.D., B.S. Starcross 59
ANNE S. MILES, M.R.C.S. L.R.C.P. Teignmouth 289

NORTHUMBERLAND HOUSE, GREEN LANES, FINSBURY PARK, N.4

A PRIVATE HOSPITAL for the treatment of mental and nervous illnesses. Conveniently situated and easy of access from all parts. Six acres of ground highly situated facing Finsbury Park. Voluntary and Temporary Patients received without certification. Occupational Therapy, Psychotherapy and other modern forms of treatment.

Telephone STAMFORD HILL 2688. Telegrams "SUBSIDIARY LONDON".
Convenient Home KEARSLEY COLLET DOVER. For further particulars apply to the Medical Sup.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Occupational Therapy. Voluntary and Temporary Patients received.

Tel. 6411. For terms etc. apply to the Medical Superintendent.

BARNWOOD HOUSE GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT OF LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 300 acres. Voluntary Patients of both sexes are also received for treatment.

Special accommodation for Ladies. Voluntary Patients is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the Main Hospital.

For particulars as to terms etc. apply to—
ARTHUR TOWNSEND M.D. Medical Supt.
Telephone No. 6707 Barnwood.

HILL END HOSPITAL FOR MENTAL AND NERVOUS DISORDERS (20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS are received for treatment on modern lines as Voluntary Temporary or Certified Private Patients at the Hill End Hospital. Convalescent or mild cases can be treated in a delightful country mansion with extensive grounds known as

HIGHFIELD HALL,

situate about a mile away from the Hospital.
FEES TWO TO THREE GUINEAS PER WEEK.

For further particulars apply to the Medical Supt. W. J. T. KIMBER L.R.C.P. D.P.M.

ST ALBANS, HERTS

STRETTON HOUSE, Church Stretton, Shropshire

A PRIVATE HOME for the treatment of Gentlemen suffering from Mental and Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Bracing Hill country. See Medical Director's p. 2328—Apply to Medical Superintendent. Phone 10 P.O. Church Stretton.

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C. EDGAR GRISEWOOD Secretary
20 Exchange Street East Liverpool.

FENSTANTON, CHRISTCHURCH ROAD, STRETTON HILL S.W.2.

A Private Home for the Care and Treatment of a limited number of Ladies with Mental and Nervous Disorders. Certified Voluntary and Temporary Patients received. Large Mansion with 12 acres of grounds (See Medical Director's p. 2312). Apply Resident Physician. Telephone Tulse Hill 7181.

HEIGHAM HALL, NORWICH

A PRIVATE MENTAL HOME situated in 11 acres of well-wooded grounds. For Ladies and Gentlemen suffering from Nervous or Mental Illness. Voluntary Patients. Temporary Patients, and Patients under Certificate are admitted for treatment. Fees from 4 guineas a week upwards according to requirements. A few vacancies exist for Ladies and Gentlemen at reduced fees on the recommendation of the Patient's own Physician. Apply to Dr J. A. SMALL. Telephone 80 Norwich. Telegrams Small 80 Norwich.

BAILBROOK HOUSE BATH

For sufferers from Nervous and Mental Disorders with or without certificates.

The house is gloriously situated in wood-laden grounds of 20 acres with magnificent views of the City and the Avon Valley (See Medical Director's page 2311).

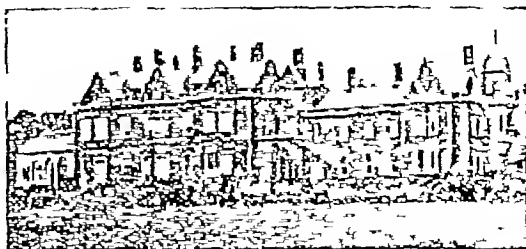
For terms apply A. CORDHAM M.A. D.S.M.
B.Ch., D.P.M. Resident Physician
Telephone Bathaston 8159

THE RESIDENTIAL TREATMENT OF ALCOHOLIC & DRUG ADDICTION

RENDLESHAM HALL

(Postal Address) — **WOODBIDGE, SUFFOLK**

Rendlesham Hall, which is open to receive patients, is essentially a Sanatorium. Its daily life and routine are that of an ordinary comfortable holiday or health resort, or of a large country house. Each patient has all the privileges of a guest consistent with the prescribed medical treatment.



RENDLESHAM HALL—SOUTH VIEW

Rendlesham Hall has 45 bedrooms, and about 450 acres of gardens and park. It has also a private nine-hole golf course, tennis and croquet lawns, and bowling green.

Illustrated booklet giving particulars as to terms, etc., can be had on application to the

RESIDENT MEDICAL SUPERINTENDENT

Telegrams and Telephone WICKHAM MARKET 16 (Toll Call from London)

Proprietors: The Norwood Sanatorium Limited

RUTHIN CASTLE, NORTH WALES

The fees are from 15 guineas a week. They include medical attendance, all scientific investigations that may be needed such as analyses, bacteriological cultures, the ordinary x-ray examinations, and electrocardiograph readings, all treatment that may be prescribed such as special diets, insulin, artificial sunlight, electrical treatment, baths, massage, nursing, medicines or vaccines, board and lodging.

The only extra charge is that for a complete alimentary x-ray examination or for x-ray therapy.

All the usual forms of treatment are given at Ruthin Castle. The climate is mild. The annual rainfall is 30.5 inches, that is less than the average for England. There is central heating throughout.

Address—THE SECRETARY, Ruthin Castle, North Wales.

Telegrams—Castle, Ruthin Telephone—Ruthin 66

BOWDEN HOUSE, Harrow-on-the-Hill

For residential treatment of

FUNCTIONAL NERVOUS DISORDERS

No case under certificate. Thorough clinical and pathological examinations. Psychotherapeutic treatment, occupation and recreation as suited to the individual case.

STAFF—H. CRICHTON MILLER, M.A., M.D., M.R.C.P. (Senior Physician) GRACE H. NICOLLE, M.A., M.B. (Resident Physician)
S. ROODHOUSE GLOVE, M.D., D.P.H. (Consulting Pathologist) MILDRED CARPENTER, M.B., B.S. (Pathologist)
T. S. RIPPON, M.R.C.S., L.R.C.P. (Medical Superintendent) Telephone and Telegrams BYFON 1011

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Extensive grounds. Detached Villas.
CONVALESCENT HOME
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Chapel.

Garden and dairy produce from own farm.

Terms very moderate.

Detached Villas standing in L. acres of ornamental grounds, with tennis courts, etc., which Voluntary Territory or Certified Patients may visit by arrangement for long or short periods.

Illustrated Brochure on application to the Medical Superintendent, The Old Manor, Salisbury

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OVER SEVEN THOUSAND POUNDS

worth of new equipment, furniture, service re-organisation have gone into

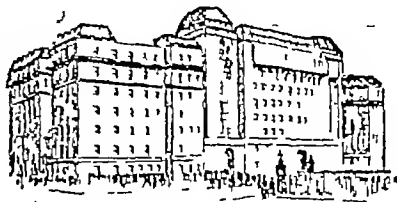
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during the past 12 months

YET CHARGES REMAIN THE SAME

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A large portion of the money was spent in a thorough re-organisation of the nursing and catering services previously at a remarkably high standard. As to catering at The Clinic now "It seems nowadays you have to be ill" wrote a patient there recently, "to learn how to live really well"

While the average charge for a room at The Clinic remains at fourteen guineas charges actually range as before, from 10 to 18 guineas, while there are a few suites at 25 to 42 guineas. All these rates include a free dispensary service—an "extra" which cost The Clinic nearly £2,000 last year. Enquiries and visits from the medical profession are welcome, and the Secretary will be glad to furnish further details

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Telephone 11 ELbeck 4444 (20 lines)

CALDECOTE HALL

NUNEATON
WARWICKSHIRE
(Phone Nuneaton 241)

Residential treatment of FUNCTIONAL NERVOUS DISORDERS

Including Alcoholism and other Addictions
(Certifiable cases are not received)

This beautiful mansion situated in the heart of the country (less than two hours from London by L.M.S.R.) and surrounded by charming pleasure grounds in which games and outdoor occupational therapy are available is devoted to the treatment of Functional Nervous Disorders by psychotherapeutic and ancillary methods

Illustrated brochure and particulars obtainable from A. E. CARRIER M.D., D.P.M., Resident Medical Superintendent

PECKHAM HOUSE, 112, Peckham Road, London, S E 15.

Telegrams Alleviated, London.

Telephone Rodney 2641 2642.

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch Kearsney Court, near Dover, to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis courts. Entertainments dances and indoor amusements held throughout the year. Terms from £3 3s per week. Illustrated prospectus and further particulars can be obtained from the Medical Superintendent

CAMBERWELL HOUSE, 33, Peckham Road, London, S E 5

Telegrams
"PSYCHOLIA LONDON"

FOR THE TREATMENT OF MENTAL DISORDERS

Telephone
RODNEY 4242 (2 lines)

Also completely detached villas for mild cases with private suites if desired. Voluntary patients received. Twenty acres of grounds. Hard and Grass Tennis Courts. Putting Greens. Bowls. Croquet. Squash. Rackets. Recreation Hall with Badminton Court and all indoor amusements including Wireless and other Concerts. Occupational Therapy. Callisthenics and Dancing Classes. A ray and Actino therapy. Prolonged Immersion Baths. Operating Theatre. Pathological Laboratory. Dental Surgery and Ophthalmic Dept. Chapel. Senior Physician Dr. HUBERT JAMES NORMAN assisted by three Medical Officers also resident and visiting Consultants. An illustrated prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary. The Convalescent Branch is HOVE VILLA, BRIGHTON, and is 200 feet above Sea level.

CHEADLE ROYAL HOSPITAL,

CHEADLE, CHESHIRE

This REGISTERED HOSPITAL with a SEASIDE BRANCH at Colwyn Bay, N. Wales is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES. The Hospital is governed by a Committee appointed by the TRUSTEES of the Manchester Royal Infirmary. In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, croquet ground and a court for badminton. There are also wireless installations. (If it may be had within easy distance). Occupational therapy. VOLUNTARY TEMPORARY AND CERTIFIED PATIENTS received. The Hospital is nine miles from Manchester, 15 minutes by rail from Liverpool and 7 1/2 hours from London. For terms and further particulars apply to the Medical Superintendent who may be seen in MANCHESTER by APPOINTMENT. Tel 474. GUTHY 31 (1 line)

The MUNDESLEY SANATORIUM

The central building makes the Mundesley Sanatorium the best equipped building in England for the cure of Tuberculosis. All the bedrooms have hot and cold running water electric light and wireless headphones. The public rooms are spacious and comfortable.

Resident Physicians

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M.B. (Cantab.) F.R.C.S. (Edin.)
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For all information apply
THE SANATORIUM MUNDESLEY
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Telephone Mundesley 94 and 95
(2 lines)

The buildings face S.S.W. and are sheltered from the sea by a pine-clad ridge. The sunshine record and dry air complete a perfect site. The medical equipment is of the latest kind and there is a day and night nursing staff.

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Enjoy the tonic air of the Kentish Coast. Perfect for holidays or your permanent home. Ideal for the convalescent. Gaily without noise. Music. Lovely sands for sea and sun bathing. Golf. Tennis.

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A HOME SCHOOL for the treatment of boys and girls whose NERVOUS DISABILITIES exclude them from the ordinary boarding school. Only curable cases accepted.
For Terms apply to the Resident Physician
Telephone Cat 659

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CHURCH STRETTON SHROPSHIRE
A private Home for the care of and treatment of a limited number of Ladies mentally afflicted. Voluntary and Temporary Patients received under the new Mental Treatment Act 1930.
Medical Superintendent, Dr. McClintock

LONDON, CORA HOTEL

Upper Woburn Place near B.N.A. Headquarters
Accommodates 235 visitors. Modern comforts.
Excellent table A.A. and R.A.C. recommended.
Room Bath and table d'hôte Breakfast from 8/6

ST VINCENT'S ORTHOPAEDIC HOSPITAL,
EASTCOTE, PINNER MIDDLESEX
Pinner 40

An entirely new wing containing PRIVATE ROOMS and a CHILDREN'S WARD for PAYING PATIENTS has been opened. Patients in these wards will be under the care of members of the visiting staff. Charges for private rooms from £5 5s per week. For further particulars apply to the Matron.

UNIVERSITY HALL, EDINBURGH

A COMMEMORATION DINNER
to celebrate the 50th YEAR of the foundation of
UNIVERSITY HALL, EDINBURGH will be held
in the NORTH BRITISH STATION HOTEL,
EDINBURGH on Saturday May 29th at 7.30 p.m.

Past and present residents of University Hall are invited to attend.

Tickets, price 10s. inclusive of wines, may be obtained from Messrs WHITSON & MATHEN, CA 21 Rutland Street Edinburgh to whom all communications should be addressed.

THE SEX EDUCATION SOCIETY

has arranged for
Dr HARRY BENJAMIN
OF NEW YORK

to LECTURE on
"REJUVENATION"

at
The Suffolk Galleries Suffolk St Haymarket W1

on
TUESDAY APRIL 13th at 8 p.m.

Chairman Dr NORMAN HOLT
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EXPERIENCED COACHING IN PHYSIOLOGY Pathology and Medicine by M.D. (Lond.) M.R.C.P. (Lond.) B.Sc. Physician to Lond. All exams. Classes held at address. No fee. B.M.A. House Tavistock Square W.C.1

BRITISH ASSOCIATION OF RADIOLOGISTS (FELLOWSHIP BOARD)

FELLOWSHIP EXAMINATION

The first Examination for the Fellowship of the Association will be held in London during the period November 29th to December 3rd.

The Examination is limited to Medical Practitioners who are duly registered in the country in which they practice and who hold a recognised Diploma in Radiology. The Diplomas so far recognised are those granted by the following bodies: The Universities of Cambridge, Edinburgh, Liverpool and London, the Conjoint Board of the Royal College of Physicians of London and the Royal College of Surgeons of England and the American Board of Radiology.

The principal subjects of the Examination are
I RADIODIAGNOSIS
II RADIOTHERAPEUTICS

All candidates must present themselves for examination in both subjects and will be required to pass in one of them on an honours standard. They will also be examined in general medicine, general surgery and general pathology but those who have passed examinations for higher medical or surgical qualifications may be exempted partly or wholly from this part of the Fellowship Examination. A thesis for published work in lieu of a thesis concerned with some aspect of their honours subject is also required from candidates and must be presented before the end of August. As regards overseas candidates theses arriving in London up to the end of October will be considered.

In addition to passing the Examination candidates must comply with the conditions for ordinary membership of the Association before they can be elected Fellows. Practitioners intending to specialise in Radiology are however invited to register their names with the Board in order that they may receive information.

Further particulars may be obtained from
F. HERNIMAN JOHNSON M.D. D.M.R.E.,
Warden of the Fellowship
British Association of Radiologists
32, Welbeck Street London W1
Telephone WELbeck 646

MANCHESTER ROYAL INFIRMARY & UNIVERSITY OF MANCHESTER

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Applications are invited for the TRAVELLING SCHOLARSHIP IN MEDICINE value £100 and for a Scholarship in PATHOLOGY value £50 each (scholar for one year). Candidates must be graduates of any University who have taken their full course of instruction in Medicine and Surgery at the University of Manchester and at the Manchester Royal Infirmary.

Details of the regulations governing the Scholarships may be obtained from the undersigned to whom all correspondence should be sent not later than Saturday May 14.

W. R. TINDALE C.M. Sept. 21 Sec.
Manchester Royal Infirmary

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Diploma in Laryngology and Otolaryngology
Diploma in Radiology
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The Guide to Medical Examinations sent post free on application gives full information relating to the various higher examinations
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SEND COUPON BELOW

Name

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Examination in which interested

THE INSTITUTE OF MEDICAL PSYCHOLOGY (The Tavistock Clinic)

Malet Place London W.C.1
A course of three lectures

by PROFESSOR KRITSCHNER

will be given on April 29th, 21st and 22nd at 8.15 p.m. each evening.

These lectures are open to MEDICAL GRADUATES only.

Details and tickets in ADVANCE from the EDUCATIONAL SECRETARY at the Institute.

BRITISH POSTGRADUATE MEDICAL SCHOOL

An INTENSIVE REFRESHER COURSE for GENERAL PRACTITIONERS will be held in the fortnight commencing April 26th as follows

Date	10.30 a.m. to 1 p.m.	Conducted by—	2 p.m. to 4.30 p.m.	Conducted by—
Monday April 26th	Principles of the Examination of Patients	Prof. F. R. FRASER, M.A., M.D., F.R.C.P.	Sciatica and Lumbago	Sir WILLIAM WILLCOX, K.C.I.E., C.B., C.M.G., M.D., F.R.C.P.
Tuesday April 27th	Pneumonia	Dr. R. A. YOUNG, C.B.E., M.D., F.R.C.P.	Injuries and Septic Infections of the Hand	Mr. M. F. NICHOLLS, M.A., F.R.C.S.
Wednesday April 28th	Indigestion	Dr. A. E. CLARK KENNEDY, M.A., M.D., F.R.C.P.	Sterility	Mr. ALICE BOURNE, M.A., F.R.C.S., F.C.O.G.
Thursday April 29th	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1
Friday April 30th	Obstetrical Emergencies	Mr. J. BRIGHT BANISTER, M.A., M.D., F.R.C.P., F.R.C.S., F.C.O.G.	Obesity	Dr. H. GARDNER HILL, M.B.E., M.D., F.R.C.P.
Saturday May 1st	Eye Conditions in General Practice	The Staff of the Royal London Ophthalmic Hospital, City Road, E.C.1	—	—
Monday May 3rd	Common Diseases of Nose, Throat, and Ear	The Staff of the Central London Throat, Nose and Ear Hospital, Gray's Inn Road, W.C.1	Diagnosis of Nervous Diseases	The Staff of the National Hospital, Queen Square, W.C.1
Tuesday May 4th	Asthma	Dr. G. W. BRAY, M.B., Ch.M., F.R.C.P.	Ante-natal Examination	Prof. JAMES YOUNG, D.S.O., M.D., F.R.C.S., F.C.O.G.
Wednesday May 5th	The Treatment of Common Fractures	Mr. J. P. HOSFORD, M.S., F.R.C.S.	Common Types of Anaemia, Their Diagnosis and Treatment	Dr. JANET M. VAUGHAN, D.M., M.R.C.P.
Thursday May 6th	The Acute Abdomen	Mr. R. J. McNEILL LOVE, M.S., F.R.C.S.	Non-operative Treatment of Common Gynaecological Conditions	Miss ALICE BLOOMFIELD, M.D., F.R.C.S., F.C.O.G.
Friday May 7th	Demonstration of Local Anaesthetics	The Staff of the School	Diet and Disease	Dr. GEORGE GRAHAM, M.A., M.D., F.R.C.P.
Saturday May 8th	Psychiatry in General Practice	Prof. E. MAPOTHER, M.D., F.R.C.P., F.R.C.S., at Maudsley Hospital	—	—

Early application is recommended as only a limited number can be admitted

FEE 5 guineas

Similar courses lasting a fortnight will commence on the following dates

May 21st

June 28th

September 20th

October 15th

November 15th

Detailed programmes and any further information can be obtained from the Dean, British Postgraduate Medical School, Duane Road, W.1.

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m. — Post-Graduates may enrol at any time for any period from 1 week to 3 months — Special facilities for Study Leave and for those wishing to take a course under the Grant-aided Scheme for Post Graduate Study by Insurance Practitioners — Anaesthetic Courses — Clinical Assistantships — Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

THE INSTITUTE OF MEDICAL PSYCHOLOGY (The Tavistock Clinic)

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Twenty Lectures on PSYCHO PHYSICAL ADAPTATION

An Introductory Course in Psychological Medicine for the General Practitioner BEGINS ON APRIL 22nd

Two Lectures will be given on THURSDAYS

3.0-4.0 p.m. — H. CRICHTON MILLER, M.D., M.R.C.P., 4.30-5.30 p.m. — CEDRIC SHAW, M.B., M.R.C.P.

Fee for either series £1 11s. 6d. for both series £2 2s.

Detailed syllabus and tickets IN ADVANCE from EDUCATIONAL SECRETARY at the Institute

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The Consulting Rooms and Laboratories of this Association (established in 1894) are available for all Medical Practitioners desiring Laboratory assistance in the investigation and diagnosis of cases under their care. All necessary apparatus and full facilities for collecting pathogenic material or for the personal attendance of Patients at the Consulting Rooms of the Association will be forwarded immediately on application.

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D. M. LLOYD, A.C.A. Secretary

Telegram: TEMPLE BAR, LONDON

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PUPILS trained as Midwives in accordance with C.M.B. regulations. Reduced fees under Ministry of Health Scheme. Sister Tutor on S.A.S. Post-graduate Courses in Anaesthesia. Phone: Clerkwell 171

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Short intensive Oral and Postal Provision Courses in preparation for the D.P.M. Council, London University etc.

Apply SECRETARY, Medical Correspondence, Collier, 19, Welbeck Street, London, W.1. Free booklet "How to Pass the D.P.M." on application.

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(Faculty of Medicine)

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SUMMER TERM 1937

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on Nutrition and Nutritional Disorders
will be delivered in the
LARGE THEATRE OF THE MEDICAL
FACULTY BUILDINGS EDMUND
STREET as follows

(a) One Lecture by Professor W. N. HAWORTH
D.Sc. Ph.D., F.R.S. (Professor of Chemistry in
the University of Birmingham) on THURSDAY
APRIL 22nd 4 p.m.

(b) Two Lectures by Professor J. C.
DRUMMOND D.Sc. F.I.C. (Professor of Bio-
chemistry in the University of London) on
THURSDAYS APRIL 29th and MAY 6th
4 p.m.

(c) Two Lectures by Professor LEONARD G.
PARSONS M.D. F.R.C.P. (Professor of Infant
Hygiene and Diseases of Children in the Uni-
versity of Birmingham) on TUESDAY and THURSDAY
MAY 11th and 13th 4 p.m.

DETAILS OF LECTURES

(1) Thursday April 22nd—Professor HAWORTH
"The Chemistry of the Carbohydrates, Ascorbic
Acid and other water soluble Vitamins"

(2) Thursday April 29th—Professor DRUMMOND
"The Chemistry and Physiological Signifi-
cance of Vitamin A"

(3) Thursday May 6th—Professor DRUMMOND
"The Vitamin and other Members of the
Fat-soluble Group"

(4) Tuesday May 11th—Professor PARSONS
"General nutrition, nutrition and nutritional
diseases of the erythrocyte, the inter relation of
iron and calcium in nutrition"

(5) Thursday May 13th—Professor PARSONS
"The role of Vitamin C in disease, multiple
deficiency states, the effect of certain alimentary
disorders on the absorption of carbohydrates"

Members of the Medical Profession and Students
of Medicine are invited to attend
STANLEY BARNES Dean

ROYAL EYE HOSPITAL MEDICAL SCHOOL

St George's Circus, Southwark S.E.1

D.O.M.S. COURSE

An Intensive Six Weeks Course for Parts I
and II of the D.O.M.S. Examination will com-
mence on May 3rd. Fees Part I £5's Part II
£10 10s. Applications to be received by April
16th. For further particulars apply to the Dean
at the Hospital

SURREY COUNTY COUNCIL

MENTAL HOSPITALS COMMITTEE.

Appointment of JUNIOR ASSISTANT MEDICAL
OFFICER (Male)

APPLICATIONS are invited for positions as male
Junior Assistant Medical Officers (unmarried) in
the Surrey County Mental Hospital Service.
Commensurate salary which will be subject to
statutory deductions under the Assylum Officers
Superannuation Act 1909 will be £350 rising by
annual increments of £25 to a maximum of £450
per annum together with apartments board
laundry and attendance valued for superannua-
tion purposes at £150 per annum. The persons
appointed will also be paid in addition to their
salaries the sum of £50 per annum if they hold
the Diploma in Psychological Medicine.

The appointments will be subject to termination
by one calendar month's notice on either side and
the persons appointed will be required to undergo
a medical examination.

Applications stating are accompanied by copies
of three recent testimonials and enclosed in an
envelope endorsed "Mental Hospitals Junior
Medical Officer" must reach me not later than
Wednesday April 21st 1937.

DUDLEY AUKLAND

Clerk of the Council
Mental Hospitals Department
County Hall
Kingston-upon-Thames
April 6th 1937

BARROWMORE TUBERCULOSIS SANA- TORIUM AND SETTLEMENT

Gr. Barrow Chester

HOUSE PHYSICIAN (Male) required on
May 1st. The appointment is for six months and
is renewable. Salary £150 per annum with board
residence and laundry.

The Institution deals with all stages of Pulmonary
Tuberculosis and comprises Hospital and Sana-
torium a commodation extensive workshops for
graduated work and a Settlement.

Special treatment Sanatorium and Artificial
Pneumothorax given.

Applications marked "House Physician" with
copies of three testimonials should be sent to the
Medical Director at the above address not later
than April 14th 1937.

THE EXAMINING BOARD IN ENGLAND

BY THE
ROYAL COLLEGE OF PHYSICIANS
OF LONDON
AND THE
ROYAL COLLEGE OF SURGEONS
OF ENGLAND

Notice is hereby given that the Examinations for
the following Diplomas will commence on the dates
stated below

DIPLOMA IN ANAESTHETICS

Friday May 21st

DIPLOMA IN LARYNGOLOGY AND

OTOLOGY

DIPLOMA IN PSYCHOLOGICAL MEDICINE

Friday June 4th

DIPLOMA IN PUBLIC HEALTH

Friday June 18th

Candidates who have complied with the neces-
sary requirements and who desire to present them-
selves for examination must apply in writing to the
Secretary Examination Hall 8/11 Queen
Square London W.C.1 at least twenty-one days
before the date of the Examination.

Applications for Part II are due at the same
time as for Part I

HORACE H. REW Secretary

ROYAL COLLEGE OF SURGEONS OF ENGLAND

DIPLOMA OF FELLOW

Notice is hereby given that the next Final and
Primary Examinations for the Diploma of Fellow
will commence on Thursday May 13th and
Monday May 31st respectively

LICENCE IN DENTAL SURGERY

Notice is hereby given that the First Exami-
nation will commence on Wednesday May 6th

Candidates who have fulfilled the necessary con-
ditions and who desire to present themselves for
examination, must give notice in writing to the
Director of Examinations Examination Hall 8/11
Queen Square London W.C.1 at least twenty-one
days before the date of the Examination transmit-
ting at the same time such certificates as may be
required by the Regulations of the Board

HORACE H. REW

Director of Examinations

GLAMORGAN COUNTY COUNCIL

APPOINTMENT OF ASSISTANT MEDICAL OFFICER (Male)

The Glamorgan Education Committee invite
applications for the appointment of an Assistant
Medical Officer (Male)

Applicants must have had at least three years
professional experience after qualification and also
hold a Diploma in Public Health. Special ex-
perience in Eye Diseases and Refraction work is
essential and experience in Orthopaedic work will
be considered an advantage.

Candidates must be under thirty five years of
age. The salary will be at the rate of £50 per
annum rising by annual increments of £5 to a
maximum of £750. Travelling and subsistence
allowances will be paid according to scale.

The post is an established post under the Local
Government and other Officers Superannuation
Act, and for this purpose a deduction of five per
cent of the salary will be made.

The person appointed will be required to give
his whole time to the duties under the control and
superintendence of the County Medical Officer and will
be required to reside where from time to time
directed by the Committee.

The appointment will be terminable by two
months' notice on either side.

Applications for appointment stating age and
qualifications and accompanied by copies of not
more than three recent testimonials should be
sent to the County Medical Officer Dr E. Colston
Williams, County Hall Cardiff and should be
received by him not later than the first post on
April 30th 1937.

Canvassing personal or otherwise will be a
disqualification.

HENRY ROWLAND

Clerk of the Glamorgan County Council
Glamorgan County Hall, Cardiff
April 1st 1937

CITY OF NORWICH

RESIDENT MEDICAL OFFICER ISOLATION HOSPITAL, ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the post of
RESIDENT MEDICAL OFFICER Isolation Hospi-
tal, ASSISTANT MEDICAL OFFICER OF
HEALTH and ASSISTANT SCHOOL MEDICAL
OFFICER. Salary £450 per annum rising to £600
per annum. Board allowances at the rate of £60 per
annum granted when absent from home on leave.

For particulars send stamped addressed envelope
to the Medical Officer of Health Mr C. S. G. G. G.
Street Norwich by whom applications for the post
must be received not later than April 20th 1937.

ROYAL COLLEGE OF MEDICINE BAGHDAD

Applications are invited for the following posts—

(1) PROFESSOR OF PATHOLOGY. To teach
Pathology theoretical and practical and Medical
Anatomy in the Royal College of Medicine Bagdad
and to be in charge of the College of Medical
Pathological Laboratory.

(2) PROFESSOR OF BACTERIOLOGY. To
teach Bacteriology theoretical and practical in the
Royal College of Medicine Bagdad and to be
in charge of the Government Vaccine and Anti-
Lymph and Pustule Institutes and to prepare the
vaccines required by the Iraq Health Service.

Contract in each case for five years at rate of
pay of £150 per month. Applications to these
posts preferably from young men not over 35 with
full particulars of academic career special training
and research experience and names of two re-
ference familiar with the candidate's work to be
sent before April 30th 1937 to Sir JOHN C. C.
LEITCH, Lister Institute, Chelsea Gardens
London S.W.1

THE UNIVERSITY OF SHEFFIELD

DEPARTMENT OF BACTERIOLOGY

The Council are about to appoint an
ASSISTANT BACTERIOLOGIST AND
DEMONSTRATOR Salary £500 per annum

Applications must be received by the under-
signed (from whom further particulars may be
obtained) not later than April 17th

W. M. GIBBONS Registrar

BOROUGH OF SWINDON

DEPUTY MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

The Corporation of Swindon invite applications
from fully qualified medical men for the position
of Deputy Medical Officer of Health and Assistant
School Medical Officer.

The commencing salary will be £600 per annum
rising by four annual increments of £25 (subject to
satisfactory service) to a maximum of £700 per
annum.

The person appointed will be required to devote
the whole of his time to the duties of the office
and to act under the supervision of the Medical
Officer of Health.

The applicant elected for the appointment will
be required to pass a medical examination and
(if appointed) to contribute to the fund estab-
lished under the Local Government and other
Officers Superannuation Act 1909.

Intending applicants must possess the Diploma in
Public Health or an equivalent qualification.

Excellent opportunities present themselves for
gaining experience in the working of a modern
Public Health Department together with facilities
for research. The appointment will be terminable
by three months' notice on either side.

Particulars of duties and forms of application
may be obtained from the Medical Officer of
Health 61 Eastcott Hill Swindon.

Canvassing in any form will be deemed a dis-
qualification and applicants must state on a form
of declaration which will be supplied with the
form of application whether to their knowledge
they are related to any member of the Council or
to any Senior Officer of the Corporation.

Applications (upon the prescribed form) en-
dorsed Deputy Medical Officer of Health must
be delivered at my office not later than Friday
April 30th 1937.

W. H. BENTLEY

Town Clerk Swindon
April 1st 1937

LANCASHIRE COUNTY COUNCIL

COUNTY BOROUGH OF BLACKBURN BOROUGH OF DAPWEN BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY

APPOINTMENT OF CONSULTANT OBSTETRICIAN

Applications are invited from registered medical
practitioners with special experience for the
appointment of CONSULTANT OBSTET-
RICIAN at a salary of £1000 per annum. The
Gentleman appointed will be allowed to exercise in
private and consultant practice subject to certain
conditions.

The successful candidate will be appointed to the
Honorary Staff of the Blackburn and District Lan-
cashire Royal Infirmary and will be required to
reside within the County Borough of Blackburn.

Conditions of appointment and forms of applica-
tion may be obtained from Mr. MEDICAL OFFICER OF
HEALTH Victoria Street Blackburn to whom com-
pleted applications should be forwarded not later
than April 15th 1937.

CHAS S. POPE SO

Town Clerk Blackburn
Town Hall Blackburn

COUNTY BOROUGH OF DERBY

ASSISTANT MEDICAL OFFICER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER in the Public Health Department. Salary £500 per annum rising by annual increments of £25 to £700 per annum. Applicants must be duly qualified registered Medical Practitioners, and should possess the Diploma of Public Health.

The duties of the post will include work in connexion with Child Welfare, the School Medical Services and such other duties as may be required by the Council.

The officer appointed will be required to devote his or her whole time to the duties of the post, to act under the supervision and control of the Medical Officer of Health, and to reside within the Borough.

The successful candidate will be required to contribute to the Council's Superannuation Fund and for this purpose must pass the necessary medical examination. Age of applicants must not exceed 40 years.

The appointment will be held during the pleasure of the Council and is terminable by one month's notice on either side.

Applications stating age qualifications and previous experience together with copies of not more than three recent testimonials must be received by the undersigned not later than April 15th 1937. Application forms are not provided. Envelopes must be endorsed "Assistant Medical Officer."

Canvassing directly or indirectly will be a disqualification.

GORDON LILICO
Medical Officer of Health

Public Health Department,
1 Derwent Street Derby

COUNTY BOROUGH OF DERBY

DERBY CITY HOSPITAL.

ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited for the post of Assistant Resident Medical Officer (Male) of the above Hospital of 300 Beds. This Hospital provides treatment for acute medical and surgical cases, tuberculosis, obstetrics and children's diseases, etc. Candidates must be registered in Medicine and Surgery.

The appointment is for a period of six months; two months' notice of termination of duties may be given on either side. The successful applicant will be required to commence duties early in May. Salary at the rate of £200 per annum with board and residence.

Applications stating age, experience and accompanied by three recent testimonials, should be sent to the undersigned as soon as possible.

GORDON LILICO
Medical Officer of Health.

Public Health Department,
1 Derwent Street Derby

NOTTINGHAMSHIRE COUNTY COUNCIL.

PUBLIC HEALTH DEPARTMENT

ASSISTANT SCHOOL MEDICAL OFFICER (Male)

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and must have had at least three years experience since qualification.

The salary will be at the rate of £500 per annum (rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's Scale).

Forms of application and conditions of the appointment may be obtained from me, and applications accompanied by copies of not more than three recent testimonials should be forwarded to the County Medical Officer, Shire Hall, Nottingham, not later than April 17th 1937.

K. TWEEDEALE MEABY

Clerk of the County Council
Shire Hall Nottingham
March 23rd 1937

BOROUGH OF ILFORD

RESIDENT MEDICAL OFFICER AT MATERNITY HOME.

Applications are invited for the above whole-time appointment from registered women medical practitioners at a commencing salary of £350 per annum, rising by annual increments of £25 to £450 per annum with board lodging and laundry.

The appointment will be subject to the provisions of the Local Government and other Officers Superannuation Act 1922, and to formal agreement and the successful applicant will be required to pass a medical examination to the satisfaction of the Medical Officer of Health.

Applications should be accompanied by three recent testimonials to be made on a form obtainable from the undersigned, must be submitted to the undersigned not later than Wednesday April 14th 1937.

CHARLES N. ROBERTS

Town Hall, Ilford Town Clerk

CITY OF BIRMINGHAM.

COLESHILL HALL

ASSISTANT MALE MEDICAL OFFICER

Coleshill Hall is a colony for mental defectives of all ages and both sexes consists of two divisions five miles apart situated at Colehill and Marston Green respectively each about ten miles from Birmingham.

Applications are invited for the whole-time appointment of a Resident Male Assistant Medical Officer at the Marston Green Division (500 beds including children's wards and colony hospital with T.B. and V.D. clinics). The candidate appointed must be required to serve at either institution. He will be required to pass satisfactorily a medical examination and to be subject to the provisions of the Asylums Officers Superannuation Act, 1909 as modified by the Asylums and Certified Institutions (Officers' Pensions) Act, 1918. If not already subject to that Act the candidate will be required to serve a probationary period of twelve months. The appointment will be subject to one month's notice on either side.

The commencing salary for a single man will be £350 per annum rising to a maximum of £650 per annum subject to satisfactory service plus residential emoluments of board lodging and laundry valued for superannuation purposes at £150 per annum. If married the commencing salary will be £400 per annum rising to a maximum of £700 per annum plus emoluments consisting of unfurnished residence, fuel, light, and laundry valued for superannuation purposes at £100 per annum. An additional £50 per annum will be granted if holding, or on obtaining a recognized qualification in psychological medicine. All fees allowances and remunerations received other than the foregoing must be repaid to the City Council.

Application forms may be obtained from the Medical Superintendent, Colehill Hall, Colehill near Birmingham and must be returned to him not later than Thursday April 15th 1937.

F. H. C. WILTSHIRE

Town Clerk.

Council House Birmingham 1

CITY OF BIRMINGHAM

DUDLEY ROAD HOSPITAL.

(926 Beds.)

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as JUNIOR MEDICAL OFFICER (Male) at the Dudley Road Hospital, Birmingham. The appointment will be for a period of six months but may be extended for a further period of not exceeding six months. Salary at the rate of £200 per annum and full residential emoluments. The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital to whom applications stating age, experience and qualifications with copies of recent testimonials should be forwarded not later than April 21st 1937.

CORPORATION OF DUNDEE.

PUBLIC HEALTH DEPARTMENT

DUNDEE MENTAL HOSPITAL LIFF

MEDICAL SUPERINTENDENT

Applications are invited for the post of MEDICAL SUPERINTENDENT, DUNDEE MENTAL HOSPITAL LIFF, Dundee. Age must not exceed 45 years on the date of appointment. Salary will be at the rate of £850 per annum rising subject to satisfactory service by annual increments of £25 to £1,000 per annum. A house, free of rates is provided in the grounds of the hospital.

The Appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 and the successful candidate will be required to pass a medical examination.

Further particulars may be obtained from the Medical Officer of Health, 9 West Bell Street, Dundee. Canvassing directly or indirectly will be a disqualification.

Applications stating age, experience, etc., with copies of three recent testimonials must reach the undersigned on or before Wednesday April 28th, 1937.

City Chambers
Dundee
April 10 1937

DAVID LATTO
Town Clerk.

CITY OF BRADFORD-GRASSINGTON

SANATORIUM

Applications are invited for the post of ASSISTANT MEDICAL OFFICER at the City Sanatorium, Grassington. This appointment is for a period of one year. Salary £175 per annum plus board residence. Forms of application may be obtained from the Medical Officer of Health, Town Hall, Bradford and should be returned to the undersigned not later than April 17th 1937.

Town Hall
Bradford.

L. FLEMING
Town Clerk

AMENDED ADVERTISEMENT

COUNTY COUNCIL OF ESSEX AND URBAN DISTRICT COUNCIL OF THURROCK

Appointment of Lady Assistant County Medical Officer and Assistant Medical Officer of Health.

Applications are invited for the undermentioned appointments—

	Commencing Salary Per annum
Assistant County Medical Officer	£700
Assistant Medical Officer of Health for the Urban District of Thurrock	£300
	£300

Applicants who should be over 45 years of age, must be duly qualified Medical Practitioners with special experience in Obstetrics, and hold a Diploma in Public Health.

The person appointed will be required to pass a medical examination and to contribute to the funds established by each authority under the Local Government and Other Officers Superannuation Act, 1922.

The total salary of the person appointed will rise, subject to satisfactory service by annual increments of £25 to £700 per annum. If the person appointed undertakes on behalf of the Urban District Council of Thurrock attendance at a Women's Welfare Clinic, an additional £12 12s. per annum will be payable to her by the District Council. A travelling allowance of £15 per annum is payable by the Urban District Council of Thurrock.

The appointment to the Office of Assistant County Medical Officer will be subject to the Sick Pay Rules and Regulations of the County Council, a copy of which will be forwarded on application.

Applications on the prescribed form (obtainable from the undersigned E. S. HOLCROFT) should be delivered at the County Hall, Chelmsford not later than Monday April 19th 1937.

E. S. HOLCROFT

Clerk of the County Council.

A. E. POOLE.

Clerk to the Urban District Council of Thurrock.

County Hall,
Chelmsford
April 2nd 1937

BOROUGH OF MORLEY

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from registered medical practitioners (male or female) for the above named post. It is desired that applicants should hold a Diploma in Public Health.

Applicants should have had at least three years experience in the practice of their own profession and have had special experience in Maternity Child and Infant Welfare work and in the administration of Dental and other Anaesthetics.

The person appointed will be required to work under the direction of the Medical Officer of Health and School Medical Officer and to devote the whole of his or her time to the duties of the office which will consist chiefly of School Medical Maternity and Child Welfare work, together with such other duties in the Public Health Department as may be required.

The appointment will be a designated post under the Local Government and Other Officers Superannuation Act, 1922, and the successful candidate will be required to pass a medical examination.

Salary will be at the rate of £500 per annum rising subject to satisfactory service by annual increments of £25 to £700 per annum. The appointment will be determinable by one month's notice on either side.

Forms of application may be obtained from the undersigned to whom they should be returned completed in a sealed envelope endorsed "Assistant Medical Officer" together with copies of three recent testimonials, on or before April 21st 1937.

E. A. FINNIGAN

Town Hall
Morley
March 25th 1937

NORTHUMBERLAND COUNTY COUNCIL.

WOOLEY SANATORIUM near Hexham for the treatment of Adults suffering from Tuberculosis (180 beds)

Applications are invited for the appointment of an ASSISTANT MEDICAL OFFICER at the above Sanatorium. Salary £340 per annum rising by annual increments of £25 to a maximum of £450 with board lodgings and laundry.

The salary will be subject to a percentage deduction in accordance with the provisions of the Local Government and other Officers Superannuation Act 1922, for which purpose the selected candidate must undergo a medical examination.

Applications should be accompanied by three recent testimonials to be made on a form obtainable from the undersigned, must be submitted to the undersigned not later than Wednesday April 14th 1937.

WILLIAM F. J. WHITFIELD

County Medical Officer

County Hall Newcastle-upon-Tyne 1

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Act. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected Candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate Study

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances may be obtained from the Medical Director-General of the Navy, Admiralty, S.W. 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than May 31st, 1937

COUNTY BOROUGH OF EAST HAM AND SOUTHBEND-ON-SEA.

RUNWELL HOSPITAL
Nr Wickford Essex.
(1032 beds.)

ASSISTANT RESIDENT PHYSICIAN

Applications are invited for the post of Assistant Physician to the above new Hospital for mental and nervous disorders.

Salary £350 rising by annual increments of £25 to £450 per annum plus furnished quarters board attendance and laundry valued for superannuation purposes at £150. An additional £50 will be given to any candidate who holds or obtains the D.P.M. Should the successful candidate be married permission may be given him to live out and he would then be allowed the value of his emoluments in cash.

The Hospital is built on modern lines and on the villa system and offers unusually good opportunities for research and post graduate work.

Forms of application together with further particulars are obtainable from the Physician-Superintendent, Runwell Hospital near Wickford Essex to whom they should be returned with copies of three recent testimonials not later than Monday April 17th. Envelopes to be marked "Physician."

H. J. WORWOOD,
Clerk to the Committee.

COUNTY BOROUGH OF WOLVERHAMPTON

NEW CROSS HOSPITAL (350 Beds)

ASSISTANT MEDICAL OFFICER (RESIDENT)

Applications are invited from single gentlemen duly qualified for appointment as Assistant Medical Officer at the above Hospital which contains Medical Surgical Maternity Children's and Isolation Departments and is modern and equipped. Experience in anaesthetics a knowledge of clinical pathology and previous Hospital experience will be deemed additional assets.

Salary will be at the rate of £700 per annum with apartments board attendance etc.

The appointment will be limited to a term not exceeding one year.

Further information as to the duties etc. may be obtained from the Medical Officer of the Hospital.

Applications, stating age qualifications and nationality together with copies of recent testimonials should be addressed to:

A. G. ALDRIDGE

Public Health Officer

Stafford Street Wolverhampton

COUNTY COUNCIL OF MIDDLESEX

ASSISTANT PATHOLOGIST

Applications are invited for the pensionable appointment of Assistant Pathologist to Redhill County Hospital Edware. Candidates must be registered Medical Practitioners with special knowledge and experience of pathology who are engaged wholly or chiefly in the practice of this branch of medicine.

The officer appointed must devote his whole time to the duties of his office. He will not be allowed to engage in private practice and any fees received by him must be paid over to the Council.

The appointment which will be subject to medical examination will be held during the pleasure of the Council and is terminable by three months' notice on either side.

Salary £650 per annum rising by annual increments of £25 to £800 per annum.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than April 24th. Application forms are not provided. Envelopes must be endorsed "Assistant Pathologist Redhill County Hospital—Z."

Conveying directly or indirectly will be a disqualification.

C. W. RADCLIFFE,
Clerk of the County Council.

Middlesex Guildhall
Westminster S.W. 1
April 1st, 1937

CITY OF MANCHESTER

BAGULEY SANATORIUM (333 Beds)

The Public Health Committee invites applications from registered medical men for the post of RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER (Grade A) at the Baguley Sanatorium.

The salary for the appointment is £200 per annum with board residence and laundry in addition subject to the Manchester Corporation regulations of service.

The appointment will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter.

Full information and forms of application may be obtained from the Medical Officer of Health, Sir Ralph Heave, Quay Street, Manchester 2, and applications for the post must be received by him not later than April 24th, 1937.

THOMAS H. F. E. WATBRET, HON. VICE-MAYOR
Manchester City Council
April 2nd, 1937

MINISTRY OF HEALTH

The Minister of Health invites applications for a vacant appointment as TEMPORARY SEROLOGIST on the staff of the Ministry. Both men and women are eligible for appointment.

The salary will be at the rate of £400 per annum. Candidates must have experience in biochemical research and must present evidence of capacity for original work. A medical qualification is desirable but is not essential; otherwise candidates should possess a University degree in science.

The officer to be appointed will be employed in the first instance in the Pathological Laboratory of the Ministry of Health in London, but must be prepared to work in any part of England (or Wales) if required to do so.

The duties will include investigation into the chemistry and physics of serological reactions generally the routine performance of Wassermann and precipitation tests with the utmost exactness and accuracy and research into the chemical constituents of bacteria as reflected by antigen activity.

Candidates must conform to the Civil Service nationality rule.

The successful candidate will be required to devote his whole time to the Public Service and will be required to take up duty without undue delay.

Conveying through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application may be obtained from The Director of Establishment

Ministry of Health
Whitehall S.W. 1

No application can be considered unless received on the prescribed form not later than April 24th, 1937.

CITY OF MANCHESTER

BOOTH HALL HOSPITAL FOR CHILDREN (700 Beds)

The Public Health Committee invite applications from registered medical practitioners for the post of DEPUTY MEDICAL SUPERINTENDENT at the above named hospital. Age 34-40 years.

Salary £1,000 per annum with board residence and laundry in addition subject to the Manchester Corporation regulations of service.

Full information and forms of application may be obtained from the Medical Officer of Health, Sir Ralph Heave, Quay Street, Manchester 2, and applications for the post must be received by him not later than April 24th, 1937.

THOMAS H. F. E. WATBRET, HON. VICE-MAYOR
Manchester City Council
April 2nd, 1937

LONDON COUNTY COUNCIL.

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing to undermentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade I).—Salary £350—£425 with board lodging and washing.

(a) PADDINGTON HOSPITAL, Harrow Road W 9—Duties mainly medical. Experience of anaesthetics and paediatrics desirable.

(b) ST ANDREW'S HOSPITAL, Devons Road, Bow E 3—General duties and those of a casualty officer. Surgical experience desirable.

(c) ST CLEMENT'S HOSPITAL, 23 Bow Road E 3—(A special allowance of £50 a year (subject to review) is attached to this position.) Officer appointed will act as deputy to Medical Superintendent. Duties mainly medical mental experience desirable.

(d) ST GEORGE IN THE EAST HOSPITAL, Raine Street, Wapping E 1—(2 positions.) Duties of one position mainly medical and of other surgical obstetrical and gynaecological.

ASSISTANT MEDICAL OFFICERS (Grade II).—Salary £250 a year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(a) LEWISHAM HOSPITAL Lewisham S E 13—(3 positions.) Duties of one position mainly surgical other two positions duties mainly medical including anaesthetics and of one obstetrical.

(b) PADDINGTON HOSPITAL, Harrow Road W 9—Duties mainly medical including anaesthetics.

(c) ST GEORGE IN THE EAST HOSPITAL, Raine Street Wapping E 1—Duties mainly medical. Experience in anaesthetics desirable.

No accommodation for a woman.
Application form obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2A County Hall S E 1 returnable by April 19th.
Canvassing disqualifies.

LONDON COUNTY COUNCIL.

Applications invited from registered medical practitioners for appointment as ASSISTANT PATHOLOGIST at The Whitechapel Clinic for the Treatment of Venereal Diseases Turner Street Whitechapel E 1. Salary £500 a year (fixed). Minimum hours of duty thirty-six a week. Appointment subject to annual review and is non-pensionable. Private practice not precluded.

Application forms containing full particulars obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division 2A) County Hall S E 1 returnable by April 28th.
Canvassing disqualifies.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered Women Medical Practitioners for the post of HOUSE PHYSICIAN at the Adelphi Park Hospital Crayke nos. Swansea Valley (126 beds for adults and children pulmonary and non-pulmonary cases).

Salary at the rate of £150 per annum plus maintenance. The appointment is for a period of six months.

Applications, stating age, qualifications, and previous experience, together with copies of three recent testimonials should reach the undersigned not later than Tuesday April 20th, 1937.

Memorial Offices D A POWELL,
Westgate Street Principal Medical Officer
Cardiff

HUDDERSFIELD ROYAL INFIRMARY (321 Beds.)

Two male HOUSE SURGEONS required to commence duty on May 1st and 5th, 1937 respectively.

Salary £150 per annum, with board, residence and laundry.

Appointment for six months subject to renewal at the discretion of the Board of Management.

The Hospital is officially recognized for the surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applications, with copies of three recent testimonials to be addressed to the undersigned immediately.

H J JOHNSON Gen. Supt. and Secretary

THE ROYAL INFIRMARY OF EDINBURGH

Applications are invited for the post of JUNIOR ASSISTANT RADIOLOGIST in the Radiological Department of the Royal Infirmary. A salary at the rate of £250 per annum will be paid and the most valuable experience in a large Radio-optical Department would be desirable. Candidates must possess radiological qualifications, and must be prepared to stay at least twelve months.

Applications, stating age and previous experience, should be sent to the undersigned as soon as possible.

HENRY MAW Secretary and Treasurer

METROPOLITAN BOROUGH OF STEPNEY

APPOINTMENT OF DEPUTY AND ASSISTANT MEDICAL OFFICER OF HEALTH

The Council of the Metropolitan Borough of Stepney invite applications for the appointment of a Deputy and Assistant Medical Officer of Health. The commencing salary will be at the rate of £750 per annum rising by six annual increments of £25 to a maximum salary at the rate of £900 per annum such salary being inclusive.

Candidates must possess the qualifications (including the Diploma of Public Health) prescribed for a Medical Officer of Health by the Public Health (London) Act 1936 as well as those prescribed in Articles 6 and 7 of the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations, 1930.

The person to be appointed should have had special experience in maternity and child welfare work, including ante-natal work, and experience in tuberculosis work. Preference will be given to a candidate who has had actual experience in Public Health work, including the diagnosis of infectious diseases. He will be required to devote the whole of his time to the duties of the office and act under the supervision of the Medical Officer of Health. The appointment will be made over be subject to the Stepney Borough Council (Superannuation) Acts, 1905 to 1931 and to the Council's bye-laws including the passing of an examination by the Council's Medical Referee as to constitutional fitness and will be made in the first instance for a probationary period of six months.

Forms of application may be obtained from the undersigned to whom they must be returned in envelopes endorsed "Appointments of Deputy and Assistant Medical Officer of Health" so as to reach him not later than 12 o'clock noon on Saturday April 24th 1937.

Canvassing members or officers of the Council in any manner whatsoever is strictly prohibited and will disqualify candidates. The Council do not bind themselves to appoint any of the candidates and the appointment will be subject to the obtaining of any necessary consents.

By Order
W L McCARTY Town Clerk.

Municipal Offices
Raine Street E 1
April 1st, 1937

CITY OF BIRMINGHAM

Maternity and Child Welfare Department.

THREE TEMPORARY MEDICAL OFFICERS

Three WOMEN TEMPORARY OFFICERS are required for a period of approximately five, four and two months respectively from June 7th in two cases and July 2nd in one.

Applicants should have had considerable experience in work with mothers and children, including resident posts in a maternity hospital and in a children's hospital. The salary offered is £10 per week.

The appointment cannot be terminated within the period named except for health reasons.

Applications endorsed "Temporary Medical Officer for Maternity and Child Welfare" and accompanied by copies of three recent testimonials, to be made on a form obtainable from the Medical Officer of Health Council House, Birmingham 3 and returned to him on or before WEDNESDAY APRIL 21st, 1937.

F H C WILTSHIRE Town Clerk

HEREFORD COUNTY AND CITY MENTAL HOSPITAL.

Wanted a SECOND ASSISTANT MEDICAL OFFICER (male) not exceeding forty years of age, doubly qualified and registered under the Medical Act. Salary £350 rising by annual increments of £25 to £450 plus £50 for D.F.M. with board furnished apartments laundry etc. or as an alternative if married £550 rising by annual increments of £25 to £600 plus £50 for D.F.M. with no emoluments. Ample opportunities exist for research with trained laboratory assistance in bacteriology pathology and biochemistry. Preference will be given to a candidate with laboratory experience and to one holding a diploma in Psychological Medicine.

The appointment is subject to the provisions of the Asylums Officers Superannuation Act, 1909.

Applications, with one or more personal references to be sent to the Medical Superintendent, County and City Mental Hospital Hereford.

ROYAL EAST SUSSEX HOSPITAL, HASTINGS.

Applications are invited for the post of SENIOR HOUSE SURGEON (female) vacant May 21st, 1937. The appointment is for a period of six months.

Salary at the rate of £200 per annum with board and residence.

Candidates must be duly registered medical practitioners.

Applications, with copies of recent testimonials, to be addressed to the Secretary.

WILFRID G KEMLEY Secretary

COUNTY BOROUGH OF WEST BROMWICH

HALLAM HOSPITAL (472 beds)

HOUSE PHYSICIAN

Applications are invited from duly qualified male registered Practitioners for the above-mentioned post.

The appointment is for six months with eligibility for a further six months. Either party may give six weeks notice terminating the appointment. The hospital is equipped with up-to-date special departments. There is a visiting staff of eight physicians and surgeons one resident surgical officer and three resident medical officers.

Salary £200 per annum and also board-residence. Canvassing, either directly or indirectly is strictly prohibited and will be deemed a disqualification.

Applications, stating age, experience and qualifications, together with copies of three recent testimonials must be forwarded to the Medical Officer of Health 2 Lodge Road West Bromwich so as to arrive not later than by first post on Thursday April 15th 1937.

ALFRED WICKHAM Town Clerk.

Town Hall West Bromwich
March 23rd 1937

COUNTY BOROUGH OF OLDHAM.

BOUNDARY PARK MUNICIPAL HOSPITAL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £200 per annum with board residence, and laundry.

Candidates should be unmarried. The appointment will be in the first instance be for a period of six months. The successful applicant however will be eligible for reappointment for a further period of six months.

The Hospital comprises 375 beds with facilities for gaining experience in medicine, surgery and midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health Town Hall Oldham and should be returned endorsed "Resident Assistant Medical Officer" not later than Monday April 26th 1937.

JOSEPH J WILLIAMS L.D.S. Town Clerk.

Town Hall Oldham.
April 6th 1937

MEDICAL OFFICER OF HEALTH SCHOOL MEDICAL OFFICER

FELLING AND WASHINGTON URBAN DISTRICT COUNCILS invite applications from fully qualified medical practitioners for the whole-time appointment as Medical Officer of Health for the Urban Districts of Felling and Washington, and School Medical Officer for Felling Education Committee at a total inclusive annual salary of £800.

In addition, travelling and office expenses will be paid. The appointment will be subject to the approval of the Ministry of Health and will be in accordance with the Sanitary Officers (Outside London) Regulations, 1935 and applicants must be qualified as prescribed in Article 8 of these Regulations. There is a Superannuation Scheme in force in the Washington Urban District but not in Felling Urban District.

The successful applicant will be required to devote the whole of his time to the duties of the appointment, and will not be allowed to engage in private practice. Full particulars, together with form of application may be obtained from the undersigned.

Applications accompanied by copies of not more than three recent testimonials endorsed "Medical Officer of Health" must reach the undersigned not later than Monday April 6th 1937.—W P PARKER Clerk of Felling Urban District Council Council Buildings Felling-on-Tyne.

Applications accompanied by copies of not more than three recent testimonials endorsed "Medical Officer of Health" must reach the undersigned not later than Monday April 6th 1937.—W P PARKER Clerk of Felling Urban District Council Council Buildings Felling-on-Tyne.

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Applications accompanied by copies of not more than three recent testimonials endorsed "Medical Officer of Health" must reach the undersigned not later than Monday April 6th 1937.—W P PARKER Clerk of Felling Urban District Council Council Buildings Felling-on-Tyne.

CARDIFF ROYAL INFIRMARY

(Associated with the Welsh National School of Medicine) (490 Beds)

Applications are invited for the post of HOUSE SURGEON to the OPHTHALMIC DEPARTMENT of the above Institution. The post is tenable for six months but may be extended for a further six months. The post is open to either sex.

It is desirable that candidates should have some knowledge of refractions.

Salary is at the rate of £80 per annum (with board residence) for the first six months and if the appointment is renewed for a further six months at the rate of £120 per annum for the second period.

Applications with copies of three recent testimonials, should be sent to the undersigned as soon as possible as the appointment is now vacant.

R. ARMSTRONG
Medical Superintendent.

April 3rd 1937

THE ROYAL HOSPITAL, WOLVERHAMPTON

(Incorporated under Charter)

HOUSE SURGEONS required (General Surgery). The Hospital contains 300 beds, includes the usual special departments and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Act and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum. Board furnished rooms and laundry provided. Applications with copies of testimonials to be forwarded to the undersigned.

W. H. HARPER
House Governor

Wolverhampton
April 5th 1937

GRIMSBY AND DISTRICT HOSPITAL

(164 Beds)
(Recognised under the Regulations for F.R.C.S.)

JUNIOR HOUSE SURGEON (MALE)

Applications are invited for the above post. Remuneration £150 per annum with board residence.

Duties to commence May 1st 1937. Candidates must be fully qualified and registered. Applications stating age, qualifications, experience and not more than three recent testimonials to be forwarded to the undersigned at once.

H. B. COATES
Secretary Supt.

April 2nd 1937

NORFOLK AND NORWICH HOSPITAL

NORWICH (417 Beds)

Applications are invited for the post of HOUSE SURGEON to the Special Departments (Ear, Nose and Throat and Ophthalmic). Salary £100 per annum with board residence and laundry. Candidates (Male) must be unmarried and must possess registered qualifications.

Applications stating age, nationality etc., together with copies of testimonials should reach the undersigned as soon as possible.

April 9th 1937. FRANK INCH
House Governor and Secretary

BLOTFORD COUNTY HOSPITAL

Wanted a SECOND HOUSE SURGEON to take over the duties April 16th for a term of six months at a salary of £150 per annum. He must be fully qualified, male, unmarried and with previous hospital experience. Board lodging and laundry.

Applications stating age, nationality, qualifications etc., together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee.

THE ROYAL FIVE AND EAR HOSPITAL

BRADFORD

Wanted HOUSE SURGEON (male). Salary £150 with board residence and laundry. Applications stating qualifications etc. with copies of recent testimonials to be forwarded to the undersigned.

F. BRIGGS, Secretary Supt.

ROYAL LANCASTER INFIRMARY (140 Beds)

TWO JUNIOR HOUSE SURGEONS (Male British Subjects) required immediately. Salary £150 per annum with board residence and laundry. The appointment is for six months. Applications with copies of testimonials should be sent to the Hon. Secretary, Royal Lancaster Infirmary.

H. CROSS, Hon. Secretary

THE WESTERN DISPENSARY, ROCHESTER

ROCHESTER, KENT

Applications are invited to fill a vacancy on the ASSISTANT MEDICAL STAFF. The post is tenable for six months but may be extended for a further six months. The post is open to either sex. The salary is £150 per annum with board residence and laundry. Applications with copies of testimonials to be sent to the Secretary, not later than April 15th 1937. The Secretary must be resident in the district.

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL

(220 Surgical and Medical Beds)

HOUSE SURGEON TO OPHTHALMIC AND EAR, NOSE, AND THROAT DEPARTMENTS

Applications are invited from fully qualified men for the above post.

The appointment is for six months.

Salary at the rate of £150 per annum.

Applications stating age together with copies of three recent testimonials should be sent to the undersigned.

G. SUNNUCK,
Supt. and Secretary

April 6th 1937

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL

(120 Beds)

Applications are invited for HOUSE SURGEON to Special Departments (Orthopaedic, Ear, Nose and Throat, Gynaecological etc.).

Applications must be duly qualified and registered under the Medical Act.

The appointments will be tenable for six months from April 1st next.

The salary attached to the post is £150 per annum with board residence and laundry.

Applications with copies of testimonials should be sent to me immediately.

A. J. COOPER
Secretary Superintendent

ROYAL WEST SUSSEX HOSPITAL

Chichester

(114 Beds including 12 in the private patients block, Two residents)

JUNIOR HOUSE SURGEON wanted. Salary at the rate of £125 per annum with board residence and laundry. Applications should reach the undersigned as soon as possible, together with not less than three recent testimonials. State age, nationality, experience and qualifications (also telephone number if possible). By Order of the Board of Management.

ALAN RUDDLE, A.M.A., Secretary

March 23rd 1937

VICTORIA COTTAGE HOSPITAL, BARNET

(53 Beds)

The Committee invite applications for the following posts to the Hon. Consulting Staff—
1. CHILDREN'S PHYSICIAN—F.R.C.P. or M.R.C.P. on Staff of London General Hospital or Children's Hospital.
2. SURGEON—Preferably under 40. F.R.C.S. on Staff of London General Hospital.
3. GYNAECOLOGIST—Preferably under 40. F.R.C.S. on Staff of London General Hospital.

Applications should be received by the Secretary not later than April 21st.

ELSIE A. HENDERSON
Secretary

GENERAL HOSPITAL, NOTTINGHAM

(386 Beds)

A RESIDENT CASUALTY OFFICER (Male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry. Candidates are invited to send applications stating age, qualifications, and experience together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible.

PETER M. MACCOLL,
House Governor and Secretary

PRINCESS ALICE HOSPITAL, EASTBOURNE

(No ordinary General Hospital, 10 Beds, two House Surgeons)

RESIDENT HOUSE SURGEON (Male) required on April 15th 1937. Salary at the rate of £150 per annum with board and laundry. Applications from registered practitioners accompanied by copies of three recent testimonials should be delivered to the undersigned by first post on Tuesday April 15th 1937.

W. RUSSELL RUDALL,
Secretary

April 5th 1937

NORTH DEVON INFIRMARY, BARNSTAPLE

(No ordinary Hospital, 70 Beds in use, including Maternity Ward)

Wanted immediately duly qualified SOLE RESIDENT MEDICAL OFFICER. Salary £150 per annum with board and laundry. Appointment to be for not less than six months. British nationality. A candidate's name and qualifications with copies of testimonials to be sent to the Secretary.

W. RUSSELL RUDALL,
Secretary

BRIDGWATER GENERAL HOSPITAL

Salisbury Palace Buildings, Somerset

HOUSE SURGEON required. Salary £150 per annum with board and laundry. Applications with copies of three recent testimonials should be sent to the undersigned as soon as possible. The appointment is for six months. The salary is £150 per annum with board and laundry. Applications with copies of testimonials to be sent to the Secretary by April 15th 1937.

A. N. WILLIS, Secretary

April 10th 1937

THE ROYAL INFIRMARY, SUNDRLAND

(250 Beds)

2 HOUSE SURGEONS (male) required to commence duty April 15th. Salary £150 per annum with board residence, laundry etc. Applications stating age, qualifications and a copy of three copies of testimonials to be sent to the undersigned not later than Wednesday, April 21st. The Infirmary possesses modern equipment and has up-to-date Pathological and X-ray Departments. The Resident Medical Staff consists of a R.M.O. and six others. The Surgical appointments are regulated by the Royal College of Surgeons of England for the six months' training. Required of candidates before admission to the Final Examination for the Fellowship.

J. A. BEARDSALL,
House Governor and Secretary

ST. BARTHOLOMEW'S HOSPITAL, ROCHESTER

(16 Beds)

(Four Residents) Rochester, Chatham, Gillingham and District.

The House and Finery Committee invite applications for the post of HOUSE SURGEON which will become vacant on June 1st 1937.

Candidates must be unmarried, qualified and registered medical men. The appointment is for six months. Salary at the rate of £150 per annum with board residence and laundry.

Applications, stating age, qualifications, experience etc., accompanied by copies of three recent testimonials, must be received by the Secretary not later than April 3rd.

Convincing the Honorary Staff will disqualify.

SWANSEA GENERAL AND LYE HOSPITAL

(376 Beds)

CASUALTY OFFICER REQUIRED. Can be man single. Must have had previous hospital experience. Appointment for six months. Duties to commence immediately.

Salary £150 to £175 per annum according to experience with board residence and laundry.

Applications, stating age, nationality, qualifications and experience together with copies of three recent testimonials to be forwarded to the undersigned.

O. C. HOWELLS,
Secretary Superintendent

THE SHEFFIELD ROYAL HOSPITAL

(240 Beds)

Applications are invited for the post of WHOLE TIME CLINICAL ASSISTANT to the OPHTHALMIC DEPARTMENT. The duties are of a general type and candidates should have good patient experience. Salary £150 per annum non resident. The appointment in the first instance is for one year.

W. H. BOOTH,
Superintendent and Secretary

MACCLESFIELD GENERAL INFIRMARY

GENERAL HOSPITAL (100 Beds)

Applications are invited for the appointment of a SECOND HOUSE SURGEON for a period of six months to commence May 1st 1937. Salary £150 per annum with Board and Residence.

Applications with copies of three testimonials should be sent to the undersigned.

J. N. A. BRISCOE, Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN

HACKNEY ROAD, F 2

CLINICAL ASSISTANT required for Medical Out Patient Clinics on Tuesday afternoon or Friday morning or both. An honorarium of five shillings per attendance to cover travelling expenses will be paid and lunch will be provided.

Apply stating qualifications and experience to CHIEF H. BRISSETT, Secretary.

TAUNTON AND SO. HERST HOSPITAL (104 Beds), TAUNTON

HOUSE SURGEON required at once for a six months' appointment. Salary £150 and a House Physician also on staff. Salary £100 and £150 per annum and the retention of certain fees.

Applications with copies of three recent testimonials to be sent to the Secretary.

CALERNARVONSHIRE AND ANGLIAN INFIRMARY, BANCOR

(A General Hospital)

We are of a SENIOR and a JUNIOR HOUSE SURGEON (Male) Salary £150 and £100 per annum respectively with board and laundry. Duties to commence at once. Applications with copies of three recent testimonials to be sent to the Secretary by April 15th 1937.

TORBAY HOSPITAL, TORQUAY

(114 Beds)

HOUSE PHYSICIAN and HOUSE SURGEON required May 1st 1937. Salary £150 and £100 per annum with board and laundry. Applications with copies of three recent testimonials to be sent to the Secretary by April 15th 1937.

ROYAL SALOP INFIRMARY SHREWSBURY
(150 Beds)**APPOINTMENT OF RESIDENT HOUSE PHYSICIAN**

Applications are invited from fully qualified unmarried gentlemen for the appointment of Resident House Physician vacant immediately.

Salary £160 per annum with board residence etc. The appointment is for six months subject to re-appointment. Resident Staff comprises Resident Surgical Officer, Resident House Physician and two Resident House Surgeons.

The Resident House Physician is Resident Officer to the Medical Wards of the Hospital under the direction of three Honorary Physicians and is also Resident Officer to the Maternity Department for difficult cases under the direction of the Honorary Obstetrician.

Applications stating age qualifications experience nationality and accompanied by copies of three recent testimonials to be sent to the Under signed not later than April 20th 1937.

Board Room. J W NOBLE
April 2nd 1937 Sec. Superintendent.

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE.

The House Committee by Resolution declare vacant the office of HONORARY SURGEON.

According to statutory provisions every candidate must be a registered Graduate in Surgery of any University recognised by the General Council of Medical Education and Registration of the United Kingdom or a Registered Fellow Member or Licentiate of one of the Royal Colleges of Surgeons of the United Kingdom provided that he is practising as a Surgeon and not as a General Practitioner.

Applications must be sent to the House Governor and Secretary Royal Victoria Infirmary Newcastle-upon-Tyne not later than Saturday April 24th 1937.

The appointment will be made on May 6th 1937. Personal canvassing will be considered a disqualification for office.

S DUNSTAN
April 2nd 1937 House Gov. and Sec.

KETTERING AND DISTRICT GENERAL HOSPITAL.

Applications are invited for the following posts: RESIDENT MEDICAL OFFICER and SECOND RESIDENT MEDICAL OFFICER (Male).

Salaries £175 and £125 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months. Applications stating age, nationality and qualifications, together with copies of three testimonials to be sent to the undersigned as soon as possible.

G W JACKSON
Secretary-Supt.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN ST QUENTIN AVENUE NORTH KENSINGTON W 10
(81 Beds)

The Board of Management invite applications for the post of HONORARY RADIOLOGIST. The holding of a diploma in Medical Radiology and experience in superficial X Ray therapy are essential. Two attendances a week will be required. A proportion of certain fees is payable to the Radiologist. Applications accompanied by copies of three testimonials should be sent to the undersigned from whom any further information can be obtained not later than Saturday May 1st.

H J ELEY Secretary

PORTSMOUTH AND SOUTHERN COUNTIES EYE AND EAR HOSPITAL, PORTSMOUTH.**HOUSE SURGEON**

Applications are invited from registered Medical Practitioners for the above post now vacant. Salary £150 p.a. plus board and lodging. Applications giving particulars of age experience and nationality to be addressed to the Secretary not later than April 19th.

VICTORIA HOSPITAL, BLACKPOOL.
(18 Beds)

HOUSE SURGEON (male) required immediately. Appointment is for six months, salary at the rate of £200 per annum with board residence and laundry.

Applications with copies of three recent testimonials should be sent to the GENERAL SUPERINTENDENT.

NEWARK GENERAL HOSPITAL.
(55 Beds)

Wanted a fully qualified RESIDENT HOUSE SURGEON (male and unmarried). Salary £175 per annum with board residence and laundry. Applications stating age and qualifications with copies of testimonials to be sent to the Secretary.

HOSPITAL OF ST CROSS RUGBY
(120 Beds)

Applications are invited for the post of ONE MALE RESIDENT MEDICAL OFFICER (Three R.M.O.s).

Salary to commence at the rate of £100 per annum for the first three months £115 per annum for second three months, and at the rate of £150 per annum for subsequent months. Full board washing etc. provided.

Six months appointment and eligible on completion of service for further extension of six months.

Candidates must be prepared to commence duties immediately.

The practice of the Hospital offers excellent opportunities for wide experience.

Certificates and other fees shared by R.M.O.s.

Applications, stating age nationality and full details with copies of three recent testimonials to be sent to the undersigned.

(Signed) W COCKBURN
Superintendent and Secretary

TYNEMOUTH VICTORIA JUBILEE INFIRMARY

HOUSE SURGEON (MALE) required 1st May 1937. Applicants must be doubly qualified and registered Salary £150 per annum with board residence and laundry.

Applications stating age and other essential particulars and accompanied by copies of recent testimonials to be addressed to the undersigned before April 16th 1937 from whom all particulars may be obtained.

The Hospital has two resident House Surgeons and contains 60 beds and cots, an X Ray Department and an Out Patient Department where accident cases are received.

CHAS ROWELL, Secretary
1 Northumberland Place North Shields

THE LONDON LOCK HOSPITAL.

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the MALE DEPARTMENTS (Out Patients Dean Street, In-Patients Harrow Road). Candidates must be doubly qualified and duly registered.

The appointment is for six months commencing May 8th salary at the rate of £175 p.a. with furnished rooms at the Harrow Road Hospital full board and laundry. Applications enclosing copies (only) of 3 recent testimonials must be in the hands of the undersigned by Thursday April 29th and from whom a copy of the By-laws relating to the appointment or any further particulars can be obtained.

J F MORTON, Secretary
283 Harrow Road W 9 March 1937

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER
(167 Beds)**HOUSE SURGEON**

Applications are invited from fully qualified men for the above post to take up duties on May 1st next. Six months appointment. Salary £125 per annum with board residence and laundry.

Candidates who must be of British Nationality to make application to the undersigned enclosing copies of three testimonials.

HERBERT MASLEN, Secretary
April 3rd 1937

HOVE GENERAL HOSPITAL, HOVE
(50 Beds)

A JUNIOR RESIDENT MEDICAL OFFICER (male) is required. Salary £120 per annum with board apartments and laundry. Third class rail way fare will be paid to applicants invited to attend for interview. Applications must be received by the undersigned not later than Friday 16th inst.

H AUBREY FROGGATT
Secretary Supt.

GROSVENOR SANATORIUM ASHFORD KENT
(236 Beds)

Applications are invited from fully qualified men for the appointment of RESIDENT HOUSE PHYSICIAN.

The appointment is for a period of at least six months at a salary of £100 per annum with board lodging and laundry.

Previous experience not necessary. Applications stating age qualifications nationality and accompanied by copies of recent testimonials, to be sent to the Acting Medical Superintendent.

THE MANOR HOUSE HOSPITAL, GOLDERS GREEN N.W. 11

Applications are invited for the post of ASSISTANT VISITING PHYSICIAN to out-patients who will be required to be in attendance from 9 a.m. till 12 noon on Wednesday and Friday of each week. Remuneration at the rate of £1 guinea per session will be paid. Candidates must be registered Medical Practitioners.

Apply by letter or in person full particulars to the Secretary.

THE GUEST HOSPITAL, DUOLEY.
(General Hospital—107 Beds—shortly to be increased to 160 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

SECOND HOUSE SURGEON (Male) required to commence duty on 2nd May 1937. Salary at the rate of £120 per annum with furnished apartments board and laundry. Duties are of a general nature more especially Surgical and Ophthalmic work and administration of Anesthetics. Applications stating age qualifications, and experience accompanied by copies of testimonials to be sent to the undersigned.

H RAYMOND HURST
House Governor and Secretary
24th March 1937

ROYAL DEVON AND EXETER HOSPITAL, EXETER

HOUSE SURGEON (male) to the Ear Nose and Throat Department.

Applications are invited for this post, shortly becoming vacant.

The appointment is for six months, but candidates are eligible for re-election.

Salary at the rate of £150 per annum with board lodging and laundry.

Applications giving particulars as to age and qualifications together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

S S COLE,
Secretary and Manager

March 30th 1937

LINCOLN COUNTY HOSPITAL.

Wanted at the beginning of May JUNIOR HOUSE SURGEON. Male unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of 6 months approved service. Board residence and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Acts.

Applications stating age and other particulars, with copies of not more than 3 testimonials, to be sent to the undersigned from whom further particulars may be obtained.

ARTHUR MOORE,
Secretary-Superintendent.

County Hospital Lincoln
April 1 1937

ROYAL BUCKINGHAMSHIRE HOSPITAL (AYLESBURY)
(In course of extension to 115 Beds)

Applications are invited for the post of SECOND RESIDENT MEDICAL OFFICER (male) for six months to begin duty as soon as possible.

The candidate appointed will be eligible to apply for the senior post when it becomes vacant.

Salary £150 per annum with board residence and laundry. Candidates must be fully qualified and registered.

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned immediately.

F O DAWES Secretary

THE CHILDREN'S HOSPITAL, SHEFFIELD
(140 Beds)

Applications are invited for the post of HOUSE SURGEON vacant May 1st 1937.

The appointment is for six months. Salary £100 per annum with board residence and laundry.

Candidates (male and unmarried) who must possess registered qualifications, should forward applications stating age nationality etc. together with copies of three recent testimonials to the undersigned.

T H G GARTLAND
Superintendent and Secretary

STOCKTON AND THORNHALL HOSPITAL, STOCKTON-ON-TYES
(140 Beds—3 Residents)

HOUSE PHYSICIAN (male) alternating with Casualty Officer required for a period of at least six months. Salary £150 per annum with board residence and laundry. Candidates must be duly qualified and unmarried.

Applications stating age nationality and experience together with copies of three recent testimonials to be sent to the undersigned.

J WILKINSON Secretary

VICTORIA CENTRAL HOSPITAL, WALLASEY
(135 Beds)

Applications are invited for the position of JUNIOR HOUSE SURGEON (Male). Salary at the rate of £150 per annum with board residence and laundry.

Applications stating age experience and qualifications accompanied by copies of three recent testimonials to be sent to the undersigned.

FRANK DEAN, Secretary-Superintendent

**CORNELIA AND EAST DORSET HOSPITAL,
POOLE, DORSET
(117 Beds)****HOUSE PHYSICIAN**

Applications are invited (from single men) for the post of House Physician. Period six months. Salary at the rate of £150 p.a. with usual emoluments. Reappointment may be applied for, and if granted the salary is at the rate of £175 per annum.

Duties to commence on appointment. The Hospital is recognised by the Royal College of Surgeons of England in connection with the Final Examination for the Fellowship.

Applications stating age, nationality, experience and qualifications together with copies of three recent testimonials (which will not be returned) should reach the undersigned at the Hospital as soon as possible.

Preference will be given to applicants who have already held a resident appointment in a hospital.

E. S. FOLEY
Secretary

**CORNELIA AND EAST DORSET HOSPITAL,
POOLE, DORSET
(117 Beds)****RESIDENT SURGICAL OFFICER**

Applications are invited (from single men) for the post of Resident Surgical Officer. Period six months. Salary at the rate of £100 per annum with usual emoluments. Reappointment may be applied for.

Duties to commence on appointment. The Hospital is recognised by the Royal College of Surgeons of England in connection with the Final Examination for the Fellowship.

Applications stating age, nationality, experience and qualifications together with copies of three recent testimonials (which will not be returned) should reach the undersigned at the Hospital as soon as possible.

Preference will be given to applicants who have already held a resident appointment in a hospital.

E. S. FOLEY
Secretary

**THE PRINCE OF WALES'S HOSPITAL,
DEVONPORT, PLYMOUTH**

(Formerly Royal Albert Hospital, Devonport)
64 Beds

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £10 per annum with board residence and laundry.

Duties to commence May 1st 1937. Appointment is tenable for six months and is subject to renewal or promotion to the senior position when this post becomes vacant.

Applicants must be registered under the Medical Act.

Applications stating age and qualifications with copies of three recent testimonials must reach the undersigned by April 16th 1937.

FRANK ROWE
Secretary

March 30th 1937

HULL ROYAL INFIRMARY

Applicants are invited from Registered Medical Practitioners for the post of SECOND HOUSE PHYSICIAN (male) vacant April 1st. Salary at the rate of £150 per annum plus residence board and laundry.

The post is recognised by the University of London for the M.D. Branch I (Medicine) Examination.

The appointment will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications, giving particulars of age, experience and nationality together with copies of recent testimonials, should be addressed to the undersigned.

R. J. CARLESS
House Governor

March 22nd 1937

**THE MOUNT VERNON HOSPITAL,
NORTHWOOD MIDDLESEX.
(For the Treatment of Cancer)**

There will shortly be a vacancy for a HOUSE SURGEON (Male or Female). Candidates must be fully qualified and registered. Salary at the rate of £150 per annum with board residence, etc. Six months appointment. Applications with copies of three testimonials to be sent to the undersigned on or before April 17th.

W. J. MORTON
3, Fitzroy Square W.1 Secretary

**NORTH ORMSBY HOSPITAL,
MIDDLESBROUGH (195 Beds)**

HOUSE PHYSICIAN (male and unmarried) required. Salary £120 per annum with board residence and laundry. Applications stating age, qualifications, experience (if any) with copies of three recent testimonials should be sent to the undersigned.

GEORGE WATTS Secretary-Supt.

**THE LIVERPOOL SANATORIUM
DELMERE FOREST FRODSHAM VIA
WARRINGTON**

(175 Beds for the treatment of patients suffering from Pulmonary Tuberculosis)

**SENIOR ASSISTANT to the Medical Super-
intendent**

Applications are invited from Male Medical Practitioners with suitable qualifications for the above named appointment. Candidates must be unmarried and preference will be given to applicants who have held resident medical appointments since qualification and have had practical institutional experience in the treatment of Pulmonary Tuberculosis.

Salary will be at the rate of £350 per annum with board quarters and laundry.

The appointment is normally tenable for twelve months but may be extended.

Particulars of duties and full information together with form of application can be obtained from the Medical Superintendent.

Forms completed with copies of three recent testimonials should be returned as early as possible to the Medical Superintendent, The Liverpool Sanatorium, Delmere Forest, Frodsham via Warrington.

**THE ROYAL INFIRMARY
SUNDERLAND
365 Beds.**

CASUALTY OFFICER required to take on duties immediately. Salary at the rate of £150 per annum with board residence, laundry, etc.

The successful applicant will be required also to act as House Surgeon to the Ear, Nose and Throat Department.

Applications stating age and qualifications, and accompanied by copies of testimonials, to be sent to the undersigned not later than 16th April 1937.

The Infirmary possesses modern equipment and has up-to-date Pathological and X-ray Departments. The surgical appointments are recognised by the Royal College of Surgeons of England for the six months training required of candidates before admission to the Final Examination for the Fellowship.

J. A. BEARDSALL
House Governor and Secretary

GENERAL INFIRMARY, SALISBURY

(Voluntary Hospital 191 beds now in course of extension to 225 beds)

RESIDENT MEDICAL OFFICER (male) required to commence duty June 1st 1937.

The appointment is for one year including a three months probationary period with the option of extension.

Candidates must have held at least an appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist either separately or in conjunction with the former.

He must reside in the Infirmary and devote his whole time to the service of the Infirmary.

Salary £250 per annum with board residence.

Applications with copies of testimonials to be sent to the House Governor and Secretary and to be received by April 30th 1937.

**GENERAL HOSPITAL, NOTTINGHAM
(386 Beds)**

A HOUSE SURGEON is required at the above institution for the Ear, Nose and Throat Department containing 40 beds and a large Out-patient Department. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry.

Candidates are desired to send applications stating age, qualifications and experience together with copies of testimonials to the undersigned not later than Wednesday April 14th.

Duties to commence on Friday May 7th.

PETER M. MACCOLL House Gov. & Sec.

**HARROGATE ROYAL BATH HOSPITAL
(Special Hospital for Rheumatic & Allied Diseases) (150 Beds)**

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) to commence duties as soon as possible.

Salary at the rate of £156 per annum with board residence and laundry. Exceptional facilities for research or preparation of thesis.

Applications, stating qualifications, age, etc., with copies of recent testimonials should be forwarded to the undersigned.

E. P. L. DIXON M.A. Secretary

**DARLINGTON MEMORIAL HOSPITAL
(400 Beds)**

Wanted HOUSE SURGEON (male) British, fully qualified for the Ophthalmic, Ear, Nose and Throat and Children's Surgical Department. Salary £150 per annum with board residence and laundry.

Applications stating age and qualifications, together with copies of three recent testimonials to be addressed to the undersigned.

ARTHUR RIDDLE, A.C.S.
Secretary Supt.

**BURY INFIRMARY (LANCS)
(127 Beds.)****APPOINTMENT OF THIRD HOUSE SURGEON
(Male)**

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of no R.S.O. and three House Surgeons.

In addition to certain surgical work as may be deputed to the Third House Surgeon by the R.S.O. his duties are to have charge of the Casualty Department and to be able to undertake the necessary administration of Anaesthetics as required.

The appointment is for six months at a salary at the rate of £150 per annum with board residence, and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age, qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible endorsed House Surgeon.

Further particulars may be had on application.

H. WILKINSON Superintendent

**ROYAL NATIONAL SANATORIUM
BOURNEMOUTH**

Applications are invited from male medical practitioners for the following appointments—

MEDICAL SUPERINTENDENT

Applicants must have had practical experience in the treatment of Pulmonary Tuberculosis and done responsible sanatorium work.

The successful applicant will be required to reside in close proximity to the Sanatorium and must devote his whole time to the duties of his office and will not be allowed to engage in private practice. He will be required to pass a medical examination.

The salary is £800 per annum rising by annual increments of £25 to £950 per annum.

The appointment will be terminable by three months' notice on either side.

Applications stating age with not more than three recent testimonials (copies of qualifications and experience should reach the Secretary not later than April 22nd).

The Sanatorium has 95 beds for the treatment of pulmonary tuberculosis, and is fully equipped for all methods of treatment.

RESIDENT ASSISTANT MEDICAL OFFICER

Salary £200 per annum with board residence and laundry.

Experience in pulmonary tuberculosis desirable.

The appointment will be for one year (renewable). Duties to commence on May 1st.

Applications with full particulars and copies of recent testimonials should be addressed to the Secretary.

A. G. A. MAJOR Secretary

**THE ROYAL PORTSMOUTH HOSPITAL,
PORTSMOUTH****(FIVE RESIDENT MEDICAL OFFICERS)**

Applications are invited for the post of HOUSE SURGEON (male) qualified. Salary at the rate of £130 per annum with board etc. To commence duties about middle of April. Six months appointment. Eligible on completion of term for extension or other resident posts.

Applications, stating age, nationality and full details with copies of three testimonials to be sent to the undersigned from whom all particulars can be obtained.

B. WAGSTAFF
Secretary

**THE HARTLEPOOL HOSPITAL
HARTLEPOOL (96 Beds)**

Applications are invited for the appointment of a JUNIOR HOUSE SURGEON (male) salary £150 per annum with board residence, and laundry.

The appointment is for six months (subject to renewal). Duties to commence as soon as possible.

The appointment offers good general experience with special Departments for Aural, Ophthalmic and Orthopaedic work.

Applications stating nationality, age, qualifications and experience (if any) should be addressed to the undersigned.

NORMAN O. DEANS Secretary

**THE LADY CHICHESTER HOSPITAL, HOVE,
FOR FUNCTIONAL NERVOUS DISEASES
(60 beds)**

SENIOR HOUSE PHYSICIAN (woman) required. Six months appointment at £100 per annum all found.

Also JUNIOR at £50 per annum. Valuable experience for Diploma in Psychological Medicine.

Duties to commence at the beginning of May. Applications with testimonials to be sent to the Secretary Mr P. F. SPOONER 33 West Street, Brighton.

March 25th, 1937

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL, Shooters Hill, London S.E.18

GENERAL HOSPITAL. (112 Beds)
(Recognized by the Royal College of Surgeons of England for its surgical practice)

The Board of Management invites application from suitably qualified male candidates for the following appointments:

- (a) HOUSE PHYSICIAN commencing June 1st, 1937
- (b) HOUSE SURGEON commencing May 1st, 1937

Each appointment will be for six months and the rate of remuneration will be £100 per annum plus board residence etc.

The closing date for the receipt of applications which should be made on the prescribed form (obtainable from the undersigned) is Monday April 19th 1937 and short listed candidates will be required to meet the Appointments Committee on Friday April 23rd 1937.

R S G HUTCHINGS
Secretary

THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S.E.1

RESIDENT CASUALTY OFFICER

Applications are invited from qualified male practitioners for the post of RESIDENT CASUALTY OFFICER vacant on May 1st, 1937 to work in the Out Patient Department at £150 per annum. Candidates for this post should have held a previous appointment. The appointment is in the first instance for a period of six months. Applications with copies of testimonials should be forwarded not later than Tuesday morning April 20th to the Secretary at the Hospital from whom further particulars can be obtained.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S.E.1

There will be a vacancy on May 1st, 1937 for a HOUSE PHYSICIAN (male) of the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum with board and residence. Applications with copies of testimonials should be forwarded not later than Tuesday morning, April 20th to the Secretary of the above address from whom further particulars can be obtained.

HOSPITAL FOR DISEASES OF THE SKIN Blackfriars.

The Committee of Management invites applications from fully qualified men and women for posts as CLINICAL ASSISTANTS. The appointments will normally be made for a period of six months but this term may be extended.

Applications with testimonials in support should be addressed before April 15th to—

L. MUNDY
Secretary to the Hospital for
Diseases of the Skin
71 Blackfriars Road S.E. 1

HOSPITAL FOR DISEASES OF THE SKIN Blackfriars

The Committee of Management invites applications for the post of PATHOLOGIST on the Staff. The Hospital possesses a fully equipped laboratory for investigation and research and an honorarium will attach to the position.

Candidates are requested to address their applications before April 15th to—

L. MUNDY
Secretary to the Hospital for
Diseases of the Skin
71 Blackfriars Road S.E. 1

WESTERN OPHTHALMIC HOSPITAL, Marylebone Road N.W.1

Applications are invited for the post of JUNIOR RESIDENT HOUSE SURGEON. The salary is at the rate of £100 per annum. Some previous Ophthalmic experience is required. The selected candidate will be required to take up duty on May 1st.

Applications accompanied by copies of three recent testimonials, should reach me by April 17th.
H W BURLEIGH
Honorary Secretary

THE LONDON JEWISH HOSPITAL, Stepney Green, E.1

The Council of Management invite applications for ASSISTANT ANAESTHETIST. Honorarium at the rate of One and a Half Guinea per annum. The holder will be required to act as deputy for the Anaesthetist in emergency. Applications accompanied by copies of three recent testimonials should reach the Secretary before Friday April 16th 1937.

METROPOLITAN HOSPITAL, Kingsland Road E.8 (150 Beds)

There are vacancies for the following resident appointments—

- (a) SENIOR HOUSE PHYSICIAN
- (b) SENIOR HOUSE SURGEON
- (c) JUNIOR HOUSE PHYSICIAN
- (d) JUNIOR HOUSE SURGEON
- (e) CASUALTY OFFICER AND RESIDENT ANAESTHETIST

(Males Salary £100 per annum)

Appointments in the first place will be for a period of six months, dating from May 1st.

Candidates must possess a registered medical and surgical qualification of the United Kingdom. Forms of application may be obtained from undersigned.

Two members of the present staff are candidates for the two senior appointments.

FRANK JENNINGS
House Governor and Secretary

THE HOSPITAL FOR SICK CHILDREN Great Ormond Street, London WC1

A half-time OUTPATIENT MEDICAL REGISTRAR (male) will be required. Salary £175 per annum.

Candidates must be legally qualified to practise, and must have held a responsible resident appointment at a General Hospital.

The appointment is tenable in the first instance for one year, but is renewable for two further years.

Applications must be received by noon on Monday April 26th 1937 and Candidates must be prepared to attend for interview by the Joint Committee at 4.45 p.m. on Wednesday May 5th, 1937.

Further particulars and forms of application are obtainable from the undersigned.

HERBERT F RUTHERFORD
Secretary

ROYAL FREE HOSPITAL AND LONDON (R.F.H.) SCHOOL OF MEDICINE FOR WOMEN

Application is invited from registered medical practitioners for the post of RESIDENT ASSISTANT PATHOLOGIST in the Pathology Unit. Salary £150 per annum. Full-time.

The appointment is for seven months from July 1 1937.

Applications must reach one of the undersigned who will supply further particulars by first post on Monday April 26 1937.

RICHARD T BARTLEY Secretary
Royal Free Hospital W.C.1

LOUIE M. BROOKS Warden and Secretary
London (R.F.H.) School of Medicine
for Women Hunter Street, W.C.1

April 2 1937

NATIONAL DENTAL HOSPITAL (DENTAL DEPARTMENT OF UNIVERSITY COLLEGE HOSPITAL)

Applications are invited for the appointment of HONORARY ASSISTANT ANAESTHETIST for duty on one morning per week.

The possession of a Diploma in Anaesthetics will be considered an advantage.

The successful candidate will be appointed for one year in the first instance and thereafter will be eligible for reappointment annually and ultimately for promotion to the rank of Full Anaesthetist.

Applications, supported by not more than three testimonials should be forwarded to the Secretary University College Hospital Gower Street W.C.1 by noon on Monday April 19 1937.

PETERBOROUGH AND DISTRICT MEMORIAL HOSPITAL, (154 Beds)

APPOINTMENT OF RESIDENT HOUSE SURGEON

Applications are invited from fully qualified male practitioners for the above post which becomes vacant on May 1st next.

Salary £135 per annum with board residence and laundry.

Applications stating age and qualifications and experience with copies of recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

FRANK A. C. TAYLOR
Secretary Superintendent.

ROYAL CHEST HOSPITAL, City Road E.C.1 (Royal Northern Group of Hospitals)

Applications are invited for the post of MEDICAL REGISTRAR vacant May 19th for one year (open to re-election). Attendance three half-days per week. Honorarium £50 per annum.

Forms of application and rules can be obtained from the undersigned to whom applications with copies of testimonials should be sent by April 16th.

GILBERT G. PANTER Secretary
Royal Northern Hospital
100 Mary Road, N.

THE PRINCESS BEATRICE HOSPITAL, Earl's Court London, S.W.4 (General Hospital—81 Beds)

Applications are invited for the post of MEDICAL REGISTRAR to the above-mentioned Hospital. Candidates must possess the M.R.C.P., and must not be engaged in general practice. An honorarium of 150y Guinea is attached to the post and the appointment is for one year only with eligibility for re-election at the end of the year.

Applications with copies of not more than three testimonials should reach the Secretary Manager not later than Monday April 12th from whom further particulars can be obtained.

ROYAL CHEST HOSPITAL, City Road E.C.1 (Royal Northern Group of Hospitals)

Applications are invited for the post of RESIDENT MEDICAL OFFICER vacant June 1st for a period of 6 months (subject to re-election). Salary at the rate of £150 p.a. with board residence and laundry.

Applications with copies of testimonials should be sent by April 30th to the undersigned from whom forms of application and rules can be obtained.

GILBERT O. PANTER
Secretary

Royal Northern Hospital
Holloway London N 7

VICTORIA HOSPITAL FOR CHILDREN The Street Chelsea SW 3 (138 beds)

The Committee of Management invite applications for the post of CASUALTY OFFICER for a period of three months.

Duties to commence on May 1 1937. Hours 9 a.m. to 1.30 p.m. daily (including Saturday). Salary at the rate of £200 p.a. with lunch.

Candidates are expected to attend a Sub-Committee for an interview and should send their applications and copies of three testimonials to the Secretary not later than first post on Tuesday 20th instant.

D. ST JOHN BANFORD Secretary

THE FINCHLEY MEMORIAL HOSPITAL, Granville Road N.12 (72 Beds)

RESIDENT MEDICAL OFFICER.

Applications are invited for the post of Resident Medical Officer vacant May 1st.

Appointment for six months at the rate of £150 per annum with board residence and laundry.

Post suitable for recently qualified Practitioner.

Applications, stating qualifications, nationality and experience, with copies of recent testimonials to be sent to the Secretary.

HAMSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL, Haverstock Hill N.W.3

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical men for an appointment of House Surgeon vacant on May 1st next. The salary will be at the rate of £100 per annum together with board residence etc. and the term will be for six months.

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials, should reach the Secretary not later than noon on April 17th next.

ROYAL FREE HOSPITAL, ORAY'S INN ROAD LONDON W.C.1

Applications are invited for the appointment of ASSISTANT PHYSICIAN to the Department of Physical Medicine. Intending candidate who must either be Members of the Royal College of Physicians or undertake to take the membership within one year of appointment, should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before the 30th June 1937.

RICHARD T. BARTLEY Secretary

THE NATIONAL TEMPERANCE HOSPITAL, Hamstead Road N.W.1

Applications are invited for the following post—HOUSE PHYSICIAN (male). Salary £100 per annum. Board residence and laundry allowance being provided.

The appointment is for a period of six months from May 1st. Preference will be given to those who have held a resident post. Candidates must submit applications stating age and accompanied by copies of not more than three testimonials by Monday April 12th addressed to the Secretary.

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B M A House, Tavistock Square, W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE (cont'd)	CONTRACT PRACTICE (cont'd)
ABERTYSSWG MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Wynham Colliery Medical Aid Society) (Workmen's Medical Scheme)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
GRANTHAM FRIENDLY SOCIETIES MEDICAL INSTITUTE (Medical Officer)	NEATH AND DISTRICT (Medical Aid Association)	CARMARTHENSHIRE COUNTY COUNCIL (Assistant County Medical Officer of Health)
INVICTA MEDICAL BENEFIT SOCIETY GILLINGHAM (Junior Medical Officer)	OAKDALE MON (Medical Officer for Medical Aid Association)	FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B M A House, Tavistock Sq, W C 1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (All Friendly Society Appointments)	The Medical Secretary New South Wales Branch 135 Mac quarie St Sydney	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association (Medical) Society Hall Albert St East Melbourne Victoria.	WESTERN AUSTRALIA (Contract and Lodge Practices)	Hon. Sec. Western Australian Branch British Medical Association "Shell House," 264 St George's Ter race Perth Western Australia
QUEENSLAND (Brisbane Associate Friendly Societies Institute)	The Hon. Sec. Queens land Branch British Medical Association B.M.A. Building 35 Adelaide St Brisbane				

April 7, 1937

By Order of the Council G C ANDERSON, Medical Secretary

HOSPITAL CONVALESCENT HOMES Park Wood Swanley Kent. (For the reception of patients (women and children) in an early stage of convalescence from the London Hospitals (10 beds) The Trustees of the Home invite applications for the post of LADY RESIDENT MEDICAL OFFICER. The appointment is for a period of six months. Salary £200 per annum with quarters and full board. Candidates should have had recent Hospital experience. Applications stating age, qualifications and full details of experience should be accompanied by copies of three recent testimonials and addressed to C M POWELL Esq. Secretary Hospital Convalescent Home c/o Westminster Hospital London SW 1 on or before Friday April 23rd 1937

VICTORIA HOSPITAL FOR SICK CHILDREN (INCORPORATED) PARK STREET HULL.

The Board of Management of the above Hospital requires a RESIDENT HOUSE PHYSICIAN (Lady) at a salary of £150 with board residence and laundry to take up duties on May 1st 1937. Applications with copies of recent testimonials stating age and qualifications and other particulars to be sent to the Secretary not later than April 14th. The present House Surgeon may apply for the post of House Physician. Candidates should state whether they wish to apply for either post. March 23rd 1937

LEIGH INFIRMARY LANCASHIRE.

Wanted a JUNIOR RESIDENT HOUSE SURGEON (male) single for hospital of 85 beds. Salary £140 p.a. with rooms fire attendance and board. Good quarters. The position is now vacant.

The appointment is for six months with eligibility for re-election. Must be good Anaesthetist. The appointment offers exceptional opportunities for Surgery.

Applications to be addressed to Mr J A Smith Secretary 3 Silk Street Leigh Lancashire.

ANCOATS HOSPITAL, MANCHESTER

Applications are invited for the post of full time RADIOLOGICAL OFFICER (non-resident) to commence duty on May 1st next. Salary £300 per annum with luncheon and tea. The appointment is for twelve months and is renewable. Candidates must hold the D.M.R.E. Diploma. Applications stating age and particulars of qualifications and experience to be forwarded to the undersigned on or before April 17th together with copies of three recent testimonials.

By Order of the Board
HERBERT J DAFFORNE,
Gen. Supt. & Sec

ROYAL UNITED HOSPITAL BATH

HOUSE SURGEON required for Ear Nose and Throat Department, who will also be expected to give anaesthetics in other Departments. Salary £150 per annum with board residence, and laundry.

The appointment is for six months and candidates must be male unmarried and of British nationality.

Applications with copies of three testimonials to be addressed to the undersigned immediately.
J LAWRENCE MEARS
February 2nd 1937 Secretary Supt.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN Dyke Road Brighton (100 beds)

HOUSE SURGEON (male) required. Salary at the rate of £140 per annum with board lodging and laundry. Good experience. No canvassing. To take up duties early in May.

Applications in writing accompanied by testimonials should be sent to PERCY F SPOONER the Secretary
March 24th 1937

HERTFORD COUNTY HOSPITAL (169 Beds)

Applications are invited for the post of SENIOR HOUSE SURGEON (male) (three residents) Salary £200 per annum with board residence and laundry. The appointment is for six months in the first instance commencing May 1st 1937. Applications with three recent testimonials should be sent to the undersigned not later than Monday April 19th 1937.

PERCY G BROOKS
Secretary

THE JESSOP HOSPITAL FOR WOMEN Sheffield.

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(Appointments continued on p 64)

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Secretary Superintendent

April 6th 1937

ROYAL NORTHERN HOSPITAL, Holloway N 7

Applications are invited for the following appointment

HOUSE SURGEON vacant on May 5th. The appointment is for 9 months (6 months as House Surgeon and 3 months as Casualty Officer). Salary at the rate of £70 per annum with board residence and laundry.

Application with copies of testimonials should be sent by April 16th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G. PANTER

Secretary

OLDHAM ROYAL INFIRMARY

HOUSE SURGEON to Special Departments and House Physician required for a period of six months. Salary at the rate of £175 per annum with board residence and laundry.

Applications stating age, experience and qualifications together with copies of three recent testimonials must be forwarded to the undersigned not later than April 15th 1937.

H. J. CLOUT

General Superintendent

THE QUEEN'S HOSPITAL FOR CHILDREN, Hockley Road London E.

HOUSE SURGEON required May 1st.

Six months appointment. Salary at the rate of £100 per year with board lodging and laundry.

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials, on or before April 10th.

CHARLES H. BESSELL

Secretary

April 1st 1937

OLDHAM ROYAL INFIRMARY

HOUSE SURGEON required for a period of six months. Salary at the rate of £175 per annum with board residence and laundry.

Applications stating age, experience and qualifications together with copies of three recent testimonials, must be forwarded to the undersigned not later than April 1st 1937.

H. J. CLOUT

General Superintendent

ROYAL BERKSHIRE HOSPITAL READING
(333 Beds)

Applications are invited for the following resident appointments

One HOUSE SURGEON (male) immediately
One CASUALTY OFFICER (male) immediately
One HOUSE SURGEON TO THE SPECIAL DEPARTMENTS (Eye, Ear Nose and Throat) (male) Vacant May 1st

Appointments are for six months and candidates must be fully qualified and registered
Remuneration at the rate of £150 per annum with board residence and laundry

Applications, stating age and experience with copies of testimonials to be sent to the undersigned as soon as possible.

H. E. RYAN
Secretary and House Governor

THE GLASGOW EYE INFIRMARY

The DIRECTORS invite APPLICATIONS from registered medical practitioners for the Post of RESIDENT HOUSE SURGEON Salary £150 per annum with apartments and board. Applications with copies of testimonials should be lodged with the undersigned by April 22nd 1937

171 West Regent Street, T. C. CALDWELL,
Glasgow C.2 Secretary
March 31st 1937

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PARTNERSHIP — ONE THIRD SHARE FOR DISPOSAL in colliery district near Doncaster. Total receipts average £4,500. Panel £1800 Good house freehold £1100 — No 274

MIDDLE AND BETTER WORKING-CLASS PRACTICE in West Riding of Yorks City for disposal. Average receipts for three years £1460 Panel 947 patients Good corner house freehold £1400 Premium 14 years purchase Vendor specialising — No 272

DELIGHTFULLY SITUATED PRACTICE on the North-West Coast for disposal. Vendor retiring. Receipts average 3 years, 1936 Panel 362 patients House to rent £30 on 6 months tenancy renewable. Good house garden and garage also shooting and fishing in a very pleasant district — No 2781

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2 BRISTOL — Good mixed PRACTICE for sale Panel 1360 £1360 p.a. Good scope Premium £3000 House rent.

3 S. ENGLAND — Unopposed PARTNERSHIP in delightful country town within easy reach of Bristol Share producing £1470 p.a. at 2 years purchase Good house

4 BOURNEMOUTH — PRACTICE in growing part. £840 last year Panel 700 rapidly increasing 2 years purchase or near offer House sale or rent

5 DEVON — Death Vacancy PARTNERSHIP in old-established good-class, non-panel Practice in fashionable coast resort. Average £3660 p.a. formerly much more Third or half share Excellent house F.R.C.S. M.D. or M.B. preferred

6 CARMARTHENSHIRE — Country PRACTICE near sea £1000 p.a. Increasing Panel 500 Premium £1500 House rent —

7 E. MIDLANDS — PARTNERSHIP in pleasant and prosperous town Panel 2000 £2300 p.a. rapidly increasing Third share with early increase 21 years purchase. House for sale

8 KENT — PRACTICE in favourite coast resort £1433 p.a. panel over 500 Premium £2900 House to rent

9 MIDDLESEX — PRACTICE in very pleasant part, within easy reach of London Panel 1600 Average £1800 p.a. 21 years purchase House sale or rent

10 BRISTOL — Good-class non-panel PRACTICE. Scope for panel if required. About £700 p.a. formerly much more. Offers considered

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2 NORTH WEST MIDLANDS — Good mixed PRACTICE with substantial Panel and Income of from £1,000 upwards IMMEDIATELY REQUIRED CAPITAL AVAILABLE

3 NEWCASTLE UPON TYNE. — Good mixed PRACTICE, with receipts from £1,500 — £2,000 and Panel of 2,000 upwards PURCHASER OFFERS CASH

4 REQUIRED — Good English Scotch and Irish ASSISTANTS Immediate pos.s to offer both Indoor and Outdoor

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1 MIDLANDS — HALF SHARE (New Large Estate no other Doctor allowed to build or open Surgeries) Excellent opportunity for young married man should be British and well qualified Good modern house available

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3 YORKS — East Coast Town — Old-established Private and Panel PRACTICE Receipts av. £1,400 p.a. panel over 800 and both increasing Good house

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FOR DISPOSAL

LONDON N.W. — DEATH VACANCY
Average over £1050 Panel 1450 Mixed dispensing practice Suitable premises on rental —

MIDDLESEX WITHIN EASY REACH OF Town Average about £1700 Large panel over 2200 Ample scope. Vendor retiring Premium £3,500 Good house (5 bed &c.) to rent or sell — 2.

SURREY WITHIN 20 MILES OVER £1400 p.a. Medium panel Old-established practice. Nice house with large garden on rental — 3

OXFORD — NUCLEUS OVER £300 P.A. with excellent scope Panel 100 increasing Fees 5/ to 21/ Midy 5/ up Appt. £10 Good house 4 5 bed garden etc. Rent £90 p.a. Premium for quick sale £300 — 4

KENT COAST — FAVOURITE RESORT Very old-established Vendor retiring through ill-health Average over £600 p.a. Better class non-panel non-dispensing Visits 21/ Surgery 10/6 Good house 6 bed Sell or let. Premium £1000 or offer — 5

SPA PRACTICE — ABOUT £1400 P.A. Old-established Fees 11/ upwards. Premium 2 years purchase Excellent detached house 3 reception cons 4 large and 4 small bed etc. Close to chief hotels and Pump Room £3000 freehold — 6

DEVON — PARTNERSHIP 1/2 OR 1/3 SHARE OF £3600 p.a. Better-class, old-established surgical scope. Premium 2 years purchase nice house available — 7

MIDLANDS — PARTNERSHIP SHARE PRODUCING ABOUT £1250 p.a. in large practice increase later surgical scope Premium 2 years purchase. Choice of houses — 8

S. MIDLANDS — ABOUT 60 MILES FROM Town £1000 — £1100 p.a. Increasing panel and appts worth over £600 Very old established country practice. Good sporting district. Premium £2,500 include fittings etc — 9

FRANKS — COUNTRY SHARE WORTH ABOUT £500 p.a. with excellent prospects. Mixed panel club and private Fees 3/6 to 21/ House 2 rec 6 bed surg etc to rent £65 p.a. Premium £1650 — 10

DEVON — COUNTRY UNOPPOSED ABOUT £1000 p.a. Panel over 400 Fees 2/6 to 10/6 Premium £1,500 Charming house 2 rec 6 bed surgery etc 1 acre Price £2300 — 11

LONDON W. — ABOUT £1000 P.A. SMALL selected panel Middle and better-class Premium £1250 2 recep 4 bed Cons Wait etc large garden Rent £200 inclu on lease — 12

LONDON S.E. NEAR OVAL — CASH PRACTICE £500 p.a. Panel 500 increasing rapidly Ample scope — rehousing area. House with 3/4 b-drooms etc Rent £85 p.a. — 13

KENT — OVER £600 P.A. — PANEL WORTH £200 approx Fees 3/6 to 10/6 Several appts House 3 recep 4 bed etc garden Rent £70 p.a. — 14

EASTERN COUNTY — 1/3 OF OVER £2,500 p.a. Panel nearly 1800 Very old-established Practice Premium 2 years purchase or near House £55 p.a. 4 bed 2 recep surgery etc and large garden — 15

ESSEX SUBURB — ABOUT £1450 P.A. Medium panel Fees 3/6 up Prem. 2 years purchase Detached house (4 bed etc) Sell or let. — 16

OUTER SW SUBURB — £2,100 P.A. PANEL 2,400 Club £450/£500 p.a. and appt. Premium £5000 Detached house 2 recep 4 bed surg etc garage and gard £2,000 — 17

HANTS — COUNTRY PRACTICE. ABOUT £1900 p.a. steadily increasing and scope. Old-established Panel 1300 Clubs £130 Two houses available. Would suit two friends in partnership — 18

ESSEX SUBURB — AVERAGE £600 P.A. AND ample scope to young active man. Panel 430 Visits 4/ up House on arterial road 2 recep 4 bed etc. Rent £90 p.a. — 19

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Practices and Partnerships for Disposal

Full particulars sent free

1 S. COAST—Good middle class non-dispensing PRACTICE about £1 100/£1,200 in popular watering place Panel about 200 Fees 3/6 to 10/6 Very attractive detached residence (3 bedrooms etc.) with garage and garden Price £3 000 Freehold Scope Premium £2 250

2 EASTERN COUNTY—PARTNERSHIP (after short preliminary Assistantship) in very old-established Practice in market town in hands of Medical Woman Receipts £2,000 House available Applicant must be Medical Man aged 30-35 and graduate of Cambridge or London preferred

3 W OF ENGLAND—PARTNERSHIP (after short preliminary Assistantship) in old-established non-dispensing Practice of £1 800 in residential town Panel 2 000 Fees 3/6 to 10/6 Four tenths share would be sold to suitable man at two years purchase

4 E ANGLIA—Partnership in Country PRACTICE in agricultural district with good appointments and substantial panel Visits 3/6 to 10/6 Charming old country house (6 bedrooms and dressing room) garage and 3½ acres of ground for sale Premium for share of about £1 700 p.a. two years purchase

5 LONDON SW—Well-established mixed PRACTICE of £1 725 including about £130 from appointments and a panel between 1 600/1 650 Rent of flat £10½ p.a. and surgery £91 p.a. inclusive Premium £4,500 to include drugs etc. etc.

6 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2,500 p.a. Panel 1 790 House with 4 bedrooms and separate surgery accommodation garage and garden to rent at £55 p.a. Scope Premium one third share two years purchase

7 LONDON (W 2)—Old established PRACTICE in good middle-class district Receipts past twelve months £955 including P.M.S. £54 and panel 1 141 House with surgery accommodation to rent at £170 p.a. on lease Premium two years purchase

8 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London Panel 900 Well built house (5 bedrooms etc.) available for sale One third or two-fifths share at two years purchase

9 OXFORD—Small non-dispensing PRACTICE Receipts 1936 £300 including Appointment worth about £10 p.a. and a panel of 100 Fee 5/- to £1 1s Good detached house (4 bedrooms etc.) to rent on lease Premium £300

10 HOME COUNTIES—Old-established good-class easily run PRACTICE in a beautifully situated country district Cash receipts average over £1,500 p.a. Panel just over 400 Visits 3/6 to £1 1s medicine extra Nice house (6 bedrooms) with main electric light gas and water 2

garages and ½ acre of garden for sale Premium 2 years purchase Good Hospital in district

11 MIDLANDS—Partnership in old-established Practice averaging over £3 850 p.a. in manufacturing town Panel 3 600 Visits 5/- to £1 1s A suitable house could be obtained A one third share would be sold at first at 2 years purchase Incoming partner must be experienced in general practice and surgery—one preferably holding the F.R.C.S

12 S OF ENGLAND—Well established Practice, averaging nearly £1,200 p.a. in a seaside resort Panel over 700 Visits 3/6 to 10/6 mostly 5/- Very little midwifery Good corner house (5 bedrooms) with central heating garage and small garden for sale Well-equipped Cottage Hospital Good scope Premium 2 years purchase

13 DEATH VACANCY—LONDON, S W 1—Old established PRACTICE Receipts 1936 £1,218, including appointments worth nearly £100 and a panel of 872 Visits 3/6 upwards Suitable flat containing 3 bedrooms etc. and surgery accommodation to rent at about £250 p.a. (exclusive) on lease Scope for increase

14 N WALES WATERING PLACE—Partnership in middle and upper-class Practice averaging nearly £3 800 p.a. including selected panel 245 Fees 5/- to 10/6 without medicine—some £1 1s Detached house (4 bedrooms etc.) with good garage and small garden to rent on lease Scope Premium one half share £3 900 to include surgery fittings drugs and book debts Hospital

15 LONDON W 2—Practice averaging over £800 p.a. including panel 165 Consultations 5/- upwards Private residence to rent at £120 p.a. and surgery premises at £60 p.a. Scope for increase Premium two years purchase

16 LONDON, S W—Partnership in well-established working-class Practice nearly £3 150 p.a. in Favourite Suburban District Panel 3 000 One fourth share would be sold at first at two years purchase

17 S W OF ENGLAND—Partnership in well-established mixed Town Practice about £4 200 p.a. Panel 1 950 Visits 2/6 to £2 2s medicine extra Detached house (5 bedrooms) with large garden garage etc. for sale One-fourth or one third share at first at two and a quarter years purchase Applicant who must be experienced in General Practice and major surgery—F.R.C.S preferred—would be appointed to Staff of Hospital

18 LONDON W—Practice of about £700 p.a. in residential district Panel 500 Large corner house (7 bedrooms) with separate surgery entrance and good garden Price of lease £1 350 Scope Premium £1 250

19 MIDLANDS—Partnership in old-established increasing Practice in pleasantly situated Country Town Good appointments and panel Visits 3/6 to £1 11s 6d medicine extra Suitable house obtainable Incoming partner must be good Surgeon—English or Scottish—aged 30-35 and preferably a F.R.C.S Small well-equipped Hospital Share worth £1,250 p.a. at first at two years purchase

British Medical Bureau

(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD.)
(FOUNDED 1880)

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1645

Practices and Partnerships for Disposal (continued)

20 S OF ENGLAND—Partnership in old-established Practice over £4,800 p.a. in beautifully situated Market Town. Panel over 2,850. Visits 3/6 to £1 ls., medicine extra. Large attractive well built house, with electric light, central heating garage and walled in garden for sale. Premium 9/30 share two years purchase.

21 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town. Receipts average £750 p.a., including P.M.S. worth £125 p.a. and panel about 750. Pleasantly situated house (5 bedrooms attics etc.) on main road. Price (freehold) £3,200. Ample scope. Premium one and three-quarter years purchase.

22 E. ANGLIA—Partnership in old-established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town. Panel 1,850. House to rent at £60 p.a. Good society and sport. Scope. One third share at first. Premium two years purchase.

23 N DEVON—Old established Practice averaging over £1,050 p.a. in small Watling Place. Panel about 400. Well built semi-detached house (3 bedrooms etc.) garden for sale. Beautiful surrounding country. All kinds of sport. Scope. Premium two years purchase.

24 SW OF ENGLAND—Partnership in very old-established mixed Practice in flourishing Industrial District. Cash receipts average over £3,200 p.a. including appointments and panel about 2,100. House with 4½ bedrooms, garage and small garden for sale. Good Hospital. One third share at first with option of further shares later. Premium two years purchase. Short preliminary Assistantship.

25 TASMANIA—Practice doing £1,500 a year, including good appointments. Fees range from 10/6 to £1 ls. House with 2 bedrooms etc. and garden for sale. Purchaser should be able to do major surgery. Premium £900.

26 ESSEX—Old established Practice in outlying Suburban District. Receipts average £2,125 p.a. including appointments worth about £260 p.a. and a panel of 1,784. Well-situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance. Garage and fair size garden. Rent £120 on lease. Premium two and a quarter years purchase. Purchaser must be English Scottish or Irish.

27 LONDON, N—Well-established Practice averaging £450 p.a. in pleasant growing District. Panel about 600. Well situated house on main road to rent at about £65 p.a. Good scope—building going on. Premium £600 or offer to include surgery fittings and drugs.

28 SURREY—Increasing middle and working class PRACTICE in thickly populated Suburban District. Receipts 1936 £1,720. Panel 660. Small house. Rent £78 p.a. (branch £55 p.a.) Ample scope. Premium £2,600.

29 LANCs—Partnership in rapidly increasing mixed Practice about £3,200 in Manufacturing Town. Panel over 2,700. Suitable house to rent. One fourth or one third share at first at two years purchase.

30 ITALIAN RIVIERA—Small well established good-class non-dispensing Season PRACTICE. Further particulars on application.

31 SOUTH SUFFOLK—Partnership in sound old-established Practice over £6,000 p.a. in most desirable Country Town. Good appointments and panel over 3,000. Not much midwifery. Choice of suitable houses. One sixth share at first at two years purchase.

32 LONDON, N—Medical Woman's Practice in populous district. Receipts average £560 p.a., including panel 470. House (4 bedrooms) to rent at £100 p.a. Premium £850.

33 WITHIN 15 MILES (S) OF LONDON—Rapidly increasing PRACTICE in outlying suburban district. Cash receipts 1936 £2,100 including appointment and club worth over £500 p.a. and a panel of 2,400. Specially built house with 4 bedrooms large garage and good garden for sale. Branch surgery rented at 10/- weekly. Ample scope. Premium £5,000.

34 ESSEX—Well established better working and middle-class PRACTICE averaging £600 p.a. in outlying Suburban District. Panel 430. House on main road with small garden front and back. Rent £90 p.a. on lease. Good scope—building going on. Premium £1,200 cash.

35 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3,300 p.a. in Market Town. No panel. Fees 5/- to £1 ls. Suitable house obtainable. Premium one half share two years purchase.

36 CO DURHAM—Well-established Practice about £1,100 p.a. in Residential Colliery District within easy distance of Newcastle. Appointments worth £85 p.a. and panel 840. Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent. Premium one and a half years purchase.

37 N. WALES. WATERING PLACE—Good-class non-panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden. Scope for panel work if desired. Premium one year's purchase.

38 HOME COUNTIES—Old established Practice of £500 p.a. in first rate town 20 miles from London. Panel over 500. Visits 5s. No midwifery. Modern nine roomed house with garage and attractive garden—about quarter of an acre. Premium freehold house and Practice £2,000.

39 ESSEX—Old-established Practice in outlying suburban district run by two medical men averaging nearly £2,900 p.a. Panel 2,849. House (4 bedrooms etc.) for sale or rent. Premium two and a quarter years purchase.

40 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3,500 p.a. in an important town. Appointments £250. Suitable house available to rent. A one third share would be sold at two years purchase to a suitable man preferably one holding the M.D. or M.R.C.P.

41 LONDON S.E.—Old-established Practice of about £1,000 p.a. in outlying residential district. Panel 100. Detached house (4 bedrooms etc.) for sale. Premium two years purchase.

42 MIDLANDS—Old-established Practice of about £930 p.a. in country district. Panel 530. House (7 bedrooms etc.) for sale. Premium two years purchase.

43 LONDON, N—Old established Practice in suburban district. Cash receipts 1936 (10 months) £1,450. Panel 1,240 increasing. Fees 2/6 upwards. Suitable house (9 rooms) to rent at £160 p.a. Premium £3,400.

44 HOME COUNTIES—A small Practice about £400 p.a. in first rate town about 30 miles from London. Panel 1,400. Visits mostly from 5/- House, with small garden to rent 25s weekly. Excellent scope. Premium one and a half years purchase.

Purchasers for cash are available for Practices with Incomes of £1,250 to £2,000 p.a. Purchasers can raise additional capital for the purchase of approved practices or shares. Particulars will be forwarded on application.

A number of Assistantships can be offered to suitable applicants.

All communications to be addressed to The Manager.

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ALDINE HOUSE,

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Telephone TEMPLE BAR 1616 (3 Lines).

Chairman and Managing Director, Dr J FIELD HALL

The maximum commission payable on the sale of any Practice or Partnership in Great Britain placed exclusively in the hands of this Agency is £50 (fifty pounds), which sum covers goodwill, drugs, surgery fittings, fixtures and furniture, instruments and book debts, but not house property. Schedule of Terms will be forwarded on application.

Accountancy and legal services furnished by the Agency where desired at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 LONDON SOUTH EAST—Old-established middle and working-class PRACTICE producing for the last 12 months £1 320. Panel of approximately 900 and P.M.S. worth £25. House contains 2 reception 4 bedrooms etc. Small garden. Leasehold for sale. Premium for practice and house £3,500 or near offer.
- 2 LONDON NORTH—Old-established chiefly working-class PRACTICE. Receipts for last 12 months approximately £1 600 with panel of about 2,700. Suitable accommodation can be rented at £92 p.a.
- 3 LONDON WEST 2—Old-established mixed-class PRACTICE producing £935 for the last 12 months. Panel 1 143. Visits 3/6 in 10/6. Roomy house with small garden can be rented at £130 p.a. Premium 2 years purchase.
- 4 LONDON SOUTH WEST—Well-established mixed PRACTICE averaging £3 100 p.a. Panel of 1 200. Appointments worth about £300 p.a. Fees from 3/6. Good house with large garden can be rented at £100 p.a. Premium £6 000.
- 5 SOMERSET—MARKET TOWN—Established over 30 years, and averaging about £1 000 p.a. Panel of nearly 900 and appointments worth over £100. Non-dispensing with fees from 5/ to 21/. Midwifery not encouraged. Good house available, freehold containing 3 reception, 6 bedrooms with separate surgery. 1½ acres of productive garden and garage for two cars. Electric light and water. Price £1,300. Premium 2 years purchase.
- 6 EASTERN COUNTIES—COUNTRY PARTNERSHIP—ONE THIRD SHARE available in mixed-class Practice over £2,500 p.a. including panel of nearly 1 800. House contains 2 reception, 4 bedrooms, large and attractive garden and good garage. Rent £55 p.a. Sport of all kinds. Premium 2 years purchase or near offer.
- 7 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to Vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 8 BORDERS OF BUCKS AND OXON—PARTNERSHIP with succession in 12 months. One-half share available now. Gross cash receipts between £800 and £900 with very good scope for increase. Purchaser can choose his own house. Premium 2 years purchase.
- 9 DEATH VACANCY—YORKSHIRE—Better class PRACTICE in good residential district. Gross cash receipts average about £650. Panel of about 400. Suitable house can be rented at £100 p.a. Offers invited.
- 10 EASTERN COUNTIES—COUNTRY TOWN—Well established PRACTICE averaging about £1 100 p.a. including panel of 1 061 and clubs, producing about £350 and £400 p.a. There is stated to be exceptional scope for increase as vendor is retiring through age and ill health.
- 11 SOUTH WALES—SEASIDE RESORT—Good middle and better working class PRACTICE established over 30 years. Gross cash receipts for past 3 years stated to average £1 670 p.a. of which approximately £650 is from panel and P.M.S. Fees 3/6 to 1 guinea. Well-built house with 2 reception, 6 bedrooms etc. Good garden tennis lawn. Garage. Can be rented on lease. Sports of all kinds. Premium £3 600.
- 12 WESTERN DISTRICT OF LONDON—Old-established good mixed class PRACTICE producing between £1 600 and £1 700 p.a. including panel of 1 500. Roomy corner house in excellent position with garage. Freehold for sale.
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- 17 LONDON WEST—PARTNERSHIP—ONE THIRD SHARE with increase later is offered in well-established practice producing £2,400 p.a. with scope. Suitable house can be obtained. Premium 2 years purchase.
- 18 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1 100 p.a. including selected panel of about 350. Fees from 4/ to good freehold house for sale or smaller house available. Premium £2,000 endor retiring.
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- 21 LONDON NORTH WEST—PARTNERSHIP—A ONE THIRD SHARE is for disposal in steadily increasing middle-class practice producing last year £2,400. Small panel. Fees 7/6 to 21/. Choice of houses. Premium £2,000.
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- 29 YORKSHIRE—GOOD TOWN WITHIN EASY REACH OF COAST—A ONE FOURTH SHARE, with increase later is offered in very old-established middle-class practice producing for last 12 months nearly £4 000. Substantial panel. Fees from 3/6. Suitable house with 2 reception, 4 bedrooms, etc. Garage. Stabling and garden. Electric light. Gas. Can be rented at £65 p.a. or freehold purchased. Premium 2 years purchase.
- 30 MIDLANDS—COUNTY TOWN PARTNERSHIP—A ONE-QUARTER SHARE (with increase later) is for disposal in mixed-class practice averaging over £2,500 p.a., including panel of 2,800. Fees from 3/6. Suitable house can be obtained. Preliminary assistantship if wished.
- 31 EAST COAST—Small PRACTICE producing over £300 p.a., including panel of 360. Fees from 5/. Suitable house with ample accommodation. Price for freehold £1 500. Premium £540.
- 32 SOUTH COAST—PARTNERSHIP—ONE THIRD SHARE is offered in old-established non-dispensing practice in favourite town producing last year £3 461. Selected panel of 400. Fees 3/6 to 21/. Suitable freehold house for sale. Ingoing partner must be well qualified and accustomed to better-class work. There are two hospitals and one partner is on the staff.
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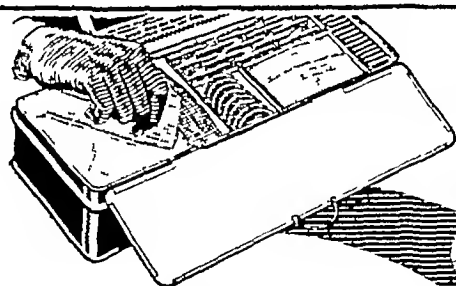
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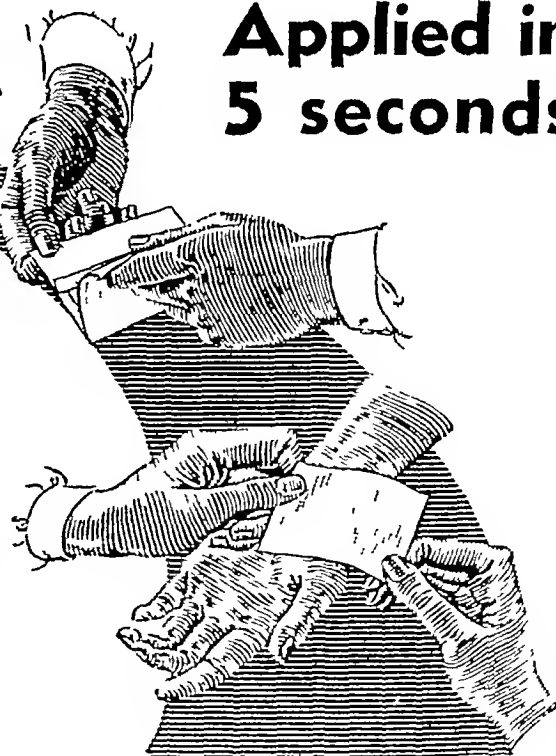
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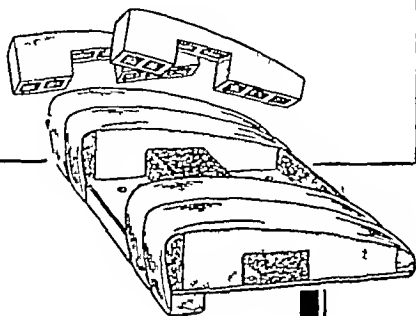
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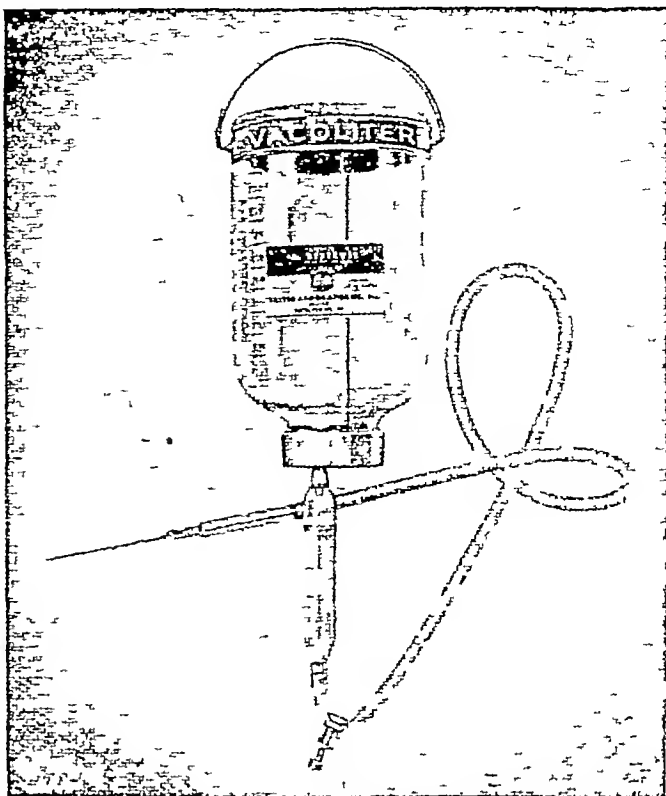
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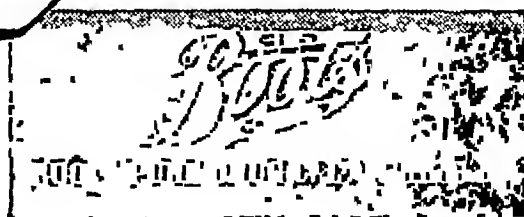
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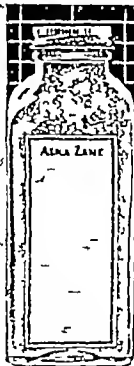
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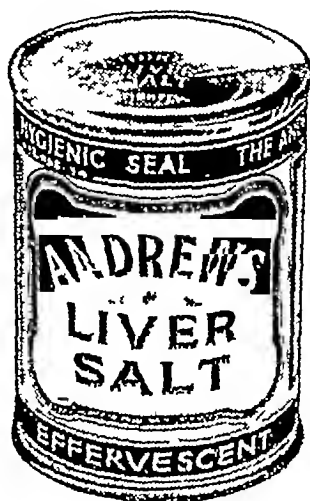


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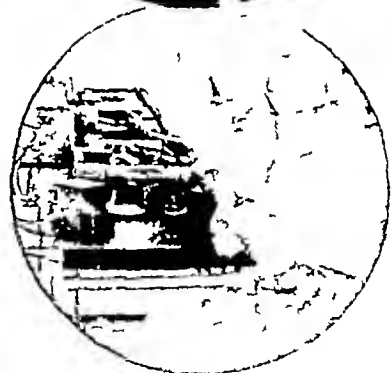
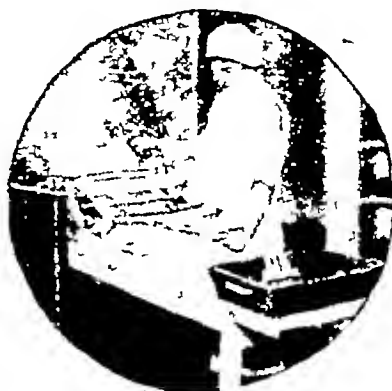
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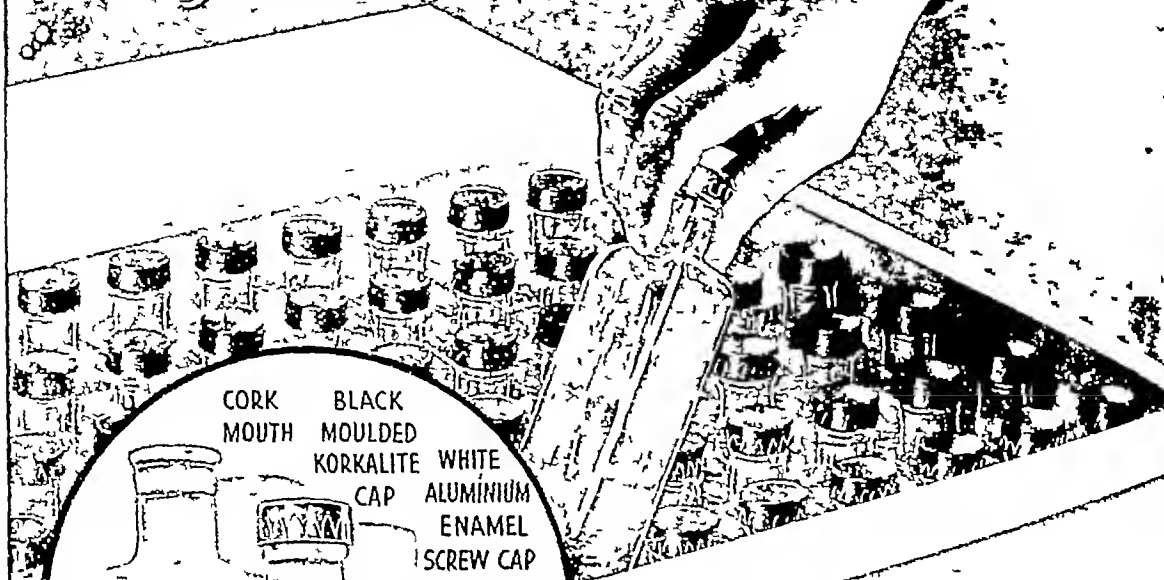
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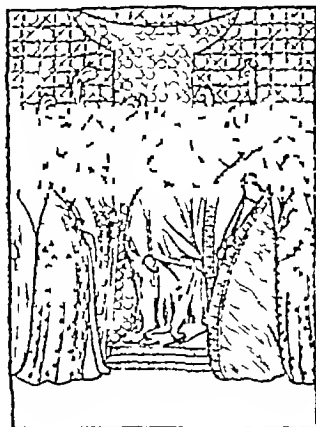
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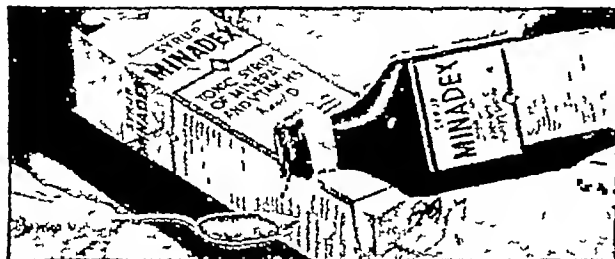
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BRITISH MEDICAL JOURNAL

LONDON SATURDAY APRIL 17 1937

THE RESULTS OF HIGH ATROPINE DOSAGE IN CHRONIC EPIDEMIC ENCEPHALITIS, WITH COMMENTS

by

ARTHUR J. HALL, M.A., M.D., D.Sc., F.R.C.P.

*Emeritus Professor of Medicine University of Sheffield Consulting Physician Sheffield Royal Hospital
Visiting Physician South Yorks Mental Hospital and State Institution Rampton*

In the article on treatment of the post-encephalitic Parkinsonian which appeared in this *Journal* on September 21 1935 reference was made to a series of cases then undergoing treatment by high atropine dosage. Since then more cases have been treated and it has been possible to follow them up long enough to warrant certain conclusions as to its value.

For the large amount of time and trouble in carrying out the treatment and keeping records my sincere thanks are offered to many colleagues both at public institutions and in private practice including amongst others Dr Bamford medical superintendent Gateshead Mental Hospital Dr Pool and his staff at the South Yorkshire Mental Hospital Dr Schneider and his staff at Rampton State Institution Dr E. Fretsen Skinner at the Sheffield Royal Hospital and Professor E. J. Wayne at the Sheffield Royal Infirmary. To Professor Wayne I am particularly indebted not only for the great trouble and interest he has taken in the cases which he has had under observation in his wards from my clinic but also for his criticism and advice in the preparation of this paper. My part has thus been only that of a collector. At the same time any opinions, views or conclusions which follow are mine and I alone take responsibility for them. It has for long been known that atropine in the form of belladonna, stramonium or hyoscyamine may relieve the physical disability in some cases of chronic epidemic encephalitis and that for this purpose doses rather larger than those laid down in the *British Pharmacopoeia* are often required. Bremer (1925) called attention to the fact that Parkinsonians showed unusual tolerance to this alkaloid so that as much as 20 mg. a day had been given per os without the occurrence of toxic symptoms. The method known as high atropine dosage introduced by Kleemann (1929) is based upon Bremer's observations. Since then the method has been widely adopted. It is not necessary to go into full details of this method which can be found in the article already referred to (Hall 1935) but some general indications will be given as to certain modifications which have been found useful.

Estimation of Optimal Dose

Kleemann (1929) begins with 0.5 mg. of atropine daily in the form of 1-2 per cent. solution of atropine sulphate given in two doses. (One drop contains 0.25 mg.) This is increased by 0.5 mg. daily spread over three doses so long as any objective or subjective improvement is produced (maximal dose). When this point is reached reduction should be gradual in order to fix the optimal dose on which improvement is maintained.

In many of the cases in this series this method has been followed. In some however after an initial small dose has been tolerated a greater daily increase has been made without ill effects. Indeed in patients who have previously been for some time on tincture of belladonna one may give 5 or even 10 mg. of atropine on the first day and increase by 2.5 mg. daily not only without ill effects but in suitable cases with rapid benefit.

Earlier observers have emphasized the necessity of keeping the patient in bed whilst estimating the optimal dose. In our experience unless already bed ridden complete rest is neither necessary nor desirable after the first day or two of treatment. Even those bed ridden at the onset should be encouraged to get up as soon as they show signs of improvement. Close daily observation of the patient is essential so long as the dosage is being increased.

In Kleemann's cases the usual optimal dose was 3 to 7 mg. atropine daily. In this series the average optimal dose was about 18.5 mg. atropine daily. The highest was 54 mg.—with definite improvement. Maximal and optimal doses however are not fixed points on a measurable standard but largely dependent on two variables the patient and the physician. In many cases indeed they are very difficult to assess. At any rate the fact that 54 mg. of atropine per day can be tolerated not only without harm but with benefit shows that even the less bold prescribers need not apprehend serious danger when estimating the maximal dose. Reference will be made later to such unpleasant effects as may arise and how they may best be met.

One further point as regards the continuation of treatment after the optimal dose has been found. We have found it a convenience to prescribe the atropine in coloured tablets. Pink tablets contain 4 mg. atropine, yellow only 1 mg. By this combination of strengths it is easy to obtain any required dose of 1 mg. or upwards. The patient has no difficulty in knowing exactly how many of each colour he has to take for a dose and this coloration distinguishes them from other less potent tablets.

Van der Meulen (1933) and others have emphasized various dangers which may occur on a sudden omission of a dose in the course of treatment. So far as this series is concerned no such dangers have occurred for some time without any untoward results.

Published Records

The records of high atropine treatment published from time to time by different observers do not widely differ in the results obtained. At one extreme the dose which has been

[1937]

high percentages of complete or almost complete recoveries, at the other those in which the results have been disappointingly slight and fugitive. The greater number of records published by those who have given the method an adequate trial show results somewhere between these two extremes. They agree that in certain cases the results are extremely good, in others there is definite improvement, whilst in still others benefit is slight or absent.

In analysing the following series of cases an attempt will be made to suggest some data whereby it may be possible before advising this somewhat severe line of treatment to foretell which cases are likely to benefit and which are not.

To do this it is necessary to have some method of dividing the cases into groups. This is difficult, because the virus of encephalitis, although having a predilection for certain levels, may attack almost any part of the nervous system and in so doing may affect some one or other part only, or several parts together to an equal or unequal extent. It may thus give rise to two broad classes of disability, which, although necessarily closely intermixed in effects, may be termed 'psychotic' and 'physical' respectively.

Classification of Physical Disabilities

A simple basis for classifying physical disability in Parkinsonism is one suggested by me in 1934—namely the extent to which it interferes with the three acts of everyday life which mark the limit between dependence and independence. These are feeding, dressing and moving about. The three classes of physical disability would then be:

1. Complete independence
2. Partial dependence
3. Complete dependence

In Class 1 may be placed those who can feed and dress themselves and walk about without assistance. They may be very slow at their meals, there may be some shakiness. They may have oculogyric attacks or torsion spasms. Their gait may be abnormal, they may even fall over at times, but they do not require physical assistance. They can look after themselves.

Class 3 is also clearly defined. They can neither feed nor dress themselves, they cannot walk without help, indeed in some cases they cannot even turn over to change their position in bed, but have to call for help in order to do so.

Class 2 necessarily includes persons who differ widely in the amount of their physical disability. Some can walk without help but cannot feed themselves on account of tremor. Others can feed and dress themselves but cannot walk without help and so forth. In other words some are almost independent, others largely dependent.

These three classes of physical disability are not necessarily consecutive. Although the tendency is for the Parkinsonian to become gradually more helpless as time goes on, yet this is not always so. There are cases which remain in Class 1 year after year and show no tendency to get worse, others who quit early in their illness were in Class 3 but owing to treatment of various kinds have returned to, and remain for years in Class 1 or Class 2.

Classification of Psychotic Disability

To classify psychotic disability is more difficult. The forms in which it may show itself are too numerous and too complex to serve as a basis. For practical purposes

however, it is convenient to make two groups according to the extent to which it dominates the clinical picture. Thus into Group A are placed those in whom psychotic disability may be said to be 'primary or predominant' and into Group B those in whom it is "secondary, or so slight as to be negligible". This or any such arbitrary grouping is necessarily very imperfect. Usually however, there is little or no difficulty in deciding to which group a particular case belongs.

In most of the cases under certificates the predominance of psychotic disability is obvious. On the other hand in a certain small number of certified patients, especially those in whom 'physical disability' is advanced, the 'psychotic disability' has either always been secondary to the physical disability or though originally predominant has become less so with the increase of the latter.

By combining the degree of psychotic and physical disability present in each case it is possible to classify the encephalitics in the following way:

Psychotic Disability		Physical Disability	
Group A	Marked	(1) Independent	
		(2) Partially dependent	
		(3) Wholly dependent	
Group B	Slight or absent	(1) Independent	
	"	(2) Partially dependent	
		(3) Wholly dependent	

In the fifty-eight cases here recorded this form of classification has been adopted, and, as will be seen from the results, the benefits obtained from large doses of atropine have been very different in the different groups.

TABLE I—Fifty-eight Cases of Chronic Epidemic Encephalitis Grouped According to their Disabilities

Psychotic Disability	Physical Disability	No. of Cases
Group A Marked	(1) Independent	26
	(2) Partly dependent	8
	(3) Wholly dependent	10
Group B Slight or absent	(1) Independent	4
	(2) Partly dependent	2
	(3) Wholly dependent	8
		14
		58

The larger number of cases in Group A is due to the fact that opportunities for carrying out observations such as these necessarily offer themselves more readily at mental hospitals where there are many such cases and the requisite control is possible.

The results are given in three categories—namely:

- (a) Great improvement
- (b) Definite improvement
- (c) Slight or no improvement.

TABLE II

Classification		Improvement		
	No. of Cases	Great	Definite	Slight or None
Group A (1)	26	0	5	21
" (2)	8	0	2	6
" (3)	10	2	2	6
Total	44	2	9	33
Group B (1)	4	0	3	1
" (2)	2	1	1	0
" (3)	8	6	2	0
Total	14	7	6	1

Cases Greatly Improved

It is seen that in nine cases (three men and six women) the improvement is described as great. Such a term hardly does justice to the facts, it might well be called 'extreme'.

In each of these cases the person, who had been practically bed ridden and required help in almost every act of daily life for a long period (in some cases years) was as the result of treatment, not only able to be up and about but also to take part in and enjoy social life again. The following is a short account of four of these cases.

Case 41 Female aged 49—Acute attack in 1919. In 1921 Parkinsonism developed with stiffness and tremor of the right arm and leg. There was never any excessive salivation. Mental symptoms took the form of a somewhat childish emotional psychasthenia. In 1925 treatment by belladonna was begun and 20 minims of the tincture was taken three times a day. On this she improved very considerably. Exactly for how long or how regularly this treatment was continued is not recorded but the history of the next few years shows that it was not continued regularly and the doses were diminished. In 1933 there was considerable mental depression. The Parkinsonism was much more marked. She was unable to walk by herself although not actually bed ridden. She was unable to write even her own name on account of the continuous tremors. At that time she was taking 10 minims of tincture of stramonium three times a day. High atropine dosage was begun in July 1935. In August she was taking 13 mg. of atropine per day and the improvement was very great. The tremor in the legs had largely disappeared and was so much less in the right hand that she was able to write a letter without any recognizable tremor in the handwriting. More than a year later in January 1937 she can walk a mile without difficulty, play on the piano again and sew and knit. She has lost her mental depression and is brighter and happier than she has been for many years. The daily dose of atropine is 10 mg. given in four equal doses.

Case 54 Female aged 29—Bed ridden for four years unable to feed herself or to walk without assistance. Speech almost inarticulate. Marked hypertonus. Optimal dose of atropine 30 mg. per day. Condition after four months treatment: she is up and about, can feed and dress herself, takes part in domestic work, goes out for long walks and dances.

Case 57 Female aged 41—Acute encephalitis in 1921 followed by Parkinsonism. During the last few years she has been completely dependent, requiring to be fed, dressed and helped to walk only a few steps. In March 1936 high atropine treatment was begun. The optimal dose was 42 mg. The following is an extract from a letter written early in 1937 by the patient herself—that is about a year after treatment was begun. The handwriting does not show any trace of Parkinsonism. 'I could not walk a hundred yards without holding someone's arm and could not feed myself or help myself in any way. Now I can walk three miles quite alone, feed myself perfectly, take off my own coat etc. I am so much better that I hardly know myself.'

Case 52 Male aged 60—Bed ridden for five years, had to have help in feeding and walking. Speech almost unintelligible. Salivation excessive and continuous. Severe tremor of both arms and legs. Optimal dose of atropine 30 mg. a day. Condition after four months treatment: up and about every day, looks after himself, helps in housework, goes to parties and entertainment. Takes a pride in his appearance. Tremor much less.

At least eight a record of 'great improvement' in only nine out of fifty-eight cases does not seem to compare favorably with some of the results published elsewhere. However, it is realized that in this series there were only seven whose physical disability had reached Class 3, the percentage of 'great improvement' among these is not so considerable.

In Table II it will be noticed that of these nine cases of 'great improvement' seven belonged to Group B—but it is their psychotic disability was no predominant whilst their physical disability before treatment was Class 2 or Class 3.

Unless the physical disability is considerable before treatment is begun it can hardly be said to improve greatly. All such striking and dramatic improvements as have been from time to time recorded must have been Parkinsonians of Class 3 or the more dependent cases of Class 2 such as Case 41 of this series who had to be placed in Class 2 because she was not completely dependent yet her dependence on others before treatment was almost complete and her improvement could only be described as great.

But if atropine is so effective in relieving serious physical disability (Class 3) why did it fail in six cases in Group A (3)? In four of them (Cases 6, 22, 34 and 38) the answer is easy. Long standing Parkinsonism had in each of them led to deformities of the arms, legs and trunk of such an advanced kind that a return to useful conditions was impossible. In the remaining two cases (Nos. 16 and 31) there was no such deformity. In them the lack of improvement was due to the predominant psychotic disability. Both were very impulsive. Neither of them would co-operate. In this connexion a word must be said about Case 42, one of the B (3) group whose improvement was not so great as expected.

This girl had been leading the life of a complete invalid for some years at the home and under the care of a devoted relative who had done everything for her. She was very emotional and would not co-operate in anything that required effort on her part. She had become so accustomed to invalidism and the daily routine of doing nothing whatever to help herself that she would rather remain *in statu quo* than undergo any treatment which involved the least personal discomfort.

Indeed this question of lack of co-operation is by no means uncommon in Parkinsonians of Class B (3) in whom there is a considerable psychotic element.

In fairness to the method, however, it must be admitted that in most of these there was some slight improvement thus the records state:

Case 6—Speech a little better, saliva a little less, can move about in bed a little more easily.

Case 38—Able to help himself a little in feeding. Speech rather clearer.

Case 22—Oculogyric attacks have ceased since treatment.

Case 42—Rigidity and tremor rather less, speech more intelligible.

As regards the thirty-four patients in whom psychotic disability was marked (Group A) and physical disability less (1) and (2) great improvement is not recorded in any and even improvement which could be called definite in a small number only.

These results are in general agreement with those obtained by other observers. It is the general experience that the mental condition of these patients except in so far as it is secondary to the distressing physical disability is not improved to any extent by atropine treatment.

Psychotic disabilities however vary so widely in character that it is impossible to generalize. Brierley (1932) in a report on 130 cases thinks that it has a definite effect on impulsive disorders but no effect on hypomania or psychomotor cases. He finds that it may relieve some symptoms by diminishing motor impulsion. Brierley (1932) finds that it has no beneficial effect on character change. In the mental department secondary to the physical disability.

ability, however, improvement is often marked, as is shown above in the letter written by Case 57. Indeed, to return from complete helplessness to ordinary life sometimes produces a condition of euphoria.

Special Symptoms

Salivation—This is the one condition that should always benefit from full doses of atropine, and indeed even when troublesome will often improve on much smaller doses of atropine such as are contained in the B.P. doses of tincture of belladonna. It is, however, by no means a constant symptom. It may be completely absent, even in advanced cases, whilst in others much less advanced it is a serious source of annoyance.

Oculogyric Attacks—These were present in twenty two of the cases. In five there was no improvement. In twelve the attacks were less frequent after treatment. In five it is recorded that they had ceased entirely. There seems no doubt that under high atropine treatment these troublesome attacks may cease entirely, at any rate for long periods. Their frequency and severity, however, vary so widely in the same individual from time to time, and are so readily influenced by emotional and other psychical happenings, that it is always difficult to be sure that they are permanently arrested or to name the exact agent which has stopped them for the time being. Though not merely a hysterical phenomenon, yet, in those liable to them, excitement, correction or having to do something they do not like will readily bring on an attack, while sufficiently strong suggestions of various kinds may prevent them or stop one that has begun. In one man (Case 25) an observant attendant in charge of the patient assures me that the attacks have been much less frequent since the patient was not allowed to lie down when one threatened to come on.

Discomforts Early in Treatment

Various discomforts were complained of in the initial stages of the treatment, but on the whole they were few and capable of relief. Among these were:

Occasional mental confusion or slight delirium coming on shortly after taking the drug and lasting sometimes for an hour or two in some cases temporary loss of memory and occasionally vertigo. Drowsiness about two hours after a dose has also occurred.

Visual disturbance due to paralysis of accommodation is common and tends to cause annoyance or even alarm. This can be relieved temporarily by (1/2 per cent solution of eserine) drops in the eyes and later by glasses adapted for complete loss of accommodation. In any case with a suspicion of glaucoma the treatment is contraindicated.

Dryness of Mucous Surfaces—Dryness of the mouth and throat occurred in a few cases and gave rise to difficulty in swallowing. Dryness of other mucous surfaces besides the mouth may cause discomfort. Thus in two women there was irritation about the vulva and in one man troublesome priapism. One patient complained of constipation with undue dryness of the anus. All these were relieved by a simple ointment.

Gastrointestinal upsets in the form of vomiting and acute diarrhoea occurred in a few cases. They were however only occasional and were relieved by ordinary measures without stopping the atropine.

Difficulty in starting micturition was observed in one or two of the men but was not of serious importance nor did it call for special treatment.

Hyperthermia during Treatment

A certain number of observers have recorded occasional rises of temperature during the taking of large doses of atropine. Such an occurrence after atropine has long been recognized by pharmacologists. According to Cushny (1936) atropine often induces a marked rise in temperature the cause of which cannot be said to be definitely known. According to Ott the dissipation of heat is increased but the heat formation undergoes a still greater augmentation. Sollmann (1936) says, "Atropine suppresses perspiration and thus causes a rise of temperature with moderate doses, notwithstanding the cutaneous vasodilatation." Larger doses produce a fall of temperature from lessened heart production. Dixon (1936) says:

It is not uncommon to find a small rise in temperature after taking a large dose of atropine. This is probably a direct action on the thermogenic centre. It cannot be due to a diminished loss of heat because the amount of heat dissipated is actually increased. In severe cases of poisoning the temperature rises sometimes very high, even to 107° or 108° F. It is this rise in temperature which is responsible for the vasodilatation of the skin vessels, it is an attempt on the part of the nerve centres to lower the temperature by increasing the loss of heat. It is evident that, as Cushny says, the cause cannot be said to be definitely known.

It was observed in four cases of this series. In three of these (Nos 1, 2, and 3) the circumstances are of especial interest in connexion with the above opinions as to its cause. These men were all in the same ward, and in each the dose of atropine had reached a considerable height (33.5 mg daily). A sudden spell of very hot weather had occurred in August, the ward thermometer registering 78° F. Each man's temperature went up to 104° F or rather higher. There was no discomfort other than thirst, and in each the temperature was easily reduced by sponging. It seems probable that a contributory cause in these three cases was an inhibition of sweating due to the atropine. In this connexion it is of interest to recall that more than one fatal case of hyperpyrexia has been described in chronic Parkinsonians. Astley Cooper (1936) mentions a fatal case of heat stroke apparently "due to failure to move out of the sun, and he adds (I think pertinently) *combined with stramonium medication*."

In one of the fatal cases with hyperpyrexia (temperature 109° before death) which I recorded in 1935 the question of it being really a heat stroke due to exposure had not occurred to me until reading Astley Cooper's paper. Inquiry, however, in my case showed that this man also had been sitting in the sun without moving for most of a day which happened to be exceptionally brilliant and hot. About 5 p.m. the attendant noticed that he looked ill. He was put to bed and found to have a temperature of 105°. In spite of treatment the temperature rose steadily, drowsiness increased to coma and before death at 7 a.m. next day the temperature had reached 109°. This man also was taking stramonium in full doses and had been doing so for some time.

These two cases taken together suggest that in persons under the influence of atropine in any form whatever may be the explanation the possibility of dangerous hyperpyrexia on exposure to a heat considerably less than affects normals must not be overlooked.

Occupational Therapy

Among those who have obtained the best results from high atropine treatment the importance of supplementing it by various forms of mental and physical treatment is generally agreed. This cannot be too strongly emphasized. In the early cases recorded by Kleemann (1929)

baths of various kinds, massage, and physical exercises formed a conspicuous and valuable feature of the treatment. At institutions where there are numbers of Parkinsonians such measures are more easily carried out although remedial baths, massage and machines for exercising are not available for treatment in this country as widely as in Germany yet it is not the exact physical nature of the supplementary treatment which matters so much as the suitable and regular occupation for mind and body. This can be carried out at any institution provided it is organized and supervised. Simple domestic duties easily devised occupations graded to suit the capacity of each individual games, physical drills, and competitions are quite as valuable as baths or massage, if not more so.

In private cases where treatment has to be carried out under home surroundings this "occupational therapy" using the term in its widest sense is often more difficult. It is not uncommon to see one of these patients after improving greatly in hospital go steadily back to his former condition on returning home even if atropine treatment is continued.

The importance of environment cannot be too strongly emphasized. All that the atropine does is to release the brake in the Parkinsonian's musculature. What use will be made of it depends upon what there is to do and what encouragement to do it.

There is still one other factor of great importance whether the treatment is carried out at an institution or in the private house—that is the personal will power of the individual himself upon which the effect of treatment largely depends. Without full co-operation it is impossible for benefit to be obtained or if attained maintained.

In some of the records published in Germany many of the cases are said to have left the institution fit for work (arbeitsfähig) as the result of high atropine dosage. In most of these it would seem that the Parkinsonian disability must have been only (1) or (2) and the psychotic disability Group B. If so in our experience a similar result would probably have been obtained by much smaller doses of belladonna or stramonium.

But once a Parkinsonian always a Parkinsonian and whilst the physical disability may have been so much relieved by treatment as to make the patient fit for work very few are in a condition to compete with normal persons in the labour market.

Summary

1 Treatment by very large doses of atropine (high atropine dosage treatment) causes remarkable improvement in certain cases of post-encephalitic Parkinsonism.

2 The greatest benefit is seen in cases in which the disability arises chiefly from muscular stiffness and excessive flow of saliva.

3 Improvement may also occur in tremor, in the frequency of oculogyric attacks and in various spasmodic symptoms. In these however, it is less in amount and more variable.

4 Cases in which psychotic disability is predominant and Parkinsonism is either absent or only slight do not usually show much benefit from this form of treatment. Where the psychotic disability is largely secondary to the physical disability removal of the latter by high atropine dosage may be accompanied by definite improvement in the former.

5 Under no circumstances does the Parkinsonian syndrome completely disappear, and unless the treatment is

maintained and reinforced by suitable environment, using the term in the widest sense there is usually a rapid return to the pre-existing condition.

Concluding Remarks

Where physical disability is maximal and psychotic minimal (Group B 3) treatment by very big doses of atropine is capable of producing results of a remarkable kind, provided that the physical disability has not caused serious deformities, and that there is full co-operation on the part of the patient. Conversely, where psychotic disability is maximal and physical minimal (Group A 1) it is not likely to be of much benefit. The fact that some cases not only tolerate massive doses but do not begin to improve until they are reached whilst others improve on doses within or but little beyond the limits given in the *Pharmacopoeia* suggests a quantitative factor in its action.

Its administration in massive doses is unnecessary in those cases of chronic epidemic encephalitis in which it is not likely to be of service, and uncalled for in any case until ordinary doses have been tried and failed. Otherwise there is a danger of bringing discredit on the most efficient agent we possess in relieving some of the disabilities of Parkinsonism.

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A Hautant (*J Laryng* February, 1937, p 65) describes certain lesions of the larynx in which a differential diagnosis may be extremely difficult or almost impossible. In general tuberculosis of the larynx can be easily distinguished from cancer by the following characteristics. Laryngeal tuberculosis does not fix the vocal cords, it is accompanied by lung lesions and there are tubercle bacilli in the sputum in histological sections giant cells are seen. The exceptional cases where diagnosis is difficult are said to fall into three groups: (1) Unilateral tuberculosis, localized in the subglottic region. (2) Tuberculous tumour of the ventricle with quiescent pulmonary tuberculosis. (3) Cancer simulating tuberculosis owing to its situation and aspect. The author gives clinical examples belonging to each group with many excellent illustrations and diagrams. One of the photomicrographs shows a tuberculous giant cell in contact with a deep epithelial cord of a carcinomatous nature. The association of tuberculosis and cancer in the same laryngeal lesion has very rarely been observed. With negative findings in the lungs and sputum the limited tuberculous tumour may be confused with a simple neoplasm. In such cases the tuberculous mass sometimes invades the cartilage and fixes one cord confusion with cancer is then almost certain. In the event of the diagnosis as between tuberculosis and cancer remaining uncertain active laryngeal treatment must be carried out with extreme caution. An untimely surgical operation might cause a fatal attack of acute tuberculosis. Hautant relies a good deal on side-view radiographs of the larynx a method of investigation which appears to be little used in this country. One can see the outline of the thyroid and cricoid cartilages and shadows of tumour masses within those outlines.

SURGICAL INTERVENTION IN OBSTETRICAL PRACTICE

INDICATIONS FOR AND AGAINST*

BY

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In the time at my disposal I can only mention the outstanding indications for and against surgical intervention in obstetrical practice. I shall endeavour to discuss the subject from the standpoint of the general practitioner. It is true that major operations, such as Caesarean section have eventually to be referred to the specialist for their performance although the family doctor in many cases is the first to give advice as to the procedure to be adopted. It is generally agreed that the wider the experience one has gained in the management of obstetrical cases the more conservative one becomes in their treatment. Maternal mortality statistics published from all parts of the world prove that the practice of conservative methods in midwifery gives the most favourable results. Not infrequently it has happened with all of us at some time or other that more courage is required to leave well alone than to terminate the pregnancy or labour by some method of operation. My general rule is when in doubt do nothing. The old political quotation 'wait and see' is not a bad rule to follow in obstetrical practice. I might, however, qualify this by stating that once a decision has been made for operative intervention it should be carried out promptly with the best possible surgical and aseptic technique obtainable.

It must be remembered that obstetrics is not a branch of surgery, it stands alone, and has its own methods of procedure. It is the exercise of wise judgement that really gives good results.

Ante natal Complications

These comprise mainly the indications for (a) induction of abortion (b) induction of premature labour (c) version (d) operations for tumours complicating pregnancy, and (e) haemorrhages.

(a) INDUCTION OF ABORTION

With our modern methods of medical treatment induction of abortion is not resorted to so frequently as was the case in former years when often the sole method of treatment was the termination of the pregnancy. An example of this may be found in diabetes where the administration of insulin has proved so effective. In vomiting of pregnancy isolation of the patient and treatment of the symptoms of starvation by dieting have reduced the incidence of induction to a remarkable extent. I now practically never terminate an early pregnancy on account of vomiting. The three main conditions calling for the consideration of induction are cardiac disease, pulmonary tuberculosis, and nephritis.

In cardiac disease no definite rules can be laid down. Each case must be judged on its merits with due regard to the condition of the heart and its reaction to exertion and prolonged rest. It is advisable to have in consultation a colleague with special experience in this disease. The use of the electrocardiograph and x rays has helped very much in making a more exact prognosis than was formerly possible. I have again and again had experience of the improvement which takes place in a damaged heart by careful ante natal supervision and treatment.

* Address given to the Huddersfield Division of the British Medical Association February 3, 1937.

It not infrequently happens that in those cases in which there has been no treatment previously the heart is in better condition at the end of pregnancy than at the beginning. The strain of late pregnancy and labour however, must necessarily be considered when one is forming an opinion as to the advisability of the continuation of pregnancy. In 200 cases of heart disease treated in the Royal Free Hospital, a number of whom were sent in for the purpose of induction only 6 per cent had their pregnancies terminated. The mortality of these patients when followed up for a considerable period was 2 per cent.

In pulmonary tuberculosis the indications for induction in patients with early active lesions are more evident than in chronic cases. Treatment by artificial pneumothorax and other methods should be tried before resorting to induction. It must be remembered that any forcible surgical interference in these conditions is not advisable. I have seen serious haemoptysis follow a straightforward induction of abortion. The slow method of emptying the uterus by laminaria tents is to be preferred. I feel convinced that the termination of an early pregnancy will not be necessary once we have established proper medical treatment for these patients. They should have residence in a sanatorium without any break in the continuity of the treatment during the confinement and post natal period. It is the present method of turning these patients out of a sanatorium a few weeks before labour is due that is so detrimental to a possible cure. Sanatoria make no provision for maternity cases and are anxious to avoid all risk of the confinement taking place. The maternity hospitals avoid the admission of tuberculous patients as far as possible owing to the fear of infection.

In cases of nephritis with hypertension albuminuria etc., I have little hesitation in terminating a pregnancy when treatment by ordinary methods has failed. There is a risk not only of permanent damage to the kidneys but as is shown by the history of these patients when followed up death occurs within a few years of the confinement in quite a number of instances. The ovum frequently dies and may be extruded in a macerated condition, which goes to show that Nature herself has her own methods of treatment. A marked amount of albumin and persistence of a high diastolic blood pressure are indications for removal of the ovum. I have found that hysterotomy with or without sterilization has given very good results. The ophthalmological examination is often the deciding factor in the consideration of induction. Haemorrhages or destructive changes in the retina are an indication for intervention in most instances. I hope in the future that in these cases of nephritis some method of treatment will be found to obviate the necessity for termination of the pregnancy.

(b) INDUCTION OF PREMATURE LABOUR

The indications for and against this are much the same as for abortion. The problem in the case of premature labour is not an ethical one as the operation is performed in most instances to save the life of the infant—for example in cases of habitual death of the foetus at a given week of pregnancy. I have been trying the effect of medication by vitamin E—wheat germ oil—in a few cases with encouraging results.

In cases of marked pelvic contraction or disproportion where for example, the head cannot be pushed into the brim at the thirty-sixth week it is obvious that Caesarean section is indicated but we all have experience of the head which stubbornly refuses to enter the brim of the

pelvis until the last moment when it passes through without any injury to itself or the maternal structures. Trial labour, therefore, is essential in all doubtful cases. Hot sitz baths, sedatives, and anaesthetics during labour render its progress much easier. In cases where there is a doubt as to the possible necessity of a Caesarean section no vaginal manipulation should be carried out. For this reason surgical induction causes more risk if a subsequent Caesarean section has to be performed.

Labour is rendered easier in doubtful cases if careful dieting and walking exercises during pregnancy are advised. If fifteen grains of chloral hydrate are given every night for a week or ten days before labour is due rigidity of the cervix may be prevented.

(c) VERSION

Version is not necessary in the majority of cases of breech presentations, as most foetuses turn spontaneously before the thirty-sixth week. In my experience of antenatal examinations about 25 per cent of all cases have a breech position before the thirty-second or thirty-fourth week.

Version should be attempted only after a radiograph has been taken of the position of the foetus and the patient should be admitted to hospital or have the manipulation carried out in her own home. It may be necessary to give an anaesthetic. If version is easy the probability is that spontaneous version would have taken place if the case had been left alone. Version fails in most cases because of extension of the back and legs. It is a dangerous procedure in cases of toxæmia or nephritis as it may cause separation of the placenta and death of the foetus or even of the patient from haemorrhage.

(d) TUMOURS

Tumours of the ovary tend to twist during pregnancy and in most cases should be removed.

Fibroids give little trouble unless they cause pressure symptoms. If they occur in the pelvis Caesarean section and enucleation is the operation of choice. If the patient is young the uterus should not be removed if it can possibly be saved. I have performed Caesarean section in a young patient with a uterus studded with fibroids and have not removed them. They involuted, and the patient had no subsequent symptoms of pressure or haemorrhage. In the case of degenerating fibroids associated with toxic symptoms I treat the patient for toxæmia, and if necessary perform Caesarean section at term. Fibroids should not be interfered with during pregnancy unless there are symptoms of pressure or evidences of acute infection.

In some cases I have enucleated a degenerated fibroid from the uterine wall several weeks after delivery with successful results and without recourse to hysterectomy.

(e) HAEMORRHAGE

In toxic haemorrhage the less interference the better. If the haemorrhage occurs in the late weeks of pregnancy absolute rest in bed and the administration of morphine will be sufficient, this should be followed by treatment for the toxæmia. Rupture of the membranes may be necessary in some cases. I have given up packing the vagina and all manipulation. It is remarkable how well these cases do compared with those treated by surgical methods. One must always remember in these cases that the danger of any interference is shock, increased haemorrhage from lacerations and sepsis. In toxic conditions of the liver pressure by an abdominal binder is dangerous.

In placenta praevia intervention in most cases must be prompt if haemorrhage takes place. I have kept cases of slight haemorrhage under observation with good results, but there is always anxiety, as sudden and fatal haemorrhage may take place. Version, performed in order to control the placental bleeding by means of the foetal buttock, has its uses. Willett's clamp is useful if the head is down and the foetus not too premature. In central placenta praevia Caesarean section should always be considered if there is a living foetus.

Intervention During Labour

Forceps—The application of forceps is more of a problem in practice than one at first realizes. In most cases of domiciliary midwifery the practitioner is influenced to some extent by a desire to terminate the labour on account of the suffering of the patient and the risks to the foetus attendant upon delay. The anxiety of the relatives may tend to precipitate matters. The forceps rate in such practice is higher, therefore, than in hospital cases. The urgency for instrumental delivery can be avoided by the administration of sedatives in the first stage and anaesthetics such as gas and oxygen or gas and air, during the second stage. Forceful muscular exertion on the part of the patient should be avoided as it causes uterine fatigue. The lithotomy position gives more room for the head to come down to the outlet and simulates the Eastern method of delivery by means of the squatting position. I do not apply forceps when the head is high in the pelvis, and I consider the administration of pituitrin a danger except after the termination of the third stage of labour.

If the perineum is preventing the expulsion of the head or is showing signs of laceration a median episiotomy is of value. The lateral incision may prevent extension of the tear but I have found it difficult sometimes to get primary union. Undue stretching of the perineum is just as frequent a cause of rectocele as a lacerated perineum. Careful suturing of the perineum in layers will prevent subsequent prolapse. If primary union does not take place I make it a rule to have the wound thoroughly cleansed by swabbing with an antiseptic (dettol for choice) and in about ten days to freshen the edges and unite them by secondary suturing. As a rule the results are excellent and no repair is needed at a later date. It is a mistake to deliver a head rapidly by forceps, slow traction during the pains causes little injury. If the head lies for a prolonged period on the perineum without any progress forceps should be applied. In cases of foetal distress or prolapse of the cord forceps may have to be applied earlier than would be the case under normal conditions. If a patient is having few pains and the foetal heart is regular there is no necessity for terminating the labour, even though the second stage may have lasted for some hours.

Caesarean section is advised for cases of extreme disproportion, for central placenta praevia and where undue strain would be dangerous for the patient. In patients who have had previous stillbirths during labour or in the case of a breech with extended legs where the pelvis is rather small Caesarean section may be indicated. I always operate after labour has started as not infrequently the operation has been found to be unnecessary. The more experienced the obstetrician the fewer cases of Caesarean section he has to his credit.

The Third Stage of Labour

Uterine fatigue is the most frequent cause of retained placenta. Patience and time will effect its delivery.

Passing a catheter is often of advantage, and expulsion from the vagina may be effected if a light anaesthetic is given. In normal cases it is not necessary to massage the abdomen in the third stage. Massage often causes irregular contractions and retention. It is unnecessary to explore the uterus for retained membranes, they will probably come away as involution proceeds. If the membranes do not come away naturally in a day or two and give rise to local sepsis a glycerin drain may be advisable. When the placenta reaches the vulva the hand should not touch the abdomen, as it may produce constriction of the cervix, which would prevent expulsion of the membranes. Injection of saline solution into the umbilicus in some cases effects delivery of the placenta.

Manual removal of the placenta should be avoided, except for haemorrhage or complete retention, as it is not infrequently followed by some degree of pyrexia.

Puerperal Sepsis

There is no time to do more than mention this subject. With improved methods of treatment, as, for example, with prontosil in cases of acute blood infections surgical intervention has been much diminished. Hysterectomy has always seemed to me a mistaken method of treatment, and has been responsible no doubt for the loss of some lives. Drainage of the abdominal cavity does not seem to me a rational method in these cases, as the infection is not comparable with that of appendicular abscess or pyosalpinx. I have found serum of value in some cases, and of course fresh air, colon lavage, and blood transfusion all help towards a cure.

In local or uterine sepsis glycerin drainage is the best method of treatment.

In cases of septic abortion it is advisable not to remove the ovum or placenta when first seen but to delay until the patient's resistance has been improved with prontosil, etc. A glycerin drain may effect the spontaneous expulsion of the ovum. If not, removal of the uterine contents by the finger or forceps is not accompanied by much risk of disseminating the organisms by breaking down the barrier in the uterine wall. A mole which gives rise to haemorrhage should, of course, be removed as soon as possible.

In conclusion, we must remember that although we are often tempted to use surgical methods in obstetrical practice time and patience will do much to banish the possible complications which we apprehend. The results of operation at the moment may be dramatic but the dice are loaded sometimes against us in the form of shock to the patient, haemorrhage and sepsis. Masterly inactivity may seem to some to be poor treatment, but the results will often be infinitely better than those attained by surgical intervention.

A Alfano (*Rinasc. med.* January 31 1937 p. 47) states that recent studies of the extra articular manifestations of acute articular rheumatism have induced him to record the following case. The patient was a girl aged 13 who was suddenly seized with abdominal pain chiefly localized in the right side, constipation, vomiting and fever. The pain in the lumbar region which subsequently developed made it doubtful as to whether the condition was a retrocolic appendicitis or suppurative peritonitis. The subsequent course of the disease made the last diagnosis appear the most probable at first, but later the occurrence of pain in the typical situation showed the true nature of the disease.

AN UNUSUAL CASE OF HERMAPHRODITISM

BY

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I put forward the details of this case as of considerable importance in having a direct bearing on the problems of sex, its origin, and manifestations.

Case Report

The patient consulted me when she was 18 years of age because she had never menstruated though she had had frequent manifestations of sexual excitement at irregular intervals and had become anxious as to their exact significance. Her general bearing was that of an attractive female, aware of her beauty both of face and figure. Her voice was pitched in the female register.

On examination she was found to be a beautiful woman remarkably well developed as far as her typically female body was concerned. The face was free from hair. Her breasts were large and full, her pubis covered with a mat of hair. Her pelvis was rounded and well developed. Her clitoris which bore to the naked eye a strong resemblance to a small penis not fused on its ventral aspect was conspicuous between her labia which were fully developed and definitely larger than the average. The vagina was about one and a half inches in length and terminated in a smooth rounded extremity but on removal of the examining finger it collapsed so as not to seem so long as the finger had indicated. She was very active sexually and had a lover who had frequent connexions with her, and during these she became very excited. This man an experienced bachelor had assured her that he was able to complete the act with great satisfaction in spite of the shortness of her vagina and that he had never had relations with such a passionate woman. These facts are mentioned to show that she was very highly sexed. Her sexual desires were invariably directed to males; indeed, she said she had rather an antipathy to females.

Desiring to settle in life and to cease her irregular friendships with her various lovers she consulted me again in 1921 with the object of having her "passage" elongated and asked if it were possible to make an artificial uterus so that she might have children. On examination I could not detect any sign of the presence of a uterus. I found in each inguinal canal a smooth rounded lump which was readily returned into the abdominal cavity by slight pressure but appeared again when the pressure was removed. She complained that squeezing the lump caused a pain which she herself described as sickening. I explained to her that it was possible to make an artificial "passage" for the sake of intercourse but that it was not possible to construct a uterus from which she could bear children. I added that there was a definite risk to her life in the former procedure if carried out by the abdominal route, and she wisely decided not to undergo it. Noting the elasticity of the perineal tissue an elastic T-bandage was devised which kept up a constant pressure on a metal dilator. This was worn during sleep and for as long a part of the day as possible. Rapidly it became possible to increase the size and length of the dilator and the patient's persistence was rewarded by the development of a passage three inches in length which on superficial examination bore a strong resemblance to the lower end of a normal vagina.

OPERATIONS

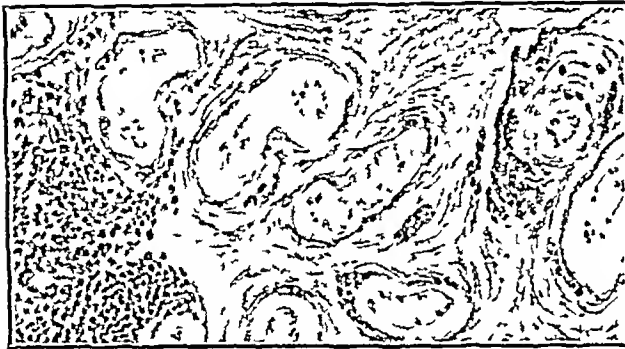
Three years later she came to see me again because the lump in the right groin had become painful and had increased in size and an operation for the cure of an inguinal hernia was undertaken. The lump was exposed and was manifest a small testicle complete in every detail except that no vas could be found. It was replaced in the abdominal cavity and the canal closed. Two years later a similar operation

for the same reasons was performed on the left side when as on the previous occasion what appeared to be an undoubted testicle was replaced in the abdominal cavity. Four years later the hernia on the right side caused her much pain and she said the lump was trying to reappear. This time she insisted on its removal. This was carried out and the appearance of the lump at the previous operation was confirmed. It turned out to be a definite testicle complete in every detail. After its removal her sexual ardour was considerably lessened, but remained identical in its direction.

The specimen was examined after removal by Dr. Nicholson, professor of morbid histology at Guy's Hospital, and his report is appended.

"The specimen was instantly identifiable with the naked eye as a testis and epididymis. The former measured 3 cm. in length, 2.4 cm. in breadth and 2 cm. in depth and was covered externally by peritoneum. On section it was pinkish in colour and studded everywhere with minute granules, slightly raised above the surface. The upper pole passed gradually into the thickened head of the epididymis. Elsewhere it was surrounded by a dense tunica albuginea. The epididymis consisted of fibrous and adipose tissue with numerous small lumina.

On microscopical examination the testis presented the typical appearance of the atrophied organ (see figure).



The spermatic tubules were thick and consisted of a broad hyaline basement membrane surrounding a lumen in which a few degenerate cells of irregular shape were present. There were no signs whatever of spermatogenesis. The intratubular stroma was dense and non-cellular but contained large numbers of big intensely eosinophil interstitial cells solitary and in groups. They often formed incomplete envelopes around the tubules or were aggregated into definite nodules or adenomata, the largest of which measured 1 to 2 cm. in diameter. The tubules of the epididymis were lined with columnar epithelium on which cilia were visible. Their lumina were always empty. They were surrounded by thick fibromuscular envelopes. The vessels of the pampiniform plexus were numerous and all their coats more especially the media, were sclerosed. The vas deferens was not identified.

On the three occasions when the patient was anaesthetized I had taken the opportunity for a thorough examination of the pelvis and there was no sign of any structures in the pelvic cavity which might indicate the presence of ovaries.

This case appears to me to be of great interest from several points of view. Here we have a beautiful fully developed woman with all the physical characteristics of the so-called female and yet she has no ovarian secretion or uterus—nor has she ever had. Clinical observation of human beings shows of course that the original division into male and female is in reality a very superficial one and can only be maintained on the anatomical ground of the gross appearance of the external sex organs. Certain physical and mental characteristics are generally accepted as appertaining to the males and females of the species, and it is a platitude to observe that there are

very few pure males or females in the human species but that the vast majority of individuals are a mixture in varying proportions of the male and female elements. Their characteristics are usually considered to be due to the secretions of the gonads. The present case directly negatives this supposition and proves that we must look further back for their origin. This woman had never possessed ovarian tissue at all; indeed, she had testicles.

Factors that Determine Sex

The origins of all the ultimate characteristics of the future individual are contained, of course, in the original fertilized and developing ovum and must be derived from the original spermatozoon and ovum, which contain the factors that determine the particular type and its sex. This case shows that these factors must be independent of the gonads. Indeed the factors that determine the type of the several characteristics of a particular individual must determine also the type of the gonads that will be present in that individual.

The type of each individual is developed with the gonads and not because of them, the gonads being just one of the elements in the structure of the individual and not, as was supposed, the structures that determined the characteristics. Thus an individual may be physically very feminine, mentally a mixture of male and female and yet have testicles or any variety of the male or female organs. The truth of this has appeared obvious to me for many years but I have not been able to demonstrate it completely before, although it was suggested by a mass of evidence from clinical observations. The degree of development of the external sex organs varies greatly in each individual. In many females the clitoris and labia approximate quite closely in appearance to a penis and a scrotum not of course fused in the midline. The degree of development of the male organs varies too, but what is more important to observe is that the sexual characteristics associated with these developments are just as variable and are not commensurate with the degree or type of anatomical development. For example, great physical development is not necessarily associated with great sexual ability or desire, nor is great physical beauty necessarily associated with great sexual attraction or small anatomical development of the sex organs. This is equally true of the mental characteristics of the individual in relation to the degree of development of the sex organs and the type of gonads, the anatomical, mental, and sexual characteristics of each individual being very largely independent of one another. Indeed it appears to me simple to deduce that the superior intelligence of the female is the result of her physical disadvantages.

The value of the ovarian secretions is, then, much more superficial than is usually supposed and this is of great interest in view of the attention drawn to them by recent work. The missing secretions in any particular individual can be augmented by the administration of artificial substitutes and important superficial changes be thereby produced, but the type of the individual is not altered. Also the ovaries have been removed surgically in a large number of women without making a radical change in the type, though in a proportion of cases certain symptoms will follow and some of these may attract a great deal of attention.

Sex Problems

Clinical observations have confirmed me in the belief that the pure male type and the pure female type are seldom satisfactory, the former generally being lacking

in real intelligence and the latter in physical power. The best human beings are those in whom there is a considerable admixture of the characteristics of both sexes, with an interplay of the elements and it appears to me that for a man to be what is commonly known as "successful" he must possess a considerable amount of the mental attributes of the female, and the "successful" female must possess a considerable amount of the physical attributes of the male. The so-called war of the sexes is therefore about as absurd as any other war, and the question as to who fights whom, and on which side, must often be difficult to answer.

Of late years sex problems have been more openly discussed, and certain advantages have accrued from this. On the other hand types of sexual activities between persons of the same sex have been dragged into the light from the relative obscurity that previously had partially concealed them and at times even have been exalted by certain authors to such an extent as to become a menace to society, a great deal of harm resulting. The position regarding them therefore needs some clarification. There are individuals with certain male externals who have an excessive amount of the female in them, and females with very obviously excessive amounts of the male apparent in their appearance, movements, and general mannerisms. Some of these indulge in sexual perversions, and the natural resentment that is felt against these activities is often toned down by the illusion that this is a glandular problem and so calls for sympathy and not drastic opposition. No one would justify excessive violent attacks by a male on a female because of the activity of the secretions of his sex glands. Again, it is true that the aggressive sexual female has often a great deal of the male in her but this is not regarded as a justification for gross sexual activities on her part. The case to which I have referred in detail shows that it is possible for an individual to have a very considerable mix-up of elements and yet confine her sexual activities entirely and successfully to the opposite sex.

The causative factors of homosexuality and Lesbianism are not to be found therefore so much in the secretions of the gonads as in the type of the individuals concerned. Their behaviour should not be regarded as justifiable on the ground of these glandular secretions nor should it be held that it is impossible for them to learn and cultivate an adequate control. In this matter the legal and medical professions are often found at variance and are often led away from the main issue the former being more interested in upholding the majesty of the law and the latter in attempting to find a cause for the behaviour and to supply a suitable remedy. It is just as possible for the participants in these practices to learn control as it is possible to control any other bodily desires normal or abnormal. It is vital that they should be made to realize that their practices are not excusable on the grounds of the secretions of the sex glands as, failing this they are dealt with drastically by the law—and justly so—for the obvious benefit of the herd in which we live.

The December issue of *Medical Life* is an Army Medical Library number commemorating the centenary of the foundation of the Army Medical Library at Washington. In addition to other papers it contains greetings from the Royal Society, the oration delivered on the occasion by Sir Humphry Rolleston (of which an abridged version appeared in our issue of November 28, 1936) and a portrait of the late medical historian, Colonel Fielding Hudson Garrison.

DERMATITIS ARTEFACTA—A NOTE ON AN UNUSUAL CASE

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The term 'dermatitis artefacta' is reserved for those cutaneous lesions which are produced by the patients themselves with intent to deceive. It does not therefore include the group of self-inflicted dermatoses known as neurotic excoriations in which the patients neither intend nor practise deception but are the victims of an irresistible desire to pick, scratch, or otherwise injure the skin, nails or hair (trichotillomania), this impulse in some instances may have originated in a pre-existing or existing true dermatosis, such as scabies or acne (*Brocq's acne excoriée des jeunes filles*). Such cases are quite distinct clinically and psychopathologically from the group of 'feigned' eruptions to which the ensuing remarks are confined and of which the case reported is an example.

Diagnosis

Dermatitis artefacta is by no means a rare condition, but to anyone who has not previously encountered it the possibility that he is dealing with a self-produced dermatosis might not easily come to mind and it is probable that a number of cases, especially of the milder type are missed.

The diagnosis may be comparatively obvious or extremely difficult. The subjects may be men or women but the great majority are women. They are usually young—between 15 and 25 years of age. There may be nothing in their past histories suggestive of any psychological abnormality, and they are not the type of person commonly called nervous, on the contrary, they often present a curiously unemotional, almost indifferent attitude on examination, which is reflected in their facial expression to such a degree that their physiognomy, though difficult to describe may be quite distinctive and of valuable help in diagnosis. This apathy, if it may be so called is neither to their environment nor to their interrogator. They are often intelligent perhaps above the average, and answer questions with apparent frankness though they do not care to volunteer much information concerning themselves or their condition. Their apathy is only towards their disease and in this direction their lack of interest is so unnatural as to be striking. They rarely complain, and may regard a number of heavily infected discharging lesions with what appears to be almost a complaisant and contented eye.

The lesions themselves present great variety in shape and character as would be expected from their aetiology. They may be linear, striped, band-like, disk-shaped or have a fantastic outline. They are constant only in one particular—that they do not conform to the lesions of any recognized dermatosis. Their border is important: it is usually sharply defined, pointed or angular and may have a thin line of erythema between it and the surrounding skin which is probably quite healthy. If a liquid agent has been used there may be one or more drop-shaped or streak-shaped subsidiary lesions caused by spilling or running. The location of the lesions is important. They naturally occur in places easily accessible to the hand: the left arm and side of the body are therefore favourite sites but the face or neck,

buttock or legs, may be chosen. The lesions have a habit of appearing, multiplying or relapsing during the course of a night, and are not preceded by any local cutaneous disturbance. The distribution may be totally unsymmetrical or impossibly symmetrical.

The agents employed to produce these lesions are also of great variety: they may be chemicals, such as carbolic or sulphuric acid, silver nitrate, caustic soda, or lysol; all kinds of instruments, such as knives, forks, brushes, etc. or simply the finger-nails or manual rubbing or pinching. The character of the lesions themselves consequently varies according to the type of agent used. Anything may be encountered from simple erythema to extensive tissue destruction. The superaddition of pyogenic infection further complicates their nature and appearance, and the infected lesions may be particularly difficult to identify.

Most perplexing, however, is the psychopathogenesis. It is true that in a certain number of the cases the motive appears to be to excite sympathy, to evade work, or to secure compensation but even in these patients as Goldsmith (1936) points out, the fact that the method chosen of achieving the purpose is a false one, and that the self-produced illness is usually out of proportion to the often trifling advantage gained, makes manifest the existence of a specific psychic abnormality. There are moreover many cases in which it is impossible to define a motive of any kind.

The following case report of a patient recently under my observation, although an extreme example of the condition, illustrates some of the points mentioned concerning difficulty both in diagnosis and in definition of motive.

Case Report

The patient was an unmarried woman 31 years of age. Apart from tonsillectomy and appendicectomy she had been healthy until the age of 22. She stated that all her life she had occasionally suffered from chilblains and had had numb feelings in her fingers. There was nothing noteworthy in her family history.

HISTORY

About nine years previously while she was training as a nurse a small lesion like a chilblain appeared at the extremity of her left little finger. It rapidly became black and began to extend. Amputation was performed at the distal interphalangeal joint. The wound healed normally and remained healthy. A few weeks later however a similar area of dry gangrene began around the nail of the left ring finger. The patient was then admitted to hospital in London where a diagnosis of Raynaud's disease was made. Alcohol was injected into the tunica adventitia of the left brachial artery. It also became necessary to deal with the affected finger by amputation although there had apparently been some improvement in the lesion following the injection. She was discharged from hospital about ten days later.

After a few months, however a new patch of gangrene appeared this time the left middle finger was affected. Amputation was again resorted to owing to signs of rapid extension of the gangrene. From then on similar lesions continued to develop at intervals of six to seven weeks the scar of the latest operation often being the site of the new gangrene. The disease was confined to the left upper limb. The succession of amputations (some thirty three in all) resulted in the complete removal of the arm up to the glenoid fossa of the scapula. The operation of left cervical sympathectomy was also performed. During the intervals between operations the patient stated that she had felt perfectly well except for spasms of pain in the stump for which she had received injections of heroin. Whenever she was not in hospital she pursued a normal life and kept up her swimming, badminton and other exercises. The last of this

series of operations had taken place about three weeks before I saw her.

She was a pleasant looking intelligent girl apparently in the best of health. There was an operation wound at the shoulder practically healed, otherwise nothing abnormal physical or mental could be discovered. She stated that she had come to London for some manipulative treatment to her neck as a last chance of curing her complaint. She was very cheerful—remarkably so when one considered the ordeals she had suffered during the past nine years and the imminent possibility of the development of yet another patch of gangrene. She spoke of this being likely to appear in about three weeks time which would make an interval of some six weeks after the last operation this being the interval she had become accustomed to expect. As however there was now nothing remaining of her left arm that could be amputated she did not quite know what would happen to her should the gangrene reappear at the shoulder and presumed that if it did she would die. She made no complaint hoping for the best from the new treatment and impressed one as being an extremely brave girl.

TREATMENT

A few days after beginning treatment which apparently consisted merely in light massage to the neck she was found in a faint outside her bedroom. She could not remember what had happened but stated that she had had similar attacks during the past few years for no obvious reason. She also developed retention of urine and required catheterization. This too had happened a number of times previously—sometimes when she had been in hospital. A few days later an attack of aphonia came on and lasted five days. She then said that she often lost her voice. One attack had persisted for ten weeks. She also mentioned that she was subject to sleep walking.

After a short rest following the fainting attack she resumed massage for about a week and then came an urgent message to see her. She was rolling about in convulsions of pain and a new patch of gangrene had appeared. Morphine had to be given, and later that day several injections of heroin which though they quieted her to some extent seemed to have little effect on the spasms of pain. On examination there was a circular gangrenous looking area about the size of half a crown in the middle of the operation scar. The epidermis was unbroken. In the centre it was black but faded gradually towards the periphery. The edge was sharply demarcated by a thin zone of erythema from the surrounding skin, which was normal and healthy. To one side of this lesion was another of a curious shape and character: it was a small triangle of which the border only was erythematous. There was also a third tiny nondescript erythematous lesion.

A diagnosis of artefact was made and the following day the patient was admitted to hospital. She was most unwilling to go but was persuaded by her father who had been sent for from the country. On admission her right arm was immediately put up in a splint to prevent possible interference. The gangrenous looking area began to diminish without treatment of any kind. From the moment of arrival at hospital she did not complain of pain and it was difficult to believe that only a few hours earlier she had urgently needed heroin. By the end of a week the principal lesion had resolved considerably and the small erythematous ones had vanished. She then left hospital.

Commentary

This case presents the remarkable picture of a self-inflicted dermatosis maintained intermittently over a period of nine years and achieving so successful a deception both in London and the provinces as to result in the piecemeal removal of an entire limb. The evidence leaves no reasonable doubt as to the diagnosis: recurring areas of dry gangrene confined to one arm and affecting the skin only (at operation the underlying tissues were found to be normal) do not conform with the lesions of any recognized disease: the peculiar nature of the latest lesions

themselves and their spontaneous resolution when interference was prevented, the characteristic mental attitude of the patient and the occurrence of other psychopathogenic manifestations, such as aphonia retention of urine, somnambulism, and fainting attacks all indicate the diagnosis of artefact of hysterical origin. That the deception should have been practised with such drastic effect is striking but by no means unique. According to Eller (1929), many cases have been cited in the European literature of amputations of one or more limbs having been performed on patients presenting large areas of gangrene of idiopathic origin which subsequently were proved to be due to the application of caustics by the patients. Simpson (1917) refers to a case recorded by Heidingsfeld of a woman who had serenely permitted the complete amputation of both breasts and one leg and had given consent for the removal of an arm before her condition was recognized. The lesions were those of gangrenous dermatitis and had been variously diagnosed as syphilis, tuberculosis, and malignancy. In addition to the operations she had received intensive salvarsan therapy.

Another extreme case, reported in the *Presse Médicale* (June 10, 1908) was of a man of 30, who produced black gangrenous patches on his arm with caustic potash. He consulted fifteen doctors in turn, and preserved their names, addresses and diagnoses which had included those of trophic lesions, neuritis, myelitis, syphilis and tubercle. He had received a variety of treatment, including stretching of the brachial plexus. Finally, amputation of the arm was performed. The other arm then became affected, after which his condition was recognized and apparently he was cured by psychotherapy. Lancashire (1922) who alludes to this case, cites one under his own observation of a young lady a musician who repeatedly developed lesions on her face and neck on the days when she was engaged to appear at a concert. It was impossible to define a motive and she privately confessed that some uncontrollable impulse made her mutilate herself in this manner on the very day when to do so would prove most disastrous for her. Of the milder type of case more generally encountered an instructive example was reported by Gardiner (1930). The patient was a woman of 26, who suffered from a bullous eruption of the chin, neck and sternum. Even after admission to hospital the lesions continued to appear until it was discovered that the patient was producing them herself in the bathroom by means of fly blisters which were found concealed in her handkerchief. Fly blisters were also found in the bed she had vacated at home.

"Belle Indifference"

It seems certain that a number of these patients are hysterical. The peculiarly calm mental attitude previously mentioned as being so often met with in subjects of dermatitis artefacta is apparently a characteristic feature of hysteria and was described by Janet as *belle indifference*. This attitude can be understood when it is realized that hysteria is a special type of reaction to difficulties that the physical symptoms represent the solution of some problem of everyday adaptation and that they are misinterpreted by the patient's consciousness (Henderson and Gillespie 1936). In the present case this *belle indifference* was very striking as also were other hysterical stigmata such as aphonia retention of urine and fainting attacks. A further question of great interest is that of dual personality. May hysterical subjects produce their lesions and not be conscious afterwards of having done so? Devine (1923) states that it is not necessary to suppose that the

hysteric is aware that his symptoms originate in his imagination, and that, even in the case of self-inflicted lesions, it would seem that his capacity for self-deception blinds him as to their origin. Dore (1926) reported the case of a girl of 19 with lesions on her arms. Stoddart considered her case to be one of dual personality, the patient being unaware that she produced the eruption herself. O'Donovan (1927) also inclines to the view that the patients possess a double personality, on which account it is practically useless confronting them with their misbehaviour. MacCormac (1926) wrote to some patients who had been treated at the Middlesex Hospital and found that of five who responded one had either forgotten that she had produced the lesions herself or was unaware of having done so, as she inquired whether the skin condition was liable to recur now that she was married, and if it would have any effect on her future children, another patient seemed to have no recollection whatever of her dermatosis, and stated that she had never been in the Middlesex Hospital. Simpson (1917) also remarks that one of his cases had apparently forgotten that she had consulted him previously with the same condition although on that occasion he had informed her that he knew she was producing the eruption herself. MacCormac believed that the explanation lay in the habit of burying the memory of unpleasant events in the subconscious mind rather than in the theory of double personality.

These and other perplexing questions concerning the psychopathogenesis of dermatitis artefacta can be clarified only by co-operation between dermatologist and psychologist in a series of cases.

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C Spampinato (*Policlinico Sez. Chir.* February 15 1937 p 95) has collected 130 cases of which four are original of dislocations of the cervical vertebrae, exclusive of the atlas which he classifies as follows: (1) complete dislocations, (2) subluxations, (3) unilateral, (4) bilateral, (5) forward dislocations, (6) backward dislocations, (7) dislocation of a single vertebra, (8) multiple dislocations, (9) pure dislocation, (10) fracture dislocation. In eighty-eight out of 122 dislocations there was no spinal paralysis while in twenty-four the dislocations were complicated by paralysis. Among 102 cases in which the dislocated vertebra was identified the fifth came first (40 per cent) and then in order of frequency the fourth (21 per cent), sixth (14 per cent), third (12 per cent), second (11 per cent) and seventh (5 per cent). As regards treatment in cervical dislocation without spinal symptoms if the patient is seen at once reduction under general anaesthesia should be tried but if this is not successful continuous extension should be employed. If the dislocation is accompanied by spinal symptoms reduction should be first tried but if this fails operative or expectant treatment should be carried out. In some severe dislocations that cannot be reduced without operation spontaneous improvement resulting in complete recovery may ensue.

IMMUNIZATION AGAINST DIPHTHERIA WITH ALUM-PRECIPTATED TOXOID

EFFICIENCY, DURATION, AND GRADE OF IMMUNITY

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I have reported previously the results of Schick tests on 162 children about two months after 0.4 ccm of alum-precipitated toxoid injected three to four weeks after an initial dose of 0.1 or 0.2 ccm (Chesney, 1936). Only one child was positive, giving a conversion rate of virtually 100 per cent. Using a similar two-dose method Parish (1936), in 164 children obtained equally satisfactory results.

Efficiency

The majority of children immunized in Poole (population 67,000) have belonged to the middle and lower classes. A severe epidemic of diphtheria occurred in 1929-30, but the attack rate has now dropped to a low level in comparison with the figures for London and for England and Wales.

Diphtheria Attack Rate per 1 000 Population

	1929	1930	1931	1932	1933	1934	1935	1936
Poole	4.25	3.25	1.51	0.94	0.19	0.14	0.27	0.29
London ..	2.68	3.03	1.95	1.88	2.25	2.81	2.25	—
England and Wales	1.59	1.84	1.26	1.08	1.18	1.70	1.60	—

The processes of natural immunization have lately been minimal. During the last three years nose and throat swabs from 500 children, who had incidentally some local abnormality did not reveal a single positive culture. The Schick-positive rate on primary tests, mostly of children over 10 years of age, has been high from 1930 to 1936: it was 75.8 per cent of 1125 children, and in 1936 78.6 per cent of 210 children. At present the rate for all children under 10 years is probably 80 per cent or higher.

Since my former report in February 1936, a further 1038 children have been immunized making a total of 1,200 children immunized with the two small-dose method. Of these 1078 have been Schick tested two months after the second dose and only two children have shown a Schick-positive reaction. The efficiency of immunization is therefore approximately 100 per cent.

Duration of Immunity

One hundred and twelve children who had been immunized with two small doses of APT and found Schick-negative when tested two months later were again tested eighteen months or more after the previous test: all were still negative. This result is the more significant for in 80 per cent of these children the fourfold Schick toxin test was used (see later).

Grade of Immunity Reached

I was interested to inquire whether the method of immunization in use converted children previously Schick-positive to the 'just-negative' condition or to a higher level. I therefore used 'fourfold' Schick toxin (kindly placed at my disposal by the Wellcome Physiological Research Laboratories). Glenny and Waddington (1929) showed that multiple Schick dilutions could be used

to test for a higher grade of immunity than the standard dilution. A child who is negative to the fourfold dilution has a higher level of antitoxin per ccm than one who is just negative to the standard but positive to the fourfold dilution. Five hundred and sixty-four children were tested with the 'fourfold' and 514 with the standard dilution. Only two positive reactors were found in the whole group, and both were positive in the ordinary Schick test. The blood of one of them was tested by the kindness of the staff of the Wellcome Physiological Research Laboratories and 1/50 of a unit of antitoxin per ccm was found.

I have also reported the results of Schick testing 127 children who had been immunized with formol toxoid: of ninety-four tested with the fourfold Schick dilution 87.3 per cent were negative and 12.7 per cent were positive, whereas of thirty-three children tested with the standard Schick dilution 97 per cent were negative and 3 per cent were positive. In forty-five cases the two tests were used simultaneously, and forty children were negative to both strengths: four were negative to the standard and positive to the 'fourfold' and one was positive to both standard and 'fourfold' (Chesney 1935).

With APT the Schick-negative rate was consistently high with both the standard Schick toxin test and the fourfold, and the results suggest that APT gives a higher level of immunity than formol toxoid.

Reactions of Immunizing Injections

No material difficulties have been encountered in the work. Following the initial detector dose of 0.1 ccm 3 per cent of the children showed mild local reaction; only 0.1 ccm or 0.2 ccm was therefore injected into those subjects as the second dose. By this procedure severe local reactions were avoided. In four children who gave a history of a blow on the arm during vigorous games a slight swelling formed eight to twelve days after the second dose from which a small amount of sterile discharge was easily evacuated. Subsequently the lesions healed rapidly.

Conclusion

Alum-precipitated toxoid used in two doses of 0.2 ccm and 0.4 ccm at an interval of four weeks gives a high level of Schick immunity. The initial small dose acting as a detector of hypersensitive persons eliminates reaction difficulties. The high Schick negative rate obtained obviates the necessity for routine Schick testing after immunization.

Summary

1 Of 1,200 children immunized with APT—0.1 or 0.2 ccm followed by 0.4 ccm four weeks later—1078 were available for retest two months later. In only two children was the Schick test positive. The immunizing efficiency of the prophylactic, therefore, approached 100 per cent.

2 The grade of immunity reached was high for over 99 per cent of the children tested with the 'fourfold' Schick dilution were negative to this test.

3 One hundred and twelve children who had been negative two months after immunization were retested eighteen months later: all were negative.

4 Reactions immediately after injection caused no material trouble and no interference with work. Small local lesions formed eight to twelve days after injection in four children who had received knocks on the arm in vigorous play: the slight discharge was sterile and disappeared rapidly.

My grateful acknowledgements are due to Dr R. A. O'Brien and his colleague Dr H. J. Parish for supplies of test

materials and valuable advice and assistance and to Dr R J Maule Horne for helpful facilities and co-operation in this work

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TREATMENT OF HAY FEVER BY INTRANASAL ZINC IONIZATION

PRELIMINARY REPORT OF 243 CASES

BY

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In 1936 the opportunity occurred at St George's Hospital of treating a number of cases of vasomotor rhinorrhoea by intranasal zinc ionization. Owing to the number of applications for treatment received (over 2,000) it was realized that the normal staff of the physiotherapy department would be unable to deal with more than a small fraction of these cases. Four special hay fever clinics were therefore set up and the services of five extra assistants accepted in order that a rapid statistical study of the method might be made. We desire to record our thanks to these voluntary workers for their invaluable assistance and to the Medical Committee for permission to establish the clinics.

During the period under survey 243 cases were treated, these were of both sexes and the ages ranged from 5 to 77 years. A special analysis of 100 cases showed that 88 per cent were of the seasonal type. 12 per cent were of the non seasonal variety and presented symptoms of varying severity throughout the twelve months. In only one case of seasonal vasomotor rhinorrhoea was there failure to give a considerable measure of relief; the only complete failures met with were in non seasonal cases of long standing.

It should be emphasized that the figures in this paper and the conclusions drawn apply to the 1936 season after treatment earlier in the year. By complete relief of all symptoms is not meant cure of the disease and in fact arrangements have been made for the cases already treated to have at least two applications in 1937.

In the present series the patient was first examined for infection of the paranasal sinuses, septic tonsils, dental sepsis or gross structural abnormality of the upper respiratory passages. Intranasal ionization was not given until these, if present had been dealt with. The routine practice was to give three treatments at intervals of one week; a few cases required as many as five applications; some were completely free after one. As a general rule the treatment was not given unless there was a chance of shortening the subject's season by at least four weeks.

In no case in the series was any anxiety caused by the primary or secondary reaction. There were no complications such as acute sinusitis, anosmia, otitis media or extensive sloughing of the nasal mucosa. One case of mild cocaine idiosyncrasy was encountered.

No other treatment for the condition was given except that in a few cases where the secondary reaction was more

marked than usual ephedrine 1/2 grain and sedobrol 2 tablets, were ordered that night. No sprays, douches, or local applications were prescribed, and the patient was asked to omit these if already in use.

It should be stated that the great majority of cases had had other treatment in previous years without relief, and from the fact that the average duration of symptoms was eleven years it will be realized that the condition was in most instances well established. Previous treatment took the form of desensitizing injections, injections of peptone, local applications, dietetic restrictions, and operations such as submucous resection, ethmoidectomy, antrostomy, etc. In many instances the patient had had more than one of the above methods applied without improvement.

Details of the technique employed are not included here as they have already been published.¹

The following table shows the results obtained

Complete relief of all symptoms	57.6%) 93.6%
Considerable relief	36.0%	
Some improvement	5.0%	
No improvement	1.4%	

Conclusions

1 The technique employed is safe and complications are not met with.

2 The method gives a satisfactory result in the great majority of cases of seasonal vasomotor rhinorrhoea, and in many cases of the non-seasonal type.

3 The treatment frequently gives relief when other methods have failed.

It is hoped in due course to publish a "follow up" of these cases, and to record any remote after-effects.

REFERENCE

¹ *Practitioner* May 1936

Clinical Memoranda

Thrombosis of Subclavian Vein Complicating Hyperthyroidism

The following case is of interest since venous thrombosis is a rare complication of thyrotoxicosis.

A single woman aged 47 who was employed as a sewing machine operative first consulted her doctor on May 30, 1936. She had been at work until a few days before this but stated that for twelve months she had suffered from attacks of palpitation and dyspnoea on exertion. She had lost weight and more recently had sweated excessively. She admitted that she was unduly nervous and that her limbs trembled. When seen by her doctor the pulse rate was irregular—200 per minute—and the thyroid was slightly enlarged. There was no definite exophthalmos. She was kept in bed on bromide and digitalis therapy for three weeks. The rate fell to 180 but was still irregular. On June 23 she was admitted to St James's Hospital Leeds.

She was grossly thyrotoxic. The pulse was 144 and irregular (fibrillating) the temperature was 97 F and the respiration ranged between 24 and 36. The veins of the neck were overfilled. The apex beat was just inside the mid-clavicular line though the heart was overacting grossly. The liver was palpable. There were moist sounds over the right lower lobe. The thyroid was soft and slightly enlarged. There was a fine tremor of the hands and a trace of albumin was found in the urine.

On the morning of June 30 seven days after her admission to hospital she awoke to find the whole of her right arm swollen and blue. She complained of aching pains along the inner side of the arm and forearm. Although the patient was

right-handed she did not remember performing any unusual movements involving abduction of the right arm. There was pitting on pressure. The radial pulse was alike on each side. The veins over the anterior and posterior folds were dilated. The lower half of the internal jugular, the external jugular and the axillary veins could be felt as solid tender cords. The temperature remained normal except on the evening of the eighth day when it rose to 98.6° F. There was no evidence of trauma or constriction of the arm by her nightdress sleeve. No focus of infection was found. All the teeth had been removed some ten years previously. The tonsils looked normal and there was no sore throat. A throat swab disclosed nothing of note. There were no septic abrasions of the skin, and no vaginal discharge. The urine contained a trace of albumin but no pus. There was no discharge from the ears. The x-ray examination revealed no sign of cervical rib root abscess or suppuration in the nasal sinuses. The Wassermann reaction was negative. There were one or two old calcified glands on both sides of the neck.

The arm was elevated on pillows and pressure was applied by alternate layers of wool and flannel bandages. She was given Lugol's iodine 10 minims three times a day and improved dramatically. The pulse rate began to fall within forty-eight hours and in fourteen days was 72 and regular. Concurrently the pain in the arm disappeared and the swelling gradually subsided. On July 30 a subtotal thyroidectomy was performed by Mr G. Armitage. The patient's convalescence was uneventful. Her condition improved rapidly and she was discharged from hospital on August 22.

On December 8 she was seen again. She had gained 18 lb in weight but her pulse rate was again 136. There was still a slight tremor of the hands and she still complained of periodic mild attacks of palpitation on exertion. When she had been using her right arm more than usual she had noticed some swelling of the upper arm and on the back of the hand. On examination of the right arm no oedema was seen, there were no dilated veins, and the temperature and the colour of the skin were normal. Measurements revealed that on the right side the upper arm was 1½ in. and the fore arm 1 in. greater in circumference than the corresponding measures on the left side.

At the time of writing—January 1937—there is still a little swelling of the right arm but this is diminishing. The difference in circumference is ¾ in. in the upper arm and ¾ in. in the lower arm. Apart from this she is quite well and anxious to return to work. The pulse rate is 72 and regular and the heart is normal in appearance on x-ray examination. The urine contains no abnormal constituent.

In a search through the literature we have found no mention of venous thrombosis complicating thyrotoxicosis. In view of the increase in the circulatory rate in the latter condition we feel that this occurrence must be one of considerable rarity.

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Serum Treatment of Tetanus

The following case of tetanus in a young child, treated with massive doses of serum may be of interest. While it is fully realized that when the incubation period is longer than ten days the prognosis is good regardless of serum treatment yet there are one or two features about the case which may be of sufficient interest to merit its publication. The diagnosis in this case is in no doubt but the incubation period is unfortunately unknown.

CASE RECORD

A boy aged 2 years and 10 months who lived on a pig farm was brought to the out patient department on November 4, 1936 because for the past twenty four hours he had been able to open his mouth only partially. No cause could be

found for this. There was no history of trauma or of previous illness apart from measles in 1935. When seen the following day his condition was about the same but after his return home he suddenly had an attack lasting two or three minutes in which the teeth were clenched on the tongue, the head was retracted and the arms and legs became extended and rigid. On November 6 he had two similar attacks and he was admitted to the hospital shortly afterwards.

On admission the child showed the typical risus sardonicus. The masseters were in spasm and the mouth could not be opened actively or passively. The head was somewhat retracted and the neck muscles felt very rigid. The knees were spastic but all the other joints were quite free. All reflexes were brisk. The fundi were normal. The temperature was 98.8° and the pulse rate was 112. Tetanus having been diagnosed careful search was made for the initial lesion. The only abrasion found was a small scratch on the left cheek which was imperfectly healed and appeared to contain some dirt. The parents stated that it had been present about two months and had persistently refused to heal.

Anti-tetanic serum was given as follows: November 6 5000 units intravenously, 7 15000 units intravenously 5000 units intramuscularly and 20000 units intrathecally 8 25000 units intravenously and 15000 units intramuscularly 9 20000 units intravenously 10 20000 units intramuscularly 11 20000 units intravenously 12 20000 units intramuscularly 13, 20000 units intravenously and 16 20000 units intramuscularly. The total doses were intravenous 105000 units intramuscular 80000 units intrathecal 20000 units the whole amounting to 205000 units. The cerebrospinal fluid obtained on November 7 showed no abnormality. The serum caused no constitutional disturbance apart from a slight rash on one occasion. The lesion on the face was treated by scraping followed by application of picric acid. Chloral and bromide were given as required at first, and later regularly every four hours. On several occasions the tongue became caught between the teeth and had to be released by administration of chloroform. Three days after admission when attacks were occurring very frequently 1.2 ccm of avertin was given with very good effect.

As these attacks became less frequent the condition of the mouth and lungs gave cause for great anxiety. The mouth became extremely septic and there were marked signs of pulmonary congestion. The mouth was cleaned on each occasion when an anaesthetic was given and soon became normal when the child was able to take solid food. The pulmonary signs which were treated by the exhibition of atropine cleared up very satisfactorily. By November 21 the child could open his mouth and put his tongue out but the neck rigidity did not disappear completely until the beginning of December by which time recovery was complete. He was discharged on December 11. He attended a hospital children's party after Christmas and was observed to be in excellent health. The lesion on the cheek had healed completely leaving practically no scar.

Apart from the fact of the child's recovery it is of interest to note that no untoward symptoms followed the therapeutic use of this large dosage of serum in a child of this age and weighing only 26 lb. and also that the employment of avertin was of great value.

I wish to thank Dr N. H. Watson under whose care the child was admitted and Dr Kenneth Tallerman who saw the case in consultation for their kind permission to publish this note and for the help and advice which they have given me.

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The French Ministries of Public Health and Physical Education have addressed to the prefects in France a circular in which they are urged to do all in their power to aid the Société de Prophylaxie Sanitaire et Morale in its educational programme relative to the venereal diseases. The prefects are requested to bring their influence to bear on sporting clubs in order that their leaders may give their support to the society in question.

Reviews

BRIGHT ON BRIGHT'S DISEASE

Original Papers of Richard Bright on Renal Disease
Edited by A. Arnold Osman D.S.C., F.R.C.P. (Pp 172
illustrated 21s.) London H. Milford, Oxford University Press 1937

By reproducing the four original papers of Richard Bright, with their beautiful coloured plates of the naked-eye appearances of the affected kidneys, Dr Arnold Osman has piously rendered a useful service in making readily accessible these classical writings so long out of print. Further, this welcome volume supplements Sir William Hale-White's full account of Bright's life and works, which, originally published in the *Guy's Hospital Reports* for 1921, was partially reproduced there in July, 1927, at the time of the centenary celebration of the appearance of the first of Bright's two volumes of *Reports of Medical Cases* when the late Professor W. S. Thayer of Baltimore delivered on July 8 the address on 'Richard Bright the Man and the Physician'.

The four papers now presented to the reader date from 1927. In 1833 Bright gave the Goulstonian Lectures at the Royal College of Physicians of London, the part of the second lecture, devoted to kidney disease, being reproduced here. The other two articles appeared in the first volume of the *Guy's Hospital Reports* (1836), and gave the most comprehensive account of the disease which has so long borne his name.

In an appropriate appendix Dr Osman introduces a new feature—namely, an account of histological sections made from three kidneys of cases recorded in Bright's original series of cases. These kidneys, in the museum of the hospital had not been previously thus examined, and now though difficulties were encountered in staining specimens a century old the histological changes are described, just as some years ago the original cases of Hodgkin's disease were submitted to what may be called palaco-histological examination. It is said that in 1842 Bright and his pupil George Robinson examined kidneys by the microscope but never reported thereon. This is hardly surprising for it was long before thin sections were cut the preparation for microscopy consisting of teasing out the tissues.

EYE, EAR, NOSE, AND THROAT

The Practitioners Library of Medicine and Surgery
Vol 11 *Eye Ear Nose and Throat* (Pp 1153 illustrated. Sold only in sets, £2 10s per vol.) New York and London D. Appleton Century Co 1937

The 1936 Year Book of the Eye Ear Nose and Throat
Pp 632 87 figures 2.50 dollars or 10s 6d postage 6d.)
Chicago Year Book Publishers Inc London H. K. Lewis and Co 1936

The first of these two recent publications forms one of a series which is intended to present the whole of medicine and surgery in a manner suited to the needs of general practice. The associate editors for volume 11 are Dr Arthur M. Yudkin for ophthalmology and Dr Paul B. MacCready for oto-laryngology. Such a large number of contributors take part in the construction of the book that some lack of uniformity is to be expected and this applies with special force to the descriptions of operative technique. Some operations such as extirpation of the lachrymal sac are described and illustrated in great detail while others for which a practitioner is more likely to become responsible (for example

the ordinary mastoid operations) receive much less description and are not illustrated. There are also articles which are not likely to make much appeal to the general practitioner, such as those on the histopathology of the middle ear and the physiology of the internal ear, valuable as they would be in a book with comprehensive aims.

The first part is devoted to the eye, and provides in systematic fashion a full account of every subject for which the book is likely to be consulted. This part impresses itself as superior both in arrangement and content to the later parts and is admirably illustrated, with even distribution of the pictures. It is not possible to mention more than a few, but the chapters on diseases of the uveal tract by Gifford, the crystalline lens by Kirby, the retina by Yudkin, and glaucoma by Yudkin are particularly good, and this third of the book, which is well documented, might serve as a textbook of ophthalmology.

The second part is devoted to the ear. This consists rather of a number of interesting essays on subjects in which the various writers are experts than of a systematic account of diseases of the ear. All these chapters appear well arranged if the titles only are considered, but an examination of the contents shows overlapping and a want of recognition of relative importance. The complications of suppurative otitis by MacCready, for instance is a good but condensed account, lacking illustrations, and quite out of proportion in length to the detailed articles on academic and scientific subjects.

Part III deals with diseases of the nose, nasopharynx, and sinuses. There is again overlapping in the first two chapters on physiology, and the illustrations in the chapters on the accessory sinuses are old-fashioned. The most satisfactory chapter is on fractures of the nasal and malar bones by Kazanjian. Part IV is concerned with diseases of the pharynx. The chapter on the tonsils by MacCready gives a sufficient account, but it cannot escape comment that there are no proper illustrations of the operation of removing the tonsils by dissection. Part V deals briefly with diseases of the larynx, and includes an excellent short account of bronchoscopy by Clerf.

The supervising editor says in his preface that he has turned to the comparatively younger group of American investigators for the newer material, and that the volume is therefore not a rehash of pre-existing material found in the older textbooks. In the section on the eye the material is certainly presented in the form desired but in the remaining four sections young America displays on the whole, a remarkable adherence to traditional conservatism.

The 1936 issue of the *Year Book of the Eye Ear Nose and Throat* fully maintains the excellent standard already set up by the editors of this publication. In the first part concerned with the eye will be found abstracts of papers dealing with the technique of operations for cataract and glaucoma, with illustrations. There is also an account of interesting experimental researches on the production of papilloedema and of chemical and anatomical studies on the pathology and pathogenesis of choked disk. The papers on acute bilateral retrobulbar neuritis treated by operations on the sphenoidal sinus and on acetylcholine in tobacco amblyopia are of practical importance. Two of the longest abstracts are of a study of optic nerve atrophy in relation to pituitary tumour and of the diagnosis of brain tumour.

In the section on the ear there is a good abstract of a paper by Lund which is likely to become classical on the indications for labyrinthine operations showing the importance of a study of the cerebro-spinal fluid. There

is also an interesting paper on neoplasms of the middle ear from which it appears that five out of six patients treated in the manner recommended had no recurrence from two to more than four years. Tuberculosis of the ear has received attention, and also a paper by Lüscher describing otomicroscopy. A collection of papers on the fashionable subject of petrositis is also summarized and illustrated. There is also an account of an ingenious explanation of neuralgias and ear symptoms associated with distorted functions of the temporo-mandibular joint and how relief may be given. The curious observations of Guild on shortened bone conduction in old age are described by the editor as startling but logical.

There are abstracts also of a varied collection of papers on the nose, mouth, and throat, including also bronchoscopy and gastroscopy. Most of these papers contain little that is novel and are confirmatory of previous observation and methods. The paper by Madrnka and Bardet of Geneva on acute pulmonary tuberculosis following radiotherapy of pharyngolaryngeal cancer is an exception, and is of great importance, as the authors found that in 43 per cent of forty-two patients acute pulmonary tuberculosis proved fatal in two to three months.

There is a good index of subjects and another of authors. The compilation shows excellent judgement in selection and is an admirable book of reference.

X-RAY DIAGNOSIS

A Manual of Radiological Diagnosis for Students and General Practitioners. By Ivan C. C. Tchaperoff, M.A. M.D. D.M.R.E. (Pp. 256, 286 plates, 21s.) Cambridge: H. K. Liff and Sons, 1937.

A concise guide to the salient points in x-ray diagnosis has long been needed, and Dr Tchaperoff has set himself the difficult task of filling the gap. For this he is well equipped for he has the gift of orderliness, and ranges his material in a systematic way curtailing verbiage so that he covers the whole vast field in a book of only 250 pages that also include 280 illustrations. This in itself is no mean feat, but when we examine the material that is so compressed we find very little omitted that is of importance and many things included which we would hardly expect in so condensed a volume. Naturally when on debatable ground the author cannot find space for discussion of the relative merits of divergent views, and either omits these or steers a middle course.

In each system of the body he opens with a radiological survey and deals, in the case of the osseous system with generalized bone disease following with regional diseases. The section on bones is by far the most extensive occupying more than a half of the volume. This is as it should be for a book of this kind. The author covers the ground very adequately and the illustrations are well chosen. He could with advantage have devoted more space to the other sections but doubtless the publishers set a limit to the size of the book. Yet when we go over these sections we find that all the vital points are dealt with and that the illustrations are sufficient for the purpose.

The author does not pretend to originality in this volume but aims at systematizing the main diagnostic points and often includes little tables drawn up to contrast the differences of the appearances in diseases that are liable to be confused. Throughout he insists both by precept and example on the systematic and orderly examination of the radiographs. In fact this book reminds the reviewer of the days of his anatomy reading when bewildered by the mass of detail in the large

standard textbooks, he turned to the Pocket Gray with which the book now under notice has close affinities.

We are not familiar with the process used for reproduction of the many well-selected radiographic illustrations that are printed in the text, they are not so good as the best half-tone blocks and are sometimes lacking in gradation. They all however, show the points for which they are chosen, and considering the price of the volume it is an achievement on the part of the publishers to have been able to include so many. The book is well and attractively turned out, and is certain to find a ready sale for not only will it be the first string for those taking up the study of radiology but it will also be much used for reference by those who are not in close touch with the subject, particularly general practitioners who having little or no experience, are often faced with the interpretation of radiographs. We can heartily recommend this book.

MEDICAL INTERPRETATIONS FOR LAYMEN

Medicine and Mankind. Edited by Iago Galdston, M.D. (Pp. 217, 7s. 6d. net.) London and New York: D. Appleton Century Co. Inc. 1936.

This book is an anthology of lectures to the laity delivered at the New York Academy of Medicine edited by the secretary of that institution. Its object is to enable the public to see clearly the workings of the medical and scientific mind. A chapter of special interest deals with the contribution of the primitive Americans to medicine. The author states that certain Mongolian characteristics have been observed in the indigenous natives of Brazil, pointing to a migration from Asia across the Behring Straits. In both North and South America medical knowledge had reached a surprisingly high level before the advent of the white man. The North American Indians were familiar with obstetric forceps, dilatation of the cervix and methods of controlling post partum haemorrhage. Even contraceptive measures were occasionally employed. Among the Mayas, pre-Incas and Incas amputations were performed and artificial limbs were in use. They filled teeth and fitted dentures. In difficult labours they performed symphysiotomy and carried out Caesarean section long before Caesar was born. Cocaine was employed as an anaesthetic, quinine, cascara and red willow, the natural form of salicylic acid are derived from the Indian pharmacopoeia.

The final chapter on the mystery of death is contributed by Dr Alexis Carrel. Dr Carrel maintains that death has been the builder of civilization for through natural selection the strong and the intelligent persisted and the great races developed. Through the success of our battle against death the weak have become artificially the equals of the strong and civilized countries are encumbered with those who should be dead. As a result natural selection has been almost suppressed.

MACCALLUM'S PATHOLOGY

A Textbook of Pathology. By W. G. MacCallum. Sixth edition, revised. (Pp. 1,277, 697 figures, 42s. incl.) Philadelphia and London: W. B. Saunders Co. 1936.

Since its original appearance in 1916 this well-known textbook has been republished in a fresh edition at unvarying intervals of four years, a fact which itself indicates the sustained popularity of the work. It has always differed from other textbooks in the arrangement of the subject matter on an aetiological instead of a regional basis. This has an admirable effect in dealing with such diseases as tuberculosis and syphilis in which numerous organs may be involved by a process which is

of the same essential nature wherever it occurs, but in other directions the consequences are less fortunate. Diseases of which the cause is unknown must obviously present difficulties, and these are either allotted to isolated chapters as in the case of Hodgkin's disease, or forced into a doubtful category, thus rheumatic fever appears among the infections caused by filterable viruses, as indeed does scarlet fever a position with whose implications few will agree. A chapter on disturbances of mineral and pigment metabolism embraces such otherwise unrelated subjects as calcium metabolism, chlorosis, jaundice and pneumoconiosis. The last of these is scarcely a disturbance of metabolism and would appear to have a more appropriate place in Chapter XIX (Chemical Injuries). It must be added that silicosis is dismissed in five lines and asbestosis is not mentioned. The virtues of such arrangement are nevertheless largely a matter of opinion and what is more important is that the whole work is comprehensive, up to date and easily readable. The illustrations are profuse, and include many admirable photographs of well-chosen specimens. References to important original papers and other fuller works are given not at the end of each chapter, but after each section, sometimes of less than a page, an arrangement which should be found of great convenience.

Notes on Books

Le Artropatie Croniche by Dr GAETANO ZAPPALA, assisted by Professor Giuseppe Lazzaro, forms part of the *Pohlmanco* series of medico-surgical monographs and as such will be of interest both to the physician and the surgeon. Professor Cesare Antonucci, a leading surgeon of Rome who has written the preface, welcomes the appearance of this book, especially as monographs of this kind are rare in Italy and the practitioner and students are consequently driven to consult works by French, German, English and American authors. The book is divided into two unequal parts. The first, which is written by Dr Zappala, is of a general character, dealing with anatomy and physiology, focal infection, allergy, cerebral symptoms, haematology, radiology, and classification. The second part, which forms the bulk of the work, deals with infective arthropathies (Lazzaro), non-infective arthropathies (Zappala), medical treatment (Lazzaro), and surgical treatment including orthopaedic appliances (Zappala). An international bibliography of 221 references is appended. The book is published in Rome by Luigi Pozzi, price 25 lire.

We have received from Messrs Knoll Limited (61, Welbeck Street W1) a volume which they are issuing in celebration of the jubilee of their foundation. It is entitled *Essential and Commonplace Aspects of Heart Disease* and is written by Dr KARL FAHRENKAMM of Stuttgart who remarks: "My twenty years of collaboration with the Knoll works, twenty years of natural growth in the evolution of experimental pharmacology in its relation to internal medicine and to the special aims and tendencies of the Knoll laboratories have made it a pleasure to accept the task of writing a small volume recording my personal experiences of heart disease, heart patients and experimentally proved and pharmacologically established methods of treatment. The author provides a series of interesting comments on cardiac therapy and the volume constitutes an acceptable jubilee gift."

The work entitled *Moscow in the Making* by Sir E. D. SIMON, a former Lord Mayor of Manchester and Parliamentary Secretary to the Ministry of Health, Lady SIMON, formerly chairman of the Manchester Education Committee, Dr W. A. ROBSON, reader in administrative law in the University of London, and Professor J. JEWKES, who occupies the chair of social economics in the Univer-

sity of Edinburgh, contains much that will be of interest to medical readers, especially those interested in public health and social medicine. In the first place the Moscow Soviet has instructed its representatives to take great care of the health of toilers and their children to increase medical assistance to the population, especially in villages, by building new hospitals and improving existing ones to increase the supply of medicines, to insist on rendering more careful and attentive assistance to the patients and to raise the qualification of medical staffs. The Moscow public health department which employs no fewer than 40,000 men and women and controls all the hospitals and many of the clinics and sanatoria contains two kinds of staff organization—namely, a shop councillor, elected by the whole mass of workers, and an association of doctors in each hospital, to advise on matters of professional conduct, ethics, and medical practice. Reference should also be made to the recent decree making abortion much more difficult, the active measures taken to solve the housing problem, and the arrangement of summer camps for children in the country. The book is published by Longmans, Green and Co., at 7s. 6d.

Dr LESLIE J. HARRIS has now produced a second edition of *Vitamins in Theory and Practice* (Cambridge University Press, 8s. 6d.). In revising the text note has been taken of advances made during the year—for example, the chemical characterization of vitamin B₁, the isolation of vitamin E, and the recognition that vitamin B₁₂ is a complex consisting of at least three factors.

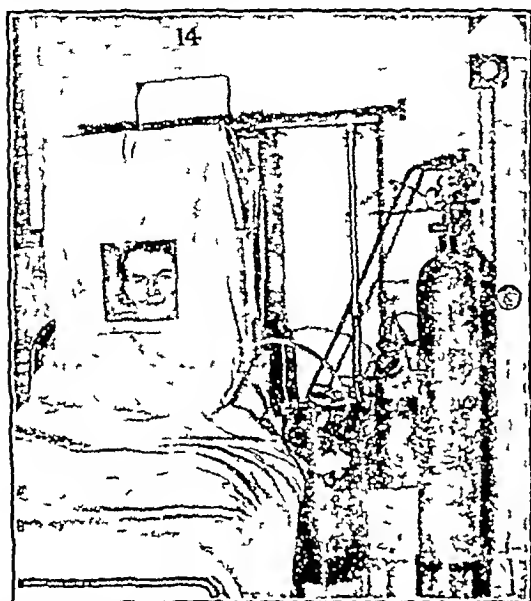
Preparations and Appliances

A NEW OPEN-TOP OXYGEN TENT

Dr HUGH GAINSBOROUGH, Mr J. ADDYMAN GARDNER and Miss RUTH MURRAY (Biochemical Department, St. George's Hospital) write: "The open top oxygen tent was introduced by Burgess Briggs and Burgess (1934) who constructed it in the form of a rigid box with windows. At the lower end of the box was an opening through which the patient's head could be introduced and a fabric collar was fitted round the patient's neck to make a 'gas tight' seal. The oxygen entered the apparatus through an ice-box suspended inside the tent and this box was covered with a metal shield to prevent cold air displacing the oxygen. The principle involved was that the introduction of cold oxygen at a suitable speed produced a concentration of this gas round the patient's head sufficient for all ordinary therapeutic purposes. A British-made tent constructed of rubberized fabric was described in the *British Medical Journal* of September 12, 1936 (p. 542). Now certain important modifications have been introduced which have improved both its efficiency and its applicability. The final design is considered satisfactory and by permission of the authorities concerned it is marketed under the name of the St. George's Hospital Oxygen Tent."

In the early pattern the presence of the ice box in the tent itself was a disadvantage. The cooling system now consists of an external box made of rustproof metal which is attached to the stand of the apparatus. Inside this there is a coil of metal tubing of adequate length and bore through which the oxygen passes. The box is filled with crushed ice and then with water to ensure adequate contact with the coil and under such conditions oxygen passing through at a rate of 7 litres a minute is cooled about 8°C. In unfavourable conditions during summer the cooler can be packed with alternate layers of crushed ice and common salt before filling with water and the temperature of the oxygen can be lowered to about 3°C. The oxygen is not humidified as we found that the humidity in the tent at the level of the patient's mouth varied between 80 and 95 per cent. Hygrometer readings in the tent are possibly not of much value as there is a diminishing gradient of humidity from the bottom to the top of the tent. The elastic collar round the

neck orifice of the original tent caused a good deal of discomfort and heating. The material is now cut amply round this orifice so that it can be folded loosely over the front of the patient's chest or tucked into the upper garment. The former method is quite adequate as a rule and allows the patient to use a handkerchief or a spittoon with surprisingly little disturbance of oxygen concentration. In use as soon as the tent has been placed in position over the patient's head oxygen is run in at the rate of 10 litres a minute for about ten minutes and the rate is then reduced to 7 litres a minute.



With this supply the oxygen concentration at the level of the patient's nose varies between 45 and 65 per cent. Under suitable conditions with absence of draughts a supply of oxygen at the rate of 5 litres a minute may be adequate to maintain the oxygen concentration at breathing level well over 50 per cent. The new tent has a very wide range of utility and we think it shows several advantages over other forms of apparatus for oxygen administration. There are no nursing difficulties, the hood can be sterilized easily, the apparatus is portable and easy to operate and finally with ordinary precautions there can be no risk of explosion.

REFERENCE

Burgess A. M., Briggs A. S., and Burgess A. M. (1934).
New England J. Med. 210: 254.

SIMPLE GAS ANALYSIS APPARATUS FOR USE
WITH OXYGEN TENTS

Dr. HUGH GAINSBOROUGH and Mr. J. ADDYMAN GARDNER (Biochemical Department, St. George's Hospital) write: This apparatus was designed to provide a simple rapid method of estimating the carbon dioxide and oxygen contents in oxygen tents. It consists of a glass bulb of cylindrical shape with a lower narrow portion (Fig. 1). The ends are capillary tubing closed by simple one-way taps. The volume between the taps is 10 c.c.m. and the volume of the narrow section is about 1 c.c.m. The whole of the bulb is graduated into 100 equal divisions by volume. It is used as follows. The apparatus (Fig. 1) is connected by fine rubber tubing to the tent or to a capillary glass tube the distal end of which can be placed at any desired point in the tent and the other end to a small reservoir of water (A). The taps are both turned to the through position, the clip on the reservoir tubing is opened and by lifting the reservoir up and down three times the apparatus is filled with a true local sample of the tent atmosphere. On lowering the reservoir for the last time the water in the

bulb is allowed to descend till it just reaches the top of the lower tap which is then closed. The top tap is closed next and the apparatus disconnected at both ends. It is important that the bulb itself should not be grasped in the hand since the gas should be at the temperature of the water in the reservoir. The next stage is to force the absorbing solution into the analyser by means of the Woulfe bottles and rubber bulbs. The plain stopper is taken out of the bottle which contains 40 per cent. potash and the apparatus inserted into that same neck till the rubber stopper on its lower end is firmly fixed. The lower tap is then opened and by compressing the rubber bulb about 1 to 2 c.c.m. of solution is forced into the analyser and the lower tap quickly turned. The apparatus is removed from the Woulfe bottle, the lower end rinsed with water and it is then placed horizontally and rotated gently for one minute. It is next immersed upright in the cylinder of water B and allowed to stand to reach the temperature of the water. It is then lifted till the lower tap can be opened and the tube is adjusted until the fluid level inside is the same as outside when the lower tap can be again closed and a reading taken which gives directly the percentage of carbon dioxide. The apparatus is then connected as before to the Woulfe bottle which contains alkaline pyrogallol solution and about 2 c.c.m. of this is forced into it by the use of the compressor bulb. The tap is again closed, the apparatus removed, the lower end rinsed carefully without dropping any of the very corrosive alkali pyrogallol solution and then rotated as before for three to four minutes in a horizontal position. It is then reinserted in the glass cylinder and the degree of absorption measured indicates the oxygen content. Care should be taken to close the Woulfe bottles immediately after use. The apparatus must be carefully cleaned. This is easily done if a small piece of rubber tube is put on the top capillary and the apparatus held under a thin stream of running water from the tap. After washing with tap water this can be blown out, the apparatus filled with 5 per cent. sulphuric acid, emptied and finally washed out with distilled water. The alkaline pyrogallol solution is prepared by dissolving



FIG. 1

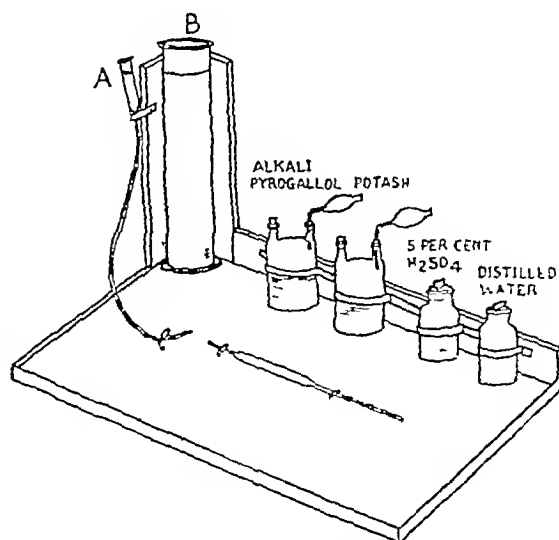


FIG. 2

10 grammes of pyrogallol acid in 100 c.c.m. of 80 per cent. potash. This solution must be stored in a very carefully stoppered bottle and exposed to the air as little as possible. For the sake of convenience and in order to avoid any risk of damage to table or shelf top by the alkali solutions used the analyser is supplied by the makers complete with all necessary accessory apparatus mounted on a suitable tray.

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TUBERCULIN-TESTED MILK

No one who has taken the trouble to ascertain the facts is under any delusion about the unsatisfactory quality of the nation's milk supply. It has been aptly compared by Sir John Orr to that of our water supplies of a hundred years ago. How is this position to be remedied? In a well-informed and closely reasoned report¹ issued from the Agricultural Economics Research Institute of Oxford Mr R. N. Dixey attempts to answer this question. The choice for him lies between the production of milk from tuberculin tested herds and compulsory pasteurization. Against the latter course he brings a number of arguments, the most important of which is that, in order to afford a completely effective safeguard against milk-borne disease pasteurization has to be carried out with a standard of exactitude more resembling that met with in a laboratory than in a commercial plant. His leaning is strongly towards the alternative course of producing tuberculin-tested milk. The difficulties, however, in the way of this choice are very considerable, and the body of his report deals with an examination of the practical measures involved. First of all, it is pointed out that not all milk need come from tuberculin-tested herds. Milk for cooking and for most manufacturing purposes could quite well be used in the infected condition. The supply of milk and cream for consumption in the liquid state, including that for butter and soft cheese production, could probably be assured if about two-thirds of the gallonage was derived from herds free from tuberculosis. Secondly, an attempt is made to ascertain the cost of establishing a tuberculin-tested herd. Inquiries conducted on 180 farms producing tuberculin tested milk showed that the average cost was about £13 per cow. Of this £7 were for structural alterations £2 to £3 for milking equipment and £3 to £4 for the replacement of reacting by non-reacting cows. Not all of this expenditure could strictly be assigned to the elimination and avoidance of tuberculous infection; some of it was rendered necessary for the production of clean milk. Broadly speaking however an additional cost of £13 per cow may be accepted as

a provisional estimate, subject, of course, on different farms, to wide variations, for the production of tuberculin-tested milk. If two-thirds of the milk supply was to be of this type an immediate expenditure of 13½ million pounds would be required. This is regarded as by no means an excessive figure, "and if the benefits to public health would justify the Government in advancing all, or part of this cost the present period of cheap money clearly offers as good an opportunity as has occurred for many years." His final conclusion is that the greatest hope for increasing consumption lies in providing the public with "safe, clean milk as it comes fresh from healthy cows."

Mr Dixey's thesis is put forward in far too serious a manner to be lightly criticized. It is impossible, however to avoid pointing out a fallacy in his major premise—namely that milk from tuberculin tested cows is safe. So it is safe from the risk of causing tuberculosis but not from the risk of carrying a number of other different infections. The experience of the United States of Denmark, and of this country during the past few years has provided evidence, cumulative and convincing, that milk produced under the most careful sanitary conditions may yet be responsible for spreading scarlet fever, septic sore throat, diphtheria, typhoid fever, paratyphoid fever, dysentery, food poisoning, and undulant fever, often in a serious and extensive epidemic form. Tuberculosis is not the only disease borne by milk, and even if all the milk in the country was derived from tuberculin tested herds it would still be desirable for the protection of the public to submit it to efficient pasteurization or other form of heat treatment. By all means let us have milk from tuberculin tested, abortus tested, and mastitis free cows, but let us, in addition, protect ourselves by pasteurization against the danger of its contamination from human and other sources.

There is a fundamental divergence of outlook between public health workers on the one hand and agricultural and veterinary workers on the other, due to a confusion of the main issue. Hitherto the production of clean milk and the control of disease in the herds has rested very largely with the Ministry of Health and local health authorities and both have been made contingent on the demand by the public for high-grade milk. This demand has not in fact been forthcoming except to a quite trivial degree and in consequence comparatively little progress has been made in the eradication of disease among the cattle population. If progress is to be made it is important as the Reorganization Commission² points out to eradicate disease for

¹ Dixey, R. N. *Tuberculin Tested Milk. A Study of Reorganization for its Production.* Agricultural Economics Research Institute Oxford 1937.

² *British Medical Journal* January 2, 1937 p. 23

its own sake, and not to make it dependent on the payment of a higher price by the public for milk derived from disease-free herds. The production of clean milk and the eradication of disease are problems for the agriculturist and the veterinarian, and we are wholly in agreement with Mr. Dixey that the Government ought to advance the money to clean up herds and improve the quality of the milk supply. On the other hand, the distribution of milk is essentially a problem for the public health authorities and if they refuse to take the responsibility of distributing raw milk to the population and insist on rendering it safe by pasteurization, then it is really no concern of our agricultural and veterinary colleagues. No antagonism exists, or ought to exist, between pasteurization on the one hand and the production of clean milk and the eradication of disease from the herds on the other. This is borne out by experience in the United States where a high proportion of milk from tuberculin tested herds is pasteurized in the large cities. The two problems are distinct. Sooner or later we shall be forced to take the control of milk production out of the hands of the public health authorities and transfer it completely to our agricultural and veterinary colleagues, to whom it rightly belongs. If they are wise they will press for adequate subsidies to convert our disease-riddled cattle population into one that is more worthy of a country which prides itself on its care of the lower animals. The public health authorities will then be left with the control of the consumption end and they will be able to devote a great deal of their energy to tightening up the supervision of pasteurizing plants and ensuring, so far as possible, that all milk delivered to the public, at any rate in urban districts, shall be as safe as our large filtered and chlorinated municipal water supplies.

"A HOUSE WORTH LIVING IN"

Some years ago Dr. K. Henderson made an interesting quotation from the report of Gartnavel Asylum for the year 1816. The case is there recorded of an old dragoon who, every three months, had a dreadful attack of outrageous insanity. Gradually, however, he improved and it is recorded that he became 'very happy knitting worsted gloves until a proper place of residence was found for him'. In the same report it is stated: "Two looms have been erected by the superintendent which made one patient who had been for some years listless almost to torpor exclaim that the house was now altered indeed; it was now worth living in. Anything we can

here say about occupational therapy can really be no more than an elaboration of this impressive human paragraph written by an enlightened psychiatrist over a century ago. The seeds sown by the enterprising doctor of the past would indeed rejoice him if he could but see the fruits of his labours. Nowadays no mental hospital could be regarded as 'efficiently organized' if occupational treatment did not form part of the daily routine. How far this treatment has developed is exemplified in a book on recreational therapy for the mentally ill written in the United States by Mr. John Eisele Davis and Dr. William Rush Dunton.¹ In a foreword Dr. Adolph Meyer observes that the best form of treatment is the removal of the cause. The best help in readjustment is the use of those parts of the patient's make-up which work well, so as to give the most normal setting for what needs readjustment. This naturally demands resourcefulness and actual experience of an unusual type—the what to do and the how—and a collaboration between the organizer of activity and the physician and the patient.

Recreational therapy has a deeper, more significant and extensive contribution than this which can only be attained through the natural and pleasurable social unfolding of the psychotic patient. Desirable social readjustment, higher levels of social striving and worthwhile social accomplishment may well supply some of the objectives. Recreational therapy should operate as an adjuvant to which many social sciences may bring distinctive contributions. The aim should be to recreate the spirit through many stimulating and tonic effects of interest inherent in the multifarious activities which this therapy provides to increase the strength of positive volitional responses to social reorientation and to assist in healthful emotional expression and emotional release which will provide the balance and effective stimulation for constructive effort. Such a programme of recreational activities for patients with mental disorder must be comprehensive and highly diversified and may well take in such seemingly unrelated pursuits as playing Mendelssohn's 'Spring Song' or participation in an informal circus.

It is evident that the spirit of occupational treatment permeates the psychiatric clinics in America. Many patients may not be well enough to leave the sanatorium but it is evident that everything is done to make them happy and busy with all kinds of occupation. They can at least say truthfully that 'the house is well worth living in'.

Principles and Practice of Recreational Therapy for the Mentally Ill. By John Eisele Davis, M.A. in collaboration with Dr. W. Rush Dunton, jun. London: V. Heinemann (1935).

MORE ABOUT VIRUS DISEASES

How profoundly filterable viruses differ from bacteria is only understood by those who take a more than ordinary interest in microbiology. It is not even certain that some of them are living entities. They are demonstrably particulate but some are so small that the simplest organization necessary for biological activities is almost inconceivable in such a compass. To call the virus of the Rous sarcoma a "transmissible mutagen" did not carry matters much farther but it was an ingenious expression implying a belief that here was something of a nature fundamentally new. That the immunology of virus diseases also differs from that of bacterial infections and that the multiplication of viruses appears only to occur within living cells are other fundamental points of distinction. In this sphere so much is known yet so much is still unknown, that to take stock occasionally and to speculate within reasonable limits is helpful. Two recent papers on these lines are well worthy of study. Goodpasture¹ reviews the phenomena of immunity in virus diseases laying particular stress on an aspect which has only been fully appreciated within recent years—namely the purely intracellular habitat and activities of viruses and their entire insusceptibility once established there to the influence of humoral antibodies. Antiviral serum is a magnificent prophylactic but worthless therapeutically for this reason. Goodpasture regards it as an axiom that killed virus cannot immunize and suggests as an explanation for this that an immunizing antigen is produced only during actual infection. On a much larger scale than this paper is Findlay's² review on variation in animal viruses: its scope may be gathered from the fact that it ends with a bibliography extending to fifteen pages. The argument here is that variants develop in viruses as they do among bacteria and for the same reasons such as habituation to another species with similar changes in antigenic constitution and in pathogenicity thus viruses behave as other living entities. This is a weighty argument, capable of and receiving profuse illustration. It is perhaps more impressive when it deals with the phenomena of actual disease. Serological methods seem sometimes to be carrying a greater weight in connexion with virus diseases than true comprehension of their mechanism and meaning can bear. A short account has also just been published of some observations which bear on one interesting aspect of immunity to virus diseases. It is well known that most adults and older children have neutralizing antibody for poliomyelitis virus in their blood and are consequently immune to this disease. It is by no means certain whether this immunity is acquired by a symptomless infection or produced in some other way. If the latter other virus infections might conceivably protect against poliomyelitis and evidence was forthcoming some years ago that vaccinia has this effect the incidence of poliomyelitis in vaccinated children being found considerably less than in unvaccinated. Dalldorf, Douglass and Robinson³ now report that in monkeys suffering or

recently recovered from experimental distemper inoculation with a poliomyelitis virus which is invariably fatal in control animals causes a mortality of only 33 per cent. The meaning of this result is not discussed, but one possibility at least appears to be that there is some antigenic relation between the two viruses. In view of the difficulties and dangers of attempted active immunization against poliomyelitis the possibility perhaps foreshadowed in this observation, of securing protection by non-specific means would be very welcome.

HYPOCHONDRIASIS

Hypochondriasis or the "bodily complaint," has troubled physicians ever since medicine began. The hypochondria, the regions below the costal cartilages were considered to be the seat of the black bile which caused melancholy and Robert Burton in his *Anatomy of Melancholy* shows a psychological insight into the condition which was much in advance of his time. Among its causes he numbers frustrated ambitions, disappointed love and solitariness, and in addition to physical treatment he recommends confession, spiritual discipline, distraction, music, mirth and merry company. Mandeville describes a common approach of the hypochondriac to his physician: "I have sent for you doctor, to consult you about a distemper of which I am well assured I shall never be cured." Dr. Felix Brown⁴ has studied the records of 226 patients admitted to the Phipps Clinic in 1934 and examined in more detail forty-one cases of hypochondriasis. The incidence he found to be 45 per cent. of the total admissions, more or less equally divided between the sexes. The bodily symptoms showed the widest variety. His attitude towards the disease is one which in earlier days was stressed more by lay than by medical writers, as he shows in a rich historical survey. He calls it a reaction of the individual to a life difficulty rather than a disease and classifies his forty-one cases roughly into five categories of bodily complaints. First come those which are partly on a physiological level and usually associated with anxieties—those which have appeared by substitution or conversion of an affect usually anxiety with more or less elimination of the affect—and those which have some more or less conscious purpose. These three types he says merge into one another and may be variously mixed in the mercurial or psychoneurotic reactions. His fourth and fifth types are bodily complaints symbolic of an essential conflict of the personality and bodily complaints consistent with a mood disturbance usually depression. The method of treatment he recommends is that of distributive analysis: the physician actively distributes the analysis along the lines which seem most pertinent and makes some synthesis or constructive formulation at the end of every interview. No special search is made for a single factor, such as a sexual trauma in early childhood; definite advice is seldom given but the alternatives are put before the patient and explained and he is allowed to make his choice. He is encouraged thoroughly to help himself. In every case a complete history is taken and

¹ *Amer. J. Pub. Hlth.* 1936 26 1163
² *J. roy. microscop. Soc.* 1936 56 213
³ *Science* 1937 85 184

⁴ *J. ment. Sci.* 1936 82 295

a psychiatric examination made in suitable cases a Binet-Simon test is performed. Free association and hypnosis are sometimes used. If the patient is admitted to hospital he enters a regular routine of occupational therapy and physical exercise and has to adjust himself to his own group of about thirteen other patients, any topical difficulties being freely discussed and analysed. An immense change says Dr Felix Brown can often be brought about by re-education and discipline, and by putting the patient where the hypochondriacal reaction will not work. Rest in bed forms no part of the treatment of the patient with a psychogenic body complaint. In the words of Sir William Gull 'if the patient thinks that the doctor is taking pains to get at the secret of his troubles he will be inclined to accept the first word of encouragement the latter throws out, and the reflecting influence of reviving hope will be certain to assist recovery.'

ACTION OF ASPHYXIATING WAR GASES

Those war 'gases' commonly referred to as asphyxiating such as chlorine phosgene di-phosgene and chlorpicrin must be distinguished from the true asphyxiants such as nitrogen methane etc. which act simply by displacing oxygen and from those such as carbon monoxide and hydrocyanic acid which disturb the transport and utilization of oxygen in the organism. The war 'gases' (gases or liquids) referred to are better named lung irritants. The mechanism of action of the best known of these depends on the chlorine content: thus phosgene (COCl_2) is held to be hydrolysed by the water in the lung tissue with liberation of free HCl and CO the irritant action resulting from the local effects of the acid. This simple view has been challenged notably by A. Kling.¹ From a consideration of certain properties of the lung irritants—for example their strong affinity for the hydroxyl group and their ease of hydrolysis—he is impressed by the disproportion between the small amount of irritant, which is effective and the overwhelmingly greater size and weight of the affected organ. He also lays stress on the solubility of these irritants in lipoids and is led to the view that there is some underlying element in the lung parenchyma which makes possible the action of all these lung irritants. He therefore puts forward the suggestion that cholesterol (unsaturated complex alcohol) may be the common body which by combining with the irritant gas undergoes such modification of its physico-chemical properties as to produce the characteristic functional changes in the lung parenchyma. To test this hypothesis Kling and his fellow workers first attempted to prepare compounds of phosgene (and some of its derivatives) and cholesterol. Such compounds could be prepared and their synthesis formulated and it is interesting to note that the derivative of phosgene which is hardly irritant at all—namely methyl monochlorformate—does not give a cholesterol ester. When however this derivative of phosgene was further chlorinated and thus made very irritant it gave cholesterol esters readily. It appears therefore that there is some parallelism between the power to produce

injury to the lung and that to form cholesterol esters. The hydrolysis of these esters was studied in detail. The products of hydrolysis depend of course upon the particular gas used for the ester formation and include carbonic acid (in all cases) hydrochloric acid formaldehyde carbon monoxide and the original alcohol (in all cases). The particular ester studied could be distinguished by the ratio in the hydrolysate of CO to inorganic chlorine: thus when phosgene is used this ratio is 1, with monochloromethyl-chlorformate it is also 1, but when the higher chlorinated trichloromethyl-chlorformate the ratio is 1/2, and so on. The next step was to extract the lipoids from the lungs of various animals and to demonstrate that similar esters to the above could be prepared with the irritant gases. The formation of esters could likewise be shown when using pulped lungs from various animals. A good case was therefore made for the formation of lipid esters in lung lipoids under the influence of at any rate, the phosgene series of gases. More difficulty was experienced in demonstrating this in the lungs of anaesthetized dogs which had been submitted to the action of these gases. But if massive doses were administered to large animals it was possible to demonstrate that the free cholesterol in the lungs was diminished by 20 per cent—that is 20 per cent was esterified. Further evidence will be necessary before this hypothesis can be accepted, but the case has been presented in a plausible manner if not yet in an entirely convincing one. If it can be proved that demonstrable physico-chemical changes in the lipoids are causally related to acute oedema of the lungs a contribution will have been made to the pathology of this condition.

THE PUBLIC HEALTH ACT, 1936

When new Acts of Parliament reach the Statute Book it is customary for publishers to issue them in book form with explanations annotations and cross references. As a rule such books have been of limited value probably because the laborious research into the history of the law and its judicial interpretation necessary to make them really useful would have occupied more time than the compiler was allowed for his task. The Act of 1936 is in a different category. When it was first issued in draft form it was accompanied by an explanatory report the Second Interim Report of the Local Government and Public Health Consolidation Committee which is in itself an essay on public health law and includes detailed descriptions of most of the changes which the Act now embodies. The work of interpretation is thus facilitated and Mr David Beattie's recent book¹ is an example of the benefits of the procedure for consolidation followed in recent times. It opens with a general introduction describing the process by which the Bill reached Parliament and was handled by it and referring to the nature of the major amendments contained in the Act. Each of the twelve parts of the Act is introduced by a brief explanatory note special reference being made to any outstanding change in the law contained in that part. The sections then

¹ *Bull. Acad. Med. Paris* 1936 116 465

The Public Health Act 1936. By David J. Beattie. L.L.M. London: The Solicitors' Law Stationery Society (1936)

selves are amply annotated. The usual tables of cases and of statutes are included and useful tables are also introduced relating the sections of the Act to those of previous general Acts. The book is fully indexed and excellently printed and produced. A careful examination has failed to reveal any errors or important omissions. This publication should therefore be useful even to those who possess the Report of the Consolidation Committee and the subsequent circulars of the Ministry dealing with the Act.

DR ROUTLEY'S VISIT

Dr T C Routley, General Secretary of the Canadian Medical Association is now on a visit to this country to make a first hand study of the problem of National Health Insurance and the inside working of the Act. His itinerary in Great Britain has been planned at the headquarters of the British Medical Association. On April 8 Dr and Mrs Routley were entertained at luncheon at Grosvenor House by the chief officers and officials. Among those present to meet the guests were the President Sir Farquhar Buzzard, the Treasurer and Mrs Bishop Harman, Sir Humphry Rolleston, Sir Henry Brackenbury, Dr Robert Hutchison, and Dr C O. Hawthorne. As the Chairman of Council, Sir Kaye Le Fleming remarked in his short speech of welcome the occasion was an informal one. He would like he said to take this opportunity of acknowledging the generous hospitality which members of the British Medical Association had received on the other side of the Atlantic. He recalled with pleasure his meeting with Dr Routley in 1932 when the Association commemorated its centenary year by a pilgrimage to Worcester. Dr Routley had come over here to study the important problem of National Health Insurance. Although he Sir Kaye did not know fully the attitude of Canada to this problem it was quite clear to him that the USA had a lack of understanding of the matter. He therefore wished Dr Routley every success in his mission and would point out that, although the methods of conducting National Health Insurance in this country could not necessarily be applied in detail in Canada the principles laid down for its conduct were essential for success. It had he concluded been a source of regret to him that the links between the British Medical Association and the Canadian Medical Association were not of a more practical nature considering how strong were the sentimental ties that bound these two organizations.

In an apt and gracious speech Dr Routley expressed his appreciation of the reception given to him and to Mrs Routley and of the facilities offered him for carrying out the investigation he was making on behalf of the Canadian Medical Association. "We come to you" he said "at a time in the history of our country when levelling influences are needed." Although Canada physically was a great country the Canadian Medical Association was small. Illustrating this remark with a pleasant story about the Canadian Pacific Railway Dr Routley remarked that he came here with an application to "travel over your line." It had been a privilege to him to attend the meeting of the Council of the British

Medical Association on April 7, and he was much impressed by the care and the work that lay behind the presentation of the reports of the various committees and by the statesman-like way in which the business of the Council was handled. National Health Insurance was a live issue in Canada but the various proposals on foot had not yet been implemented by legislative enactment. In view of the importance of this question it was strange that Canada had waited twenty five years before sending an official medical emissary to Great Britain and more than strange that the USA had sent no emissary at all. There were he said strong reasons why the Canadian Medical Association and the British Medical Association should get together in closer and more practical co operation. Although he could offer no detailed plan to make this effective, he suggested that a committee might be set up on each side for the purpose of interchanging ideas and discussing common problems. At the coming meeting of the Canadian Medical Association at Ottawa a great welcome awaited the representatives of the British Medical Association and their visit was looked forward to with keen interest and pleasure. Finally, Dr Routley conveyed to the British Medical Association the good wishes of medical men in Canada, and said that not least among their possessions was pride at belonging to the British Commonwealth of Nations.

"HISTORADIOGRAPHY"

X rays lack one property that is possessed by visible light that of being refracted by an optical system. It is true that they can be refracted by crystal planes a property made use of in x-ray spectroscopy but this does not make it possible to focus them optically in a camera or a microscope. In the study of histological sections by radiography therefore the magnification of the picture must take place by enlargement of the finished film and not during the exposure as in the photomicrograph. P Lamarque¹ has elaborated an ingenious method which he has termed "historadiography" by which he obtains radio photomicrographs of histological sections. He uses a special x ray tube energized with a voltage of only 5 kilovolts. The resulting x-ray beam is absorbed by air to avoid this effect the histological section is gummed to a sensitive photographic film and placed in a vacuum chamber attached to the tube. The x-ray exposure made the sensitive photographic film is then developed and viewed under the microscope in the ordinary way. Photomicrographs may of course be taken of the section for purposes of reproduction. An essential feature of the method is the sensitive film which at present Lamarque makes himself. The ordinary x ray or photographic film is too coarsely grained to allow much in the way of magnification. Enough work has already been done to prove that it is no mere duplicate of the standard colour method but that it may reveal histological features not shown by ordinary staining methods and that it is really complementary to them. When the technique is perfected a considerable new field of research will be opened up and one that may yield important results.

¹ *Radiology* 1936 27 563

ENDOCRINES IN THEORY AND PRACTICE

This article is one of a series on Endocrinology contributed by invitation

THE MENOPAUSE

By

P M F BISHOP, B.M., B.Ch.

The menopause is a period of variable duration through which women pass naturally some time between the ages of 45 and 55. For about 15 per cent of women it is symptomless; in the remainder the severity of the symptoms varies; they may be so mild as to render treatment unnecessary or so severe as to lead to profound mental disturbances. Surgical removal of the ovaries in younger women or destruction of ovarian function by deep x rays or radium brings about an artificial menopause which is usually attended by similar but relatively more severe symptoms.

The great variety of changes which may take place can be grouped conveniently under the following headings:

Vasomotor Changes

The tendency to vasomotor instability is shown by the most characteristic menopausal manifestation—hot flushes. In these attacks dilatation of the vessels of the skin is accompanied by sweating and discomfort due to a sensation of heat and suffocation, which after a few minutes gives way to cold shivers. The hot flush is painfully obvious to those around the patient and consequently causes her some embarrassment. Flushes may appear without warning at any time of day or night, frequently awakening the patient, but they are especially prone to follow circumstances giving rise to emotional stress or excitement. Their frequency varies greatly in different patients, and they may occur only once or twice a week or twenty or thirty times a day.

Cardiovascular Symptoms

Though no organic cardiac lesion is associated with the menopause, symptoms such as palpitations and precordial pain may be experienced. The blood pressure is sometimes found to be raised and it has been suggested on inadequate experimental grounds, that this may be due to the excessive activity of the anterior pituitary basophil cells or of the adrenal cortex. Ovarian deficiency, both in earlier life and at the time of the menopause, is often associated with acrocyanosis and in some cases ovarian replacement therapy has led to improvement in the circulation to the extremities.

Arthritis

Pains in the joints, backache and fibrositis are all common complaints and a menopausal type of arthritis is described which is due to chronic hypertrophic synovitis and usually affects the knees.

Emotional Instability

Practically every menopausal woman becomes aware of a certain mental clumsiness, an inability to cope with the ordinary problems of daily life and a tendency to give in. The realization of her shortcomings is worrying and she readily becomes depressed. Emotional instability is well defined and the patient reacts to trivial situations with rather surprising attacks of laughter or

tears. She is subject to rapid and frequent changes of mood; at one moment she will be unbearably irritable, at the next pathetically contrite. There may be marked changes in personality and severe attacks of mental depression sometimes lasting for days during which the patient may become suicidal. A condition of hypochondriasis, which is particularly distressing to those around her, may develop out of the complicated syndrome even in the milder cases and persist for the remainder of the patient's life.

Headaches and giddiness are common and appear early. Migraine is frequently aggravated or induced, but is sometimes amenable to treatment with ovarian extracts.

Endocrine Changes

Owing to the delicate interdependence of the components of the endocrine system the functional failure of one gland is likely to affect all the others. A common example is the gradual masculinization which may take place. The breasts atrophy, hair appears on the chin and upper lip and the features assume a male appearance. This virilism is probably due to a compensatory overactivity of the adrenal cortex. Thyroid function frequently diminishes and signs of hypothyroidism are common. Skeletal changes suggestive of acromegaly may occur and provide evidence of the disturbance of pituitary secretion. There are some who believe that the obesity which commonly develops is endocrine in origin and remark on the 'girdle' type of distribution, which suggests that the pituitary may be responsible.

The essential feature of the syndrome is of course amenorrhoea which may appear quite suddenly or after some months of menstrual irregularity. Other characteristics of the gradual ovarian failure are the atrophy of the breasts, uterus, and external genitalia. Sexual desire usually wanes, particularly when the menopause has been surgically induced, but may remain unchanged.

Methods of Treatment

General.—Assistance can be rendered by the members of the patient's household. Her husband and her relatives should be told that she is passing through a difficult phase of life and that they should therefore be tolerant and sympathetic in their dealings with her. She should be shielded as much as possible from domestic worries, and sometimes a holiday away from her household duties is beneficial, though it may be harmful if she is a woman of forceful personality who will worry over the conduct of her home in her absence. She should be encouraged to pursue any hobby which will prevent her from becoming introspective about her condition. She may suffer from a secret fear that her symptoms are due to cancer and it is wise for her doctor to reassure her specifically on this point. Bromides and valerian are popular and sometimes efficacious. Thyroid extract is of value only in those cases in which there is clinical evidence of hypothyroidism.

Pituitary Extracts.—There is an increasing tendency to prescribe anterior pituitary preparations. This form of therapy is based on a misunderstanding of the endocrinology of the condition. The relative activity of the ovary and pituitary is complementary, so that when ovaries

function is declining the gonadotropic activity of the anterior pituitary is excessive. That there is no deficiency of pituitary secretion at the time of the menopause is shown by the increased concentration of the follicle stimulating factor in the urine. Furthermore, it has been pointed out that the severity of the symptoms—for example the number of hot flushes a day—runs parallel with the curve of urinary excretion of the follicle-stimulating factor. Nor does there appear to be a reasonable basis for attempting to control the uterine haemorrhages which sometimes occur during the early stages of the menopause with gonadotropic preparations. These are designed theoretically to stimulate ovarian function, whereas the failure of ovarian function at the menopause is progressive and inevitable so that any attempt at artificial stimulation merely exemplifies the unsound principle of flogging the tired horse. It is, moreover, fashionable to administer anterior pituitary preparations by mouth. For this there is no experimental justification. All animal experiments so far conducted on these substances have failed to show any effect if the material is administered in any other way than by injection. A few encouraging results of irradiation of the pituitary with the object of diminishing its gonadotropic activity have been reported, but in the majority of cases this seems an unnecessarily drastic procedure.

Ovarian Extracts—By far the most satisfactory method of controlling the symptoms of the menopause is by the administration of oestrogenic preparations. This method of treatment produces results probably by temporarily restoring the endocrine balance until the patient has accustomed herself to the new level of endocrine activity. The ovarian extract acts both by replacing the ovarian deficiency to some extent and by damping down the excessive activity of the pituitary.

Principles of Treatment with Oestrin

Urinary Estimations—It has already been pointed out that owing to the compensatory overactivity of the pituitary an excess of the follicle stimulating factor can be demonstrated in the urine. Quantitative estimations of this principle are however laborious, expensive, and subject to a considerable margin of technical error. It is hoped that in the near future such estimations will be placed on a more practical basis but at the present they are merely of rather doubtful academic interest.

Vaginal Smears—The use of the vaginal smear technique of Papanicolaou and Shorr has proved to be of greater value. As the result of deprivation of oestrin the vaginal mucosa undergoes atrophy and the appearance of the menopausal vaginal smear is quite characteristic. By the examination of such a smear therefore, it is possible to identify those cases in which the symptoms are associated with ovarian deficiency. In the first group oestrin therapy usually produces satisfactory results, in the second group it is without effect. Furthermore it is fortunate that the human vagina is a delicate indicator of oestrogenic influence for one is enabled to estimate the correct dose of ovarian extract for each individual patient by determining the amount necessary to induce an oestrous type of smear. This applies only to the more common and milder symptoms which are gradually coming under control by the time an oestrous smear has been produced. This is of importance, for the object of the treatment is not completely to replace the ovarian activity of pre-climacteric life nor entirely to counteract the excessive activity of the pituitary but to accustom the patient gradually to the new level of endocrine balance.

The Psychological Factor—A preliminary course should be given exactly resembling the intended regime of oestrin therapy with regard to mode of administration—whether by mouth or by injection, colour of the tablets, appearance of the solution for injection, etc.—but differing from it in that the material administered is inert. For this purpose 'dummy' tablets of oestrin or a solution of sterile olive oil may be employed. This procedure serves to differentiate the more fanciful complaints which tend to disappear, from the genuine symptoms of ovarian deficiency or gonadotropic excess which persist at the conclusion of such a course.

Hot Flushes as an Indicator—The hot flush is the most clearly defined of the subjective symptoms, and is therefore a valuable indicator of progress. The patient should be instructed to keep a note of the daily number of hot flushes both during the preliminary period of 'control' treatment and later when active oestrogenic compounds are being administered. One should aim not at complete elimination of the hot flushes but at reducing them to one or two every day or every other day, since, as has already been pointed out, the object of the treatment is not to postpone the menopause artificially by giving large doses of oestrin, but to alleviate the symptoms sufficiently to allow the patient to accustom herself as comfortably as possible to the new level of endocrine balance.

Dosage of Oestrin

With this object in view it is obviously desirable to start with relatively small doses, the administration of large doses from the beginning in order to enhance one's reputation with the patient by procuring miraculous and immediate results is to be deprecated. In the milder cases it is well to begin by giving 1,000 international units daily by mouth. There is usually a latent period before an effect is established, and one should consequently persist in this dose for at least a fortnight. At the end of this time evidence of progress or otherwise should be sought from the records of frequency of hot flushes and from the microscopical examination of the vaginal smear, and with the aid of these indicators the dose should be cautiously raised until the correct level is established. From this plateau one should equally cautiously descend. The symptoms can usually be kept under control by oral administration but some of the more serious manifestations such as severe attacks of mental depression, may require relatively high doses by injection. Such injections should be administered twice weekly and intramuscularly. There are certain disadvantages of high dosage therapy. The patient may complain of unpleasant minimal symptoms, or she may actually experience a period which is in fact an oestrin withdrawal bleeding some days after the cessation of the course of treatment. Unless previously warned of this possibility she is apt to be alarmed and to lose confidence in her medical attendant. High dosage therapy should never be continuous but always intermittent otherwise it may cause tenderness and swelling of the breasts, cystic endometrial hypoplasia or deleterious effects from prolonged inhibition of the pituitary.

The beneficial results of successful oestrin therapy include apart from the relief of symptoms the development of a feeling of well being, and in some cases a return of sex desire.

Sequels of the Menopause

There are certain late sequels which may follow a symptomless menopause and occur as late as six or seven years after the cessation of the menses. These are directly

due to ovarian deficiency, and remarkably satisfactory results have followed treatment with oestrin. To one group belong the conditions resulting from the lack of ovarian stimulus to the external genitalia, such as atrophic senile vaginitis and ulceration, pruritus and kraurosis vulvae, associated with dyspareunia as the result of the shrunken and tender introitus, and, according to some authorities, leucoplakia vulvae. Another group consists of a number of skin lesions which are gradually becoming recognized as being associated with the menopause. One example is a patchy keratosis which is typically confined to the palms of the hands and the soles of the feet, and which appears to benefit from oestrin therapy.

"NIGHTMARE'S NEST"

LONDON SEEN AS AN INFERNO

It is commonly held that the habit of understating one's case is peculiarly a British, even an English monopoly. If it is primarily, as some contend an affectation or a piece of illogical hypocrisy, it is so extraordinarily effective that it has become almost part and parcel of the English method of conducting controversy. But it does not appeal to everybody, and conspicuously not to Mr Robert Sinclair, whose savage attack on London, Londoners, and London government, entitled *Metropolitan Man*, overstates so grossly and unfairly what might (or might not) have been a good case if it had been put with moderation that it is bound to have an effect exactly opposite to that which its author may be assumed to have desired—that is the general uplift of our social conditions. After 323 pages packed with choice and savage invective against London and everything connected with it, including politicians of all parties, he concludes with a note to the reader in which he claims that his book is not intended to be a vehicle of opinion that his presentation of statistics is "common sense arithmetic," and that his virtue lies in the disinterment from Blue Books and similar publications of guaranteed facts.

The sensationalism and the violence of Mr Sinclair's criticisms—the long list of sources (given at the end of the book) from which his statistics have been derived, and the implied failure of preventive medicine to remedy the dreadful state of public health in London will probably lead thoughtful laymen to ask members of the medical profession whether Mr Sinclair is right or wrong or perhaps how far he is right and how far he is wrong. It is therefore advisable that some critical examination of the statistics presented should be made in order that doctors may be able to assist the layman on such points. It is not enough to say that Mr Sinclair is a sensation-mongering pessimist deliberately shutting his eyes to everything that is good, ignoring purposely (as he himself confesses, on page 20 that he does) the great and steady improvements of the last two or three generations and twisting facts and statistics to suit his preconceived ideas and prejudices. It is necessary to see where and how he has erred in arriving at conclusions which to anyone who knows London are so obviously fantastic.

Tuberculosis in the Metropolis

No better illustration can be selected, perhaps than his treatment of the tuberculosis figures for London. Everyone knows that for sixty years past tuberculosis has been a steadily declining disease and that its control is in fact one of the high spots of preventive medicine. Readers of *Metropolitan Man* might well conclude that the exact contrary is the case for Mr Sinclair out of the masses of statistics at his disposal picks out for

his sole quotation the (indisputable) fact that in 1930 there was a definite and considerable increase in the mortality rate from tuberculosis amongst females in the 15 to 25 years age group and makes great play with this regrettable and unexplained occurrence. It is therefore a matter of public interest and public concern to state quite definitely that since 1930 the rates of this particular group have declined as in all other groups they have been for fifty or sixty years declining and to put down in black and white the broad facts about tuberculosis as a whole. The death rate in London from tuberculosis—all forms, not pulmonary tuberculosis alone—has been as follows:

1891-1895	yearly average per 1,000 living	2.63
1896-1900		2.44
1901-1905	"	2.15
1906-1910	"	1.87
1911-1915	"	1.78
1916-1920	"	1.77
1921-1925	"	1.20
1926-1927	"	1.06
1933	"	0.93
1934	"	0.87
1935	"	0.79

But not a line or a word of Mr Sinclair's would lead any reader to suspect that progress on this astonishing scale has been and is being achieved by the people he spends his time in abusing. As for his particular age and sex group the L.C.C. reports show that in 1910 there were 1,229 notifications—the deaths are not given separately every year—and that in 1934 there were in the same group 1,060 notifications in 1935 967 notifications and in 1936 931 notifications. In connexion with tuberculosis in children he has bitter and burning words to say about the maiming and crippling brought about by the surgical forms of the disease but he does not tell his readers that whereas fifteen years ago the distribution of Lord Mayor Treloar's Christmas hampers for cripples involved picking and choosing among the applicants nowadays there are not enough cripples to go round nor does he quote the figures that he might have got from one of the actual documents which (in this connexion) he quotes—namely, that tuberculosis in children caused 10,637 deaths in England in 1911 and 6,053 in 1924.

More "Common sense Arithmetic"

When Mr Sinclair ventures on prophecy he is of course less amenable to criticism—anyone can prophesy, and no one can say for many years whether the prophecy is right or wrong. In London there were in 1935 575 cases of suicide. Mr Sinclair's handling of this figure is to commit himself to the statement emphasized in bold type on the dust wrapper that *ninety thousand future suicides are walking the streets of London to day*. It is not unfair to say that if his prophetic powers are on a par with his common sense arithmetic no one need pay much attention to his anticipations. Elsewhere he proceeds to examine maternal mortality which he says has grown worse in the last twelve years here too. It is profitable to study the actual London figures which are as follows: 1924 3.08 per thousand births, 1925 3.19, 1926 3.35, 1927 2.91, 1928 3.59, 1929 3.61, 1930 3.33, 1931, 3.81, 1932 2.99, 1933 3.66, 1934 2.80, 1935 2.58 (the lowest on record). He further names four Continental countries where the figures are stated to be lower but he does not say whether as in London the statistics include deaths from abortion which very heavily weight the figures in this country.

On the nutrition of school children his presentation is equally untrustworthy. He says that fewer than 1 in 6 of London children appear to be adequately nourished and that 57 per cent are definitely undernourished. This is an interpretation of the Board of Education reports which in our judgement distorts the facts and the truth. The actual number of really and incontrovertibly under-

* The provisional approximate figure for 1936 given by courtesy of the M.O.H. for London is 2.75.

¹ *Metropolitan Man: The Future of the English*. By Robert Sinclair. (Pp. 365. 10s. 6d. net.) London: G. Allen and Unwin, 1937.

nourished children in the Council schools—not in London as a whole be it noted—is about 0.08 per cent, the number of the adequately nourished is about 94 per cent.

There are many other counts in the indictment upon which equally damaging criticisms might be founded. According to this book there is not a single aspect of London life and London government which is not a seething mass of mismanagement and corruption. Curiously enough, hundreds of intelligent foreigners who have visited London during this century and investigated the methods of its administration have gone away full of admiration and determination to bring their own domestic affairs up to a similar standard if possible. That things are perfect, or anywhere near perfection, is the very last impression that anyone ought to propagate, we agree, that Mr Sinclair is animated by a sincere desire for amelioration, we agree, that the medical profession has a special duty in relation to the education of the public in matters of public health, we agree. But we do not agree that to shut one's eyes to the genuine and rapid progress of many years past, and to the signs of its continuance at an accelerating rate, is a useful contribution to the cause, and, most emphatically of all, we do not agree that the garbling of statistics serves any useful purpose—and in our view that is an act of which Mr Sinclair stands definitely convicted. This is an understatement of London's case against Mr Sinclair.

HENRY ROBINSON

MEDICINE IN THE LONDON COUNTY HOSPITALS

The varied and extensive hospital services provided by the London County Council are the subject of two annual reports—the first already reviewed dealing mainly with the administrative aspect and the second a medical supplement compiled by members of the Chief Medical Officer's staff.¹ This latter report contains a series of articles describing the work carried out in various special units which have been established at the county hospitals. One of these is the puerperal fever unit at the North Western Hospital in connexion with which an analysis is given of 156 patients with local uterine sepsis admitted during the year under review with eleven deaths. Another is the radiotherapeutic clinic at Lambeth Hospital with 567 new patients placed on its records during the year. There is also a plastic surgery unit at St James Hospital, where 386 operations were performed including fifty-nine Thiersch grafts. Two thoracic surgery units have been established, at St Andrews and St James Hospitals, and here on patients about half of whom were suffering from chronic pulmonary tuberculosis, a total of 285 operations were performed principally thoracoplasty, thoracoscopy, and cauterization of adhesions and phrenic evulsion. In the gaiter clinic at the New End Hospital operations were carried out on 100 patients with no mortality. Brief reports are included from the arthritic unit of St Stephen's Hospital, the diabetic clinics at St George in the East and St Peter's the congenital syphilis unit at St John's the urological unit at St Mary Abbots and the out-patient fracture unit at Fulham Hospital. At the last which is the most recent of these special units from thirty-eight to forty-five cases are seen at each weekly session.

Research in Council Hospitals

The report also includes a number of articles written by members of the Council's medical staff regarding unusual cases. Thus the case of agranulocytosis which was the subject of an inquest at Shoreditch some time ago

(*British Medical Journal* December 7, 1935, p 1135) is set out in full detail. Two cases of idiopathic steatorrhoea are described, and one case of Rendu Osler-Weber disease, a hereditary condition characterized by haemorrhages due to multiple telangiectases. A case is also recorded of primary tuberculosis of the spleen, only six like cases could be found in the British journals two of which were described by Carling and Hicks in the *British Medical Journal* of August 15 1925. From another article it appears that the condition of acute dilatation of the stomach is not so uncommon as is often thought at Bethnal Green Hospital during the past five years five cases have been recognized and treated successfully.

A considerable amount of research is carried on every year in the diagnosis and treatment of infectious diseases admitted to the fever hospitals. In the present report five medical superintendents write on various conditions. Dr J D Rolleston reviews 104 cases of acute poliomyelitis admitted to the Western Hospital in eight years. Only four deaths occurred in this series, all from ascending paralysis. Apart from a number of cases treated by the Drinker respiratory apparatus, the patients did not receive any active treatment, but the affected limbs (usually the leg) were put in splints as recommended by the consulting orthopaedic surgeon. In fourteen cases the symptoms were of sufficiently recent onset to justify giving convalescent serum, but in no instance did demonstrable benefit result. In a paper on whooping cough Drs. Mitman and Ronaldson state that drugs and vaccines exert no consistent influence once the disease has become established, and though attempts to produce an efficient vaccine are being made, no real success has as yet been achieved. It is pointed out that whooping-cough is responsible for the longest average stay of any of the diseases treated in a fever hospital (the average in London is fifty-six days) yet the actual period during which there is danger to the patient on account of complications or to the community on account of infectivity rarely exceeds four weeks. If the public could be educated to the fact that whooping as such is not infectious many cases could be discharged from hospital much earlier.

Maternal Deaths

A section of the report is taken up with a series of articles tracing the origin and development of services which the old Local Government Board placed upon the Metropolitan Asylums Board and which have been inherited by the Council. These include a hospital for the treatment of venereal diseases in women, where there were 369 admissions in 1935, hospitals and sanatoria for pulmonary tuberculosis, a special hospital for the treatment of skin diseases, a hospital for the isolation and treatment of contagious ophthalmia, and a hospital for patients suffering from diseases of the ear.

Finally there is an analysis by Dr Letitia Fairfield of the deaths of women in childbirth in Council hospitals. During the year under review the number of women confined in these hospitals was 15,280 over 2,000 more than the previous year and 50 per cent more than in 1931. Of this number sixty-four died, the deaths in forty-two cases being returned as due to pregnancy or confinement and in twenty-two as associated therewith. A further twelve women died in hospital after having been delivered elsewhere. There were fifty deaths from abortion (out of 3,607 cases treated) and four from ectopic gestation (out of 136 cases). The deaths from sepsis fell from fifteen in 1934 to twelve in 1935. Caesarean section was performed on 120 patients with eight maternal deaths, nine stillbirths and five deaths of infants under ten days. As for the forty-two deaths which were due to pregnancy or confinement after delivery had taken place in hospital, twelve were due to puerperal sepsis, nine to toxæmia, nine to haemorrhage, eight to obstetric shock, and the others to rupture of uterus and puerperal mania, while one patient (with a greatly enlarged thymus gland

¹ London County Council Annual Report 1935 Vol. 4 (Part III), Public Health—Medical Supplement to the Report on the Hospitals Services. P. S. King and Son Ltd., Westminster (S.S.).

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY APRIL 17 1937

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British Medical Association PROCEEDINGS OF COUNCIL

TUESDAY AND WEDNESDAY, APRIL 6 and 7, 1937

A meeting of the Council of the Association was held on Tuesday and Wednesday April 6 and 7, at the Association Headquarters in London. Sir KAYE LE FLEMING, Chairman of Council, presided, and the other members present were

Mr H S Souttar (Chairman of Representative Body) Mr N Bishop Harman (Treasurer) Sir E Farquhar Buzzard Bt (President) Professor R J Johnstone (President Elect) Dr H G Dain (Deputy Chairman Representative Body) Mr J Armstrong Prof R J A Berry Dr J W Bone Sir Henry Braekentbury Prof A H Burgess Dr J D Comrie Mr W McAdam Eccles Dr C E S Flemming Dr E R Fothergill Dr T Fraser Mr J L Gilks Dr P L Giuseppe Dr I G Glover Dr F W Goodbody Dr R G Gordon Lieut-Col C H H Harold Dr C O Hawthorne Dr J Henderson Dr J Hudson Dr J Hunter Dr I Jones Mr E Lewis Lilley Dr J C Loughridge Dr P Macdonald Sir Ewen Maclean Dr J S Manson Dr O Marriott, Dr J C Matthews Dr J B Miller Dr H J Milligan Sir Richard Needham Mr R L Newell Dr L A Parry Dr W Paterson Prof R M F Picken Dr H W Pooler Colonel A H Proctor Dr J R Prytherch Dr H Robinson Dr E H Snell Dr P B Spurgin Surg Rear Admiral A R Thomas Dr W E Thomas Dr G Clark Trotter Wing Commander H M Stanley Turner Dr S Wand Mr N E Waterfield Dr W Watkins Pitchford Dr W N West Watson Dr W G Willoughby, Dr F T H Wood

Apologies for absence were intimated from the following

The Past President Sir Crisp English Dr H C Jonas Dr R Langdon Down Dr J P Shanley and Dr D Lyon Steven on

The Council sent a message of sympathy to two of its members Dr R Langdon Down and Dr H C Jonas who were absent through illness. The Chairman welcomed Dr T C Routley of Toronto General Secretary of the Canadian Medical Association who attended during a part of the Council proceedings

Personal

Before proceeding to business the Chairman of the Representative Body voiced the feelings of the whole Council in extending to Sir Kaye Le Fleming their hearty

congratulations upon the honour which he had recently received at the hands of the King. Mr Souttar said that it was an honour amply earned after many years of hard work on behalf of the medical profession including five years as Chairman of the Panel Conference three years as Chairman of the Representative Body and three years in the still more arduous position of Chairman of Council. His work outside the Association in particular as a member of the General Medical Council was an additional reason for the honour conferred upon him. He knew that Sir Kaye Le Fleming felt and would wish them to feel also that it was an honour conferred upon the British Medical Association as well as upon himself. To him in no small degree was it due that the Association in recent years had grown so markedly in prestige and influence.

The Chairman of Council after expressing his appreciation of the remarks made and the endorsement which they had received from the Council apologized to individual members who had written him charming letters of congratulation, which he had not as yet been able to answer. The amount of correspondence to which this circumstance gave rise was something quite unanticipated and it came at a time when he was heavily engaged in practice. Moreover he preferred where possible to thank his friends personally. He would be insincere if he pretended that the honour had not given him great personal satisfaction but he did wish to echo the words of the Chairman of the Representative Body when he said that this was an honour in which the Council and in a lesser degree all the members of the Association shared. It was an acknowledgement of the position which the Association occupied to-day. He would only add that so far as his public life was concerned he had been nurtured in the Association. He had never done any kind of public work until he first became honorary secretary of his Division and the Association had taught him all he knew in that respect and had helped him to develop such faculties as he might possess. It would always be his dearest wish to serve the Association and the Council to the best of his ability.

The Chairman then went on to express on behalf of the Council their pleasure on seeing with them the Medical

Secretary on his return from India. Nobody appreciated that more than the Chairman of Council, to whom the Medical Secretary in his office was a tower of strength. At the same time he wished to say how extraordinarily well served the Council and the Association had been in Dr Anderson's absence by the Deputy Medical Secretary, Dr Hill. He proposed that the Council place on its minutes an expression of its appreciation of the way in which Dr Hill had acted in this respect.

Communications all expressive of the pleasure with which Dr Anderson's visit had been received in India were placed before the Council from Major-General D S Skelton, acting D.M.S., India, and the Punjab, Bombay, Assam, and Calcutta Branches.

Dr Anderson said that he had had a most interesting time, but this was one of the most tiring pieces of work he had ever accomplished in his life. It was not only a question of the very extensive travel, but of being constantly at call at every place he touched. He thought that if his visit had done nothing else it had served to allay suspicion and to remove some misconceptions with regard to the Association and its activities. He had no doubt whatever that the visit was worth while. It would be worth while to himself as an executive officer of the Association in dealing with members who contemplated going to India, and also when in due course certain changes, particularly in the I.M.S., came to be considered. His report would be made to the appropriate committee and would if the committee so decided, be placed before the Council. Therefore the present was not an appropriate occasion to speak of the position in India as he found it or to put forward the suggestions which would in due course be made. He wished only to say how extraordinarily well he was received, and what kindness and hospitality were shown him everywhere by Indian and European alike.

Finance

The Treasurer presented the Financial Statement of the Association for 1936. He said that the outstanding feature of the Income and Expenditure Account was the allocation of £15,000 against commitments for extension of premises. In 1935 and previous years that allocation had been £6,000. The past year had been a good one. Receipts had increased on several counts but the most noteworthy feature was the absence of any exceptional and unexpected expenditure such as last year, when the Association had been called upon suddenly to undertake large law costs entailed by the opposition to the Bill promoted by the osteopaths. When there was an exceptional surplus such as in this year the first concern of the Finance Committee was to make such provision as might be possible against heavy commitments entailed by contract for the buildings which the Association would have to proceed with towards the end of the present year. The customary reserve for printing plant was no longer necessary in view of the altered arrangements for printing the *Journal* and therefore the amount held in reserve for this purpose had been transferred to the reserve against commitments for extension of premises making with the £15,000 just mentioned a total of £26,716. That might seem a large sum but it was only a small part of that which would be needed to meet a contracted liability. In dealing with other items in the accounts Mr Bishop Harman drew attention to a new item in general Association expenses of £797 as a grant to the Australian Federal Council. In reply to Dr Macdonald the Treasurer said that the £503 set out in the Income and Expenditure account as a refund from the National Ophthalmic Treatment Board did not represent the completion of the return of the loan but since the accounts had been made up the remaining amount outstanding had been received from the Board. So that the whole of the money advanced had been repaid. He also mentioned that the Finance Committee had appointed a subcommittee,

consisting of Drs. Dain Parry, Robinson, and himself, to consider the making of provision for depreciation and the financing of the commitments for the extension of the Association's premises.

The report of the Finance Committee was approved.

Organization

Dr Matthews, chairman of the Organization Committee, brought forward a recommendation that members of fifty or more years standing be allowed to remain in the Association without payment of further subscriptions. He said that the number concerned was approximately 190, and his committee had thought it would be a graceful act if the subscription were remitted altogether in their case.

Dr Flemming, speaking as one of this very select group thought the concession ought not to apply to members who were in active practice. Those of them who like himself were still able to be in active practice after fifty years' membership felt that the Association had lengthened their working lives by the interest it had stimulated and by the large number of friends it had brought. Dr Matthews said that he much appreciated Dr Flemming's suggestion, but it was so difficult to say when a doctor had retired that it would be almost impossible to frame a regulation to cover it.

The proposal was agreed to as a recommendation to the Representative Body. Dr Hawthorne suggested that there was one possibility of uncertainty about this recommendation—namely, whether the fifty years must be continuous!

It was also decided to recommend to the Representative Body that the concession whereby members not engaged in medical practice who were whole time members of the teaching staff of a university or medical school paid a reduced subscription of two guineas should be extended to the whole time medical instructors recently appointed by the Air Raid Precautions Department of the Home Office. Dr Matthews said that this affected fifteen or twenty individuals.

It was further agreed to arrange for the supply of the *British Medical Journal* to senior medical students in Great Britain and Northern Ireland at a nominal subscription of half a guinea. The student would be required to make a declaration that he was at a given medical school, that he had completed the second year of the clinical part of the curriculum, and that he was not a qualified medical practitioner.

The matter of the peripheral organization of the Association was brought forward on the report both of the Medico-Political and the Organization Committees. It was the experience of the former committee that the organization at the periphery was weak in certain aspects more particularly in regard to parliamentary and local legislation, and it considered that an investigation should be made with a view to strengthening it. The Chairman of Council said that this was likely to be a very large piece of work indeed and the difficulty he saw was that many members of Council were already so closely engaged in committee work that it would be impossible to expect them to do more at the moment.

At a later stage Dr Matthews who said that as chairman of the Organization Committee he welcomed this investigation proposed that the matter be referred to a special committee consisting of the Organization Committee with the addition of Dr Bone and Dr Wand as representing the Medico-Political Committee, Dr O T J Clayre honorary secretary of the Southern Branch and Dr L Kilroe honorary secretary of the Rochdale Division for investigation and report. This was agreed to.

The Chairman of Council was authorized to forward special letters of recognition of the services given by Dr D R Macdonald honorary secretary of the Sudan Branch and Dr C J Fuller honorary secretary of the Exeter Division who have recently relinquished office.

Representation of the Profession in Parliament

Mr Bishop Harman presented a report from the Parliamentary Elections Committee. This was concerned with the action taken in the recent by-election in the Combined English Universities. He said that at the last Annual Representative Meeting it was directed that steps should be taken to make preliminary inquiries for the selection of a medical practitioner intimately acquainted with the aims and policy of the Association with a view to his election to Parliament for one of the university seats. On this vacancy occurring the committee persuaded Sir Henry Brackenbury much against his own inclinations, to stand. He was the most admirable candidate they could have chosen, and the opportunity seemed a promising one, but unfortunately the result was disappointing.

The Chairman of Council said that in view of the strong expression on this subject in the Representative Body the Council would have been criticized if it had not done its best to persuade Sir Henry Brackenbury to stand. Dr Hawthorne said that he could not agree that the committee owed any apology either to Sir Henry Brackenbury or to the Council for its action. It had seen an opportunity and seized it with promptness and decision. Sir Henry Brackenbury had consented with some reluctance but out of a sense of duty to the Association to offer himself for election. The result it was true had been disappointing and the loss was by no means confined to the medical profession, but whilst they owed Sir Henry Brackenbury thanks for embarking on this enterprise there was no need for apology.

Sir Henry Brackenbury said that he did not wish to traverse ground covered by a letter from him which appeared in the *Journal* of April 3, but there were one or two things he desired to say in addition. The first was that the Association owed its gratitude as he did personally, to those in the office who undertook the work attaching to the candidature. Certain lessons had been learned and should another university election be sought these would prove useful. The Deputy Medical Secretary and his staff did what seemed to him an extraordinary amount of good work which was deserving of thanks. In the second place the election disclosed a distressing lack of effectiveness in the peripheral organization of the Association, and, from correspondence which he received brought to light some astonishing misconceptions entertained by members of the medical profession with regard to the policy of the Association. One protest received actually stated that the Association stood for a whole time salaried medical service for the nation, and therefore the elector could not possibly support his candidature! Such misunderstandings almost made one despair of bringing home the policy of the Association to the rank and file of the profession. Again the result brought out the impossibility of achieving anything like a common action amongst their own members. Here was a constituency of which more than half the electors were either doctors or teachers but of the 4,500 medical graduates of the universities concerned those on the electoral register numbered no more than 3,056. Therefore at least one third of the doctors who were graduates were not electors, not having taken steps to secure registration. But out of those 3,056 he could not have received more than 1,000 votes and he knew that he received 700 or 800 votes from the teachers. The circumstances raised the whole question whether it was of any use persisting in seeking representation in Parliament even through a favourable university constituency.

Dr Pooler said that he had taken a personal interest in the campaign and he made certain observations as a result of his experience. There were a large number of members of the profession—doctors on both sides—who would vote with their party whatever their personal or professional interests. A governing factor in the election was the strong appeal and energetic campaign of the

successful candidate, Mr Harvey who although standing as an Independent, enlisted the Liberal and Labour vote.

The report of the committee was approved. It was also agreed that the whole question of Parliamentary representation should be reviewed by the Parliamentary Elections Committee and with this in view a recommendation by the Medical Political Committee for the appointment on the headquarters secretarial staff of a liaison officer in Parliamentary medical matters was postponed until the Parliamentary Elections Committee had reported.

Psychological Medicine Group

A petition signed by 175 members for the formation of a Psychological Medicine Group within the Association was laid before the Council. The petition which was published in the *Supplement* of January 30 had been referred to the Science and Organization Committees, which recommended that the Council accede to the request. Dr W. G. Masefield and Dr A. A. W. Petrie attended in a deputation from the signatories.

Dr Petrie said that those who were engaged in the study and practice of psychological medicine were a scattered group and their representation through the Divisions was liable to be a very isolated one, so that their particular point of view was apt to be swamped by the general interests of the other members. There was a distinct necessity for an Association policy with regard to psychological medicine. Since the Act of 1929 came into operation there had been a great deal of bureaucratic development in connexion with the work of those engaged in institutions whose position and autonomy had been considerably altered in consequence. A reasonably autonomous condition of service should be afforded for those who did institution work throughout the country. The doctor had always been to a very large extent an independent person one who was allowed to think for himself and not unduly subject to bureaucracy. The Association had protected the interests of many branches of the profession, such as the public health services and the Services of the Crown and it could do still more valuable work in safeguarding the independence of those engaged in mental hospitals.

Dr Fothergill drew attention to the criteria for inclusion in such a group. It was proposed that membership should be confined to those members of the Association who were engaged predominantly in the practice of psychological medicine and who signed a declaration to that effect. To his mind the term predominantly was dangerous. Other groups consisted exclusively of consultants and specialists or whatever the class of members might be. To establish a group for those engaged predominantly in a speciality would lead to trouble in the future.

Sir Henry Brackenbury pointed out that the petitioners themselves had asked for the formation of a group of those limited in their practice to psychological medicine. As they had asked for this it seemed a pity to widen the door by introducing the word predominantly. In his own view every general practitioner in the country was predominantly engaged in the practice of psychological medicine. The term 'engaged predominantly' was less valuable as a definition, and liable to make the group too inclusive. He moved that the phrase be substituted 'those limited in their practice to psychological medicine.' Dr Fothergill seconded.

Dr Gordon reminded the Council that a few years ago it adopted a report from a committee which had been set up to consider the relationship of mental hospitals and general practitioners and the Council then had expressed the hope that in future mental hospitals would be staffed by visiting physicians from general hospitals. Surely such a group as was now proposed would be more useful if it were to some extent leavened by a number of people whose practice was not limited to psychological medicine.

Sir Ewen Maclean said that the article governing the formation of groups read: 'Special groups of members

having distinctive professional interests may from time to time be formed' In the consequential by-laws there was nothing which laid it down that membership must be exclusive to the specialty concerned Every group was in part recruited from general practice, and if it was ordained that the members of a group must be those limited in their practice to one particular specialty it would prevent the practitioner who might be practising along that line, though not restricting his practice thereto, getting into touch with his colleagues

The amendment to replace the word 'predominantly' by the word 'limited' was lost, and the Council acceded to the request for the formation of the group, and laid it down that the group should be comprised of all those members of the Association who are engaged predominantly in the practice of psychological medicine

Rules for Industrial Medical Officers

Dr Bone, chairman of the Medico Political Committee, brought forward a code of model rules which the committee had prepared, outlining the duties and governing the ethical conduct and relationships of industrial medical officers The rules had been submitted to the Central Ethical Committee, and the suggestions made by that committee had been embodied

Dr Dain drew attention to certain ambiguities of statement in and omissions from the document, which it was promised should be rectified before the rules, as intended, are recommended for approval to the Representative Body

Dr Macdonald thought the Association should be careful only to lay down rules which were likely to secure compliance, and in his view certain of the proposed rules failed in that respect It must be remembered that a very large amount of the work of the industrial medical officer was the treatment of quite minor casualties such as would not have the attention of a doctor at all were it not for the fact that the doctor was on the spot, they would be dealt with by nurses or first aid personnel Therefore, to place upon the industrial medical officer, as the rules laid down, the requirement that he should inform the workman's own practitioner whenever emergency or first aid treatment had been given seemed quite unnecessary Only where there was a residual disability, or was likely to be such disability, or something had taken place which was likely to affect the medical history of the individual was it imperative that communication should be made with the private doctor It was also stated that where the industrial medical officer in an emergency sent a workman to hospital he should advise the workman's medical attendant Should not that more properly be done from the hospital itself? Again, another rule laid it down that except in emergency the industrial medical officer should not carry out any individual preventive measure without the individual consent of the worker and prior agreement with the worker's medical attendant What about a case where a workman performing certain difficult manipulations had 'soft hands', and was advised by the works medical officer to wear gloves or in conditions trying to the eyesight to wear goggles, or again if subject to SO fumes to wear a respirator? Was the works medical officer to be prohibited from advising such measures?

Dr Bone said that none of the examples cited by Dr Macdonald came within this rule The rule was designed to prevent experiments which involved the active participation of the workers without their consent and the prior notification of the worker's doctor An example would be preventive inoculations A procedure of that kind should surely come under the medical attendant As for the wearing of gloves and goggles such measures were already laid down as among the advisory duties of the industrial medical officer

Professor Picken said that it was clearly inoculation which the committee had in mind in drafting this ethical rule, but there might be interference of other kinds which it was desirable to cover by such a rule He thought the

words, 'any form of specific prophylaxis might be substituted The whole question was in its infancy, and any code such as was now being elaborated should be subject to modification from year to year as experience went on He thought that the word 'should' might reasonably be substituted for the word 'shall' in the document

Wing Commander Turner said that there appeared to be some confusion in the minds of members between protective measures as laid down in the Factory Acts and prophylactic measures such as might be undertaken in connexion with experiments In many cases the wearing of gloves or of goggles in the case of welding plant was laid down already in various Orders

Dr Bone also said that statutory requirements were quite outside the purview of these rules

Dr Wand said that the subcommittee drafting these rules had used the mandatory verb in certain cases at the request of industrial medical officers in order that their hands might be strengthened These ethical rules were, first, a code of good manners, and, secondly, a means of protection for the works medical officer who was asked by his employer to do certain things which in his opinion he ought not to do If he was able to show his employer the requirements of such an ethical code it would be of great assistance Accordingly the word 'shall' had been used in certain places to enable him to insist to his employer that he must not carry out a particular measure, and such prophylactic measures as had been mentioned were probably the most important It was obviously undesirable that a works medical officer should be able to inject into the arm of an individual a vaccine or anti serum irrespective of whatever illnesses the man might have suffered from or of his medical history as known to his own doctor For that reason it was laid down that the works medical officer shall in no way associate himself with experiments which involve the active participation of the workers without their consent and the prior notification of the worker's doctor, no matter whether they were mass experiments or individual ones He took exception to what he had gathered to be a statement by Dr Macdonald that a minor injury such as a cut finger involved no liability to residual disablement He was pretty sure that if every case of a cut finger which received first aid dressings was directed to the doctor's surgery the same day disabling finger conditions would be very greatly reduced

With regard to one of the rules which laid it down that the industrial medical officer should not hold the position of certifying factory surgeon in the same area as that in which the factory concerned was situated Dr Bone said that in the new Factory Bill there was a proviso whereby the Home Secretary was allowed in certain special circumstances to permit the industrial medical officer to be the certifying factory surgeon Representation had been made to the Home Secretary that although the Association did not challenge this clause it did suggest that it should be used only on the rarest occasions The point was that the works medical officer was an employee of the factory whereas the certifying factory surgeon was an independent person and it was very important that his independence should be maintained

An amendment to substitute the word 'should' for 'shall' generally throughout the document was lost and it was agreed that subject to verbal rectification, the rules should be recommended for approval to the Representative Body

Nursing Problems

About a year ago a communication was made to the Association from the College of Nursing inviting its views upon a number of nursing questions raised by that body Thereupon a joint subcommittee was formed from the Medico-Political and Public Health Committees and Dr Bone now presented its report to the Council It is hoped that the report will presently be published in the *Supple*

ment Dr Bone explained that the College of Nursing was a voluntary body analogous in some respects to the British Medical Association and it admitted only fully State registered nurses. The General Nursing Council was a statutory body resembling in some respects the General Medical Council. The report dealt with interchangeability of pensions, domiciliary nursing, the supply of and demand for the services of the trained nurse by the community, the care of the chronic infirm and other subjects. In drafting the report great help had been given by three members of the subcommittee—Dame Janet Campbell, Dame Louise McLroy, and Dr Marguerite Kettle who was honorary secretary of the *Lancet* Commission on Nursing.

In reply to Dr Fothergill, Dr Bone pointed out that the question of title (of different classes of nurses) was not intended to be dealt with, the subcommittee had been anxious not to interfere in questions of title, these being a matter for the nursing bodies themselves to decide. The report was approved.

A resolution was also agreed to with regard to some of the questions contained in papers for the final examination of the General Nursing Council. It was stated that these papers included questions relating to diagnosis and medical treatment, as distinct from nursing care, of certain diseases, some of them of a rare nature. One instance was cited in which the candidate had been required to give a full description of disseminated sclerosis and its treatment. It was the view of the Council that the inclusion of such questions must cause a candidate to spend valuable time in the study of matters which were not in effect the business of the nurse who might be more profitably employed in learning the essential principles of nursing.

A member pointed out that it was not the General Nursing Council that was at fault but members of the medical profession who set the papers.

Over-seas and Services

Dr W Paterson reported for the Dominions Committee, in particular with regard to the recent deputation to the Colonial Office. A summary of the matters contained in the report of this Committee appeared in the account of its meeting in the last issue of the *Supplement* (p 180). The Council endorsed the Committee's expression of regret at the retirement of Sir Thomas Dunhill from membership of the Committee and the Council, and its appreciation of the valuable services he had rendered in that capacity since 1921. A welcome was also given to Dr Isaac Jones as representative on the Council in Sir Thomas Dunhill's place of the South Australian, Tasmanian, Victorian and West Australian Branches for the remainder of the period 1935-8.

It was reported that representations had been made to the Air Ministry on the question of improvement in terms of service of civilian medical practitioners engaged under short term contracts and the Ministry had been asked to meet a deputation from the Naval and Military Committee on the matter. Wing Commander Turner stated that the power to employ a certain number of civilian practitioners was given to the Air Ministry under the recommendations of the Warren Fisher Committee. Although in some cases at the new aerodromes civilian practitioners were being employed instead of Service medical officers this was on account of the shortage of Service officers and the rapid expansion that had taken place in the opening of new aerodromes. It was hoped eventually that Service medical officers would be available for all these positions but in the meantime a doctor must be available and the only recourse was to employ a civilian practitioner.

Some consideration was given by the Council to the question of hospitality for overseas members visiting this country during the Coronation period. The difficulty was that there were no means of discovering how many such members would be in London, so that the arrangements

were bound to be of a somewhat elastic nature. It was left in the hands of the officers of the Association to do the best they could with a view to arranging a reception at headquarters.

Medical Ethics

Dr Waterfield chairman of the Central Ethical Committee, said that the Committee had had before it the question of the acceptance by practitioners of whole time public health appointments under authorities which were not applying the Memorandum of Recommendations or of appointments not in conformity with the Memorandum. The Committee, after discussing the matter with representatives of the Public Health Committee was satisfied that the Important Notice and the binding resolution in relation to public health appointments were not wholly effective, and would welcome any arrangement to bring about an improvement in this respect.

Professor Picken said that as one of the members who discussed the matter with the Ethical Committee he was well satisfied with the consideration given and he suggested that it be referred to representatives appointed by the Ethical, Public Health, and Organization Committees to explore the possibilities of an improved arrangement.

Sir Henry Brackenbury said that as one of the representatives of the Association on the Council of the Society of Medical Officers of Health he hoped that some active steps would be taken in the direction proposed. When the Memorandum of Recommendations was first adopted there was some feeling among the Association representatives that the Society of Medical Officers of Health was not taking such steps as it might take for the expulsion of its members who were acting contrary to the Memorandum but the Society reformed its machinery and in fact had taken steps to terminate the membership of some four or five persons who had transgressed the Memorandum. Owing to the autonomy of the Divisions the Association was in a somewhat different position but its machinery should be made more satisfactory if it was not to lay itself open to the reproach which it had at an earlier period levelled against the Society of Medical Officers of Health. There ought to be some strengthening of such disciplinary power as the Association possessed against those who habitually broke the agreement.

Dr Hawthorne said that the Ethical Committee was always anxious that the ethical force of the Association should be applied in suitable cases and in appropriate directions but it was necessarily held up by two considerations the first being that it could not act unless there was what was technically termed a representation from a Division and the second that it was the Ethical Committee which in the final stage was called upon to pronounce judgement, and therefore it could not at the same time initiate proceedings in the capacity of prosecutor.

The proposal to set up the joint subcommittee was agreed to.

Scotland

Dr J B Miller reported for the Scottish Committee that the position in regard to the Scottish scale of salaries for whole time public health appointments was improving. The details of the appointments made during the last seven years had been analysed and considered and the relative facts were being sent to the various Divisions in Scotland for their information.

He also stated that the first Sir Charles Hastings Lecture to be delivered outside London—at Glasgow by Professor E. P. Cathcart—was a great success. Quantitatively the audience had not been exceeded by any in the Great Hall in London and qualitatively so far as one could judge it had not been equalled. The questions were all pertinent and there was an absence of the peculiar type of crank who sometimes constituted himself a nuisance at such meetings.

Dr Miller further reported that the Health Services Committee had completed its review of the recommendations

of the Departmental Committee on Health Services in Scotland, and at its next meeting would consider a draft report

Physical Education

Sir Kaye Le Fleming, chairman of the reconstituted Physical Education Committee reminded the Council that it had been decided to reappoint that Committee in view of the possible further work that it might be called upon to do. Since that decision was made matters had moved forward very considerably. The Government proposals were now clearly set out and the three subcommittees of the National Advisory Council on Physical Fitness had been set up and had already met. Viscount Dawson of Penn and himself were the only medical representatives on that committee, they had met and discussed their attitude and had determined to bring constantly before the committee the medical aspect of physical education which was at present so deplorably neglected. They had pressed that in the new National Physical Training College for males there should be full facilities provided for study from the medical side of such aspects as nutrition, fatigue, the standard of physical fitness, and similar questions. Their views had met with a most cordial reception, and already there had been appointed a young biologist of considerable distinction who was going to be sent on behalf of the committee to the great training institutions on the Continent to study from the biological aspect the work done there and bring back a report.

The only recommendation from the committee concerned a reply which it was proposed to send to a petition that the Association should set up a joint standing committee with another (non-medical) body. The view that the committee took was that the setting up of such a joint committee would be a serious step only to be undertaken after great deliberation, and, when so many bodies were interested in physical education to take this step in regard to one of them or a section of them would be a mistake.

The recommendation was agreed to.

Various Business

Reports were presented to the Council from the Insurance Acts Public Health and Hospitals Committees, the principal matters in which have already been dealt with in the accounts given of the recent meetings of these committees in the *Supplement*. The report of the Consultants and Specialists Group Committee was presented by Professor Burgess and contained a recommendation, which was agreed to, for the division of Region 5 consisting of South Yorkshire and part of the East Midlands, into two regions each to elect one member of the Group committee.

The report of the Science Committee was introduced by Sir Ewen Maclean and dealt with several matters relating to the library and to Association prizes all of which will be found dealt with in the Annual Report of Council to be published in the next issue of the *Supplement*. The Council decided to bring to the attention of the various national medical organizations and of the Association Professionnelle Internationale des Médecins the opinion expressed in a minute of the last Annual Representative Meeting condemning unreservedly the use of poison gas in warfare as inhuman in its results and degrading to civilization. A report was presented by the Medical Secretary as correspondent of the Association on the A.P.I.M. detailing the work of the eleventh annual conference held at Amsterdam last September and it was resolved to include this as the personal report of the Association's representative in the Annual Report.

Sir Kaye Le Fleming presented a report from the Central Emergency Committee. He said that a great deal of responsibility would be thrown on the office of the Association in the event of war becoming imminent and machinery was being devised to ensure that the help would be as efficient as possible.

A report from the joint committee of the British Medical Association and the Trades Union Council was also presented by Sir Kaye Le Fleming. He said that a first meeting had been held, at which among others Sir Walter Citrine, Mr E. Bevin, and Dr H. B. Morgan were present, and the relations established between the two sides had been most friendly. One of the discussions which took place was on the possibility of sending at times to the Ministry on a common issue a joint deputation from the Association and the Trades Union Council. He looked forward to really good and useful work under the aegis of this joint committee. It was mentioned in the report that on the proposed National Health Insurance Bill the Trades Union Council had made representations to the Ministry of Health on a number of points and had expressed its view that the preventive work of the medical profession in respect of the age group 14-16 was of extreme importance and it would be a profound mistake to damage its efficiency by reducing the capitation payments to practitioners.

Dr W. H. Willoughby was appointed delegate of the Association to the eighth biennial Social Hygiene Congress, to be held under the auspices of the British Social Hygiene Council at Westminster in July next, and Sir Robert Philip (or failing him Dr U. Stobie) and Dr Ernest Ward, delegate to the twenty-third annual conference of the National Association for the Prevention of Tuberculosis, to be held at Bristol in July.

The Council expressed its sympathy with the protest of the Palestine Jewish Medical Association at the murder of the Jewish physician Dr. Lehrs, the only practitioner in the Arab town of Beisan, who was murdered by Arabs pretending to seek his aid.

A report was made by Dr Gordon for the Journal Committee and to this was appended a report of the Board of Directors. These reports dealt with technical matters connected with printing, supply of paper, advertisements and reprints. Sir Henry Brackenbury, while expressing gratification at the success of the new regime, hoped that there would be no tendency to regard the *Journal* as a property owned by the Association for financial profit instead of a service rendered to the members of the Association in part return for their subscription. Dr Gordon said that the Council might rest assured that the Journal Committee and the Board of Directors would always have it clearly in mind that the primary object of the *British Medical Journal* was service to the Association and the profession.

The Council devoted a considerable part of its first day's session to a consideration of office arrangements for the production and distribution of the *Journal* and of the proposed engagement of officials. Certain resolutions were brought forward by the Committee of Inquiry into office arrangements, and these with amendments were adopted and it was remitted to the Committee and to the Board of Directors to make recommendations to the June meeting of Council regarding the terms and conditions of service attaching to the proposed new appointments.

The Council sat from 2 p.m. to 6 p.m. on the first day and on meeting again at 10 a.m. concluded its business at 5 p.m. on the second day.

DANGEROUS DRUGS ACTS NOTICE

The Home Secretary has suspended until further order the operation of the notice published in the *London Gazette* and *Edinburgh Gazette* on August 28, 1934 withdrawing from Alexander Gordon Bonnyman M.B., Ch.B., now residing at Broxburn West Lothian, the authority granted by the Regulations made under the Dangerous Drugs Act, 1920 to duly qualified medical practitioners to be in possession of and to supply raw opium, coca leaves and Indian hemp and the drugs and preparations to which Part III of the Act applies, and has also suspended the direction given at the same time that it should not be lawful for Dr. Bonnyman to give prescriptions for the purposes of these Regulations.

TAKING THE CAR TO ULSTER

In view of the fact that many English and Scottish motorists are unfamiliar with motoring laws and conditions in Northern Ireland, the following details are given for the benefit of those members of the British Medical Association attending the Annual Meeting in Belfast who contemplate transporting their cars to the Ulster capital.

First and foremost the important fact must be emphasized that no Customs barrier exists between Northern Ireland and Great Britain. Therefore when the car has been disembarked on Northern Ireland soil the British motorist has no concern with irritating Customs formalities. Furthermore, motoring laws and regulations operating in Northern Ireland are practically identical with those in force throughout Great Britain with the one important exception—that a general speed limit for motorists is not applicable to this province. The visitor's driving licence, his Road Fund tax, and, in almost every instance, his insurance policy are all valid for a temporary stay in Northern Ireland. So it will be obvious that once transport arrangements are completed the motorist is entitled to drive where he chooses in any part of Ulster.

Transport by Sea

When considering a motoring holiday in Ulster the question of transport by sea is one of paramount importance to the motorist from Britain. There is a fairly wide choice of shipping services operating between English, Scottish and Northern Irish ports. For example, daily sailings take place between Liverpool and Belfast, Heysham and Belfast, and Glasgow and Belfast; cars may also be shipped daily between Stranraer and Larne. During the summer period—that is from May 1 until September 30—morning and evening services operate between the last named ports.

In addition to the foregoing steamship services operate between London, Plymouth, Southampton and Belfast. Full particulars of sailings, freight charges for cars and passenger fares are as follows:

LONDON-BELFAST (Clyde Shipping Co. Sailings from London each Tuesday and Friday)

Car Transport	OR
Per ton	£5 0 0
Minimum	£3 10 0

Passenger Fares	
Saloon single 55s	Return 100s
Third-class single 25s	

SOUTHAMPTON-BELFAST (Clyde Shipping Co. Sailings from Southampton each Saturday)

Car Transport	OR
Per ton	£5 10 0
Minimum	£3 10 0

Passenger Fares	
Saloon single 50	Saloon return 90s
Third-class single 22s	6d

PLYMOUTH-BELFAST (Clyde Shipping Co. Sailings from Plymouth each Friday)

Car Transport	OR
Per ton	£5 10 0
Minimum	£3 10 0

Passenger Fares	
Saloon single 45s	Saloon return (to Glasgow) 80s
(No call at Belfast on outward journey, but passengers are landed at Glasgow, paying their own fare thence to Belfast.)	
Third-class single 22s	6d

(On each of the above trips food costs about 10s. 6d. per day. Return tickets are available for six months but are not issued for third-class passengers.)

From the point of view of some English visitors the choice of route will lie between either Heysham or Liverpool and on both of these routes the loading and unloading facilities for cars are modern and quite satisfactory. There is little difference in the freight charges levied by the shipping companies concerned as the following figures will demonstrate:

BELFAST-LIVERPOOL (Belfast Steamship Co. Ltd. Sailings daily except Sunday)

Car Transport	
Weight not exceeding 10 cwt	£3 0 0
" " 15	£3 5 0
" " 20	£3 10 0
For each additional cwt. over 20 cwt	£0 1 6
Tricars up to 8 cwt	£2 12 6

Passenger Fares	
Saloon single 22s 6d	return 37s 6d
Third-class single 10s 6d	return 21s
(Return tickets are available for three months)	

BELFAST-HEYSHAM (London Midland and Scottish Railway. Sailings daily)

Car Transport	OR	CR
Weight not exceeding 10 cwt	£2 16 3	£3 3 9
Each additional cwt. or part	£0 1 6	£0 1 6

Passenger Fares	
Saloon single 22s 6d	return 37s 6d
Third-class single 10s 6d	return 21s
(Return tickets are available for three months)	

It is of importance to mention that a Sunday night sailing takes place between Heysham and Belfast and vice versa, although cars are not accepted for conveyance on Sunday nights.

The Scottish visitor too is well catered for so far as shipping facilities are concerned. He may proceed to Belfast via Glasgow direct via Ardrossan or via Stranraer and Larne. Here again freight charges do not vary to any appreciable degree. The rates on the various services mentioned are given below.

BELFAST-GLASGOW (Burns and Laird Lines Ltd. Sailings daily except Sunday)

Car Transport	
Not exceeding 10 cwt	each £3 0 0
Over 10 cwt. and not exceeding 15 cwt.	each £3 5 0
Over 15 cwt. and not exceeding 20 cwt.	each £3 10 0
Each additional cwt. or part	£0 1 6

Passenger Fares	
First-class single	£1 0 0
return	£1 12 0
Third-class single	£0 9 6
" " return	£0 19 0

(Return tickets are available for three months)

BELFAST-ARDROSSAN (Burns and Laird Lines Ltd. Sailings daily except Sunday)

Car Transport	OR
Not exceeding 10 cwt	each £2 10 0
Over 10 cwt. and not exceeding 15 cwt.	each £2 15 0
Over 15 cwt. and not exceeding 25 cwt.	each £3 0 0
Each additional cwt. or part	£0 1 6

Passenger Fares	
Saloon single 17s 6d	return 28s
Third-class single 8s	
(Return tickets are available for three months)	

LARNE-STRANRAER (London Midland and Scottish Railway. Sailings twice daily)

Car Transport	OR
Not exceeding 10 cwt	£2 5 6
Over 10 cwt. and not exceeding 25 cwt.	3 0 6
Over 25 cwt. for each additional cwt. or part	£0 1 6

Passenger Fares	
Saloon single 10	saloon return 20
Seetage single 6s	seetage return 12s

On each of the services mentioned a motor car may be shipped outward and return by the same route at a freight charge of fare and a half, provided the car is accompanied by two adult passengers for whom return tickets are valid.

The Automobile Association, which has offices at Port Officers at all ports mentioned, will provide loading and unloading operations will be pleased to advise the member of all matters connected with the shipment of vehicles. The A.A. will be glad to provide a car book and passenger information.

required procure passenger tickets and in other words complete negotiations on behalf of members so that the visitor is free from any petty annoyances connected with this aspect of his holiday. An important point to be remembered is that during the summer months—and this year will certainly be no exception—steamship bookings are particularly heavy, and it is very desirable that lengthy notice should be given to either the shipping company direct or to the A.A., to ensure that the required accommodation can be secured.

Garage accommodation for cars in and around Belfast need present no difficulty to the visitor. The city is adequately supplied with garage establishments which are efficiently staffed and equipped with modern plant thus ensuring the competent handling of any class of repair work.

Irish Free State—Those visitors who wish to embrace the Irish Free State in their tour should bear in mind that important Customs formalities must be complied with before a motor vehicle can be taken across the land frontier between Northern Ireland and the Irish Free State. In this direction it is suggested that those who are interested should make application to the nearest A.A. Branch Office, or to the Belfast Office of the association at Fanum House 5 Oxford Street, when full particulars of Customs requirements will be readily advanced.

We are informed that the R.A.C. will provide similar facilities for their members and they advise intending visitors to get into early communication with either their head office Pall Mall, London, S.W.1 or their local branch office 65 Chichester Street Belfast, well in advance of their departure.

Motorists desiring further information should apply to either the A.A. or the R.A.C. for the appropriate guide book. The Ulster Tourist Development Association 6 Royal Avenue Belfast have a very useful volume on motoring which includes a number of tours in and around Belfast and in Northern Ireland generally. Intending motorists are advised to apply for this to the above address.

OPHTHALMIC EXAMINATIONS AT HOSPITALS

There is a steady increase in the number of insured persons eligible for ophthalmic benefit who present themselves at the out-patient departments of voluntary hospitals for a general examination of the eyes. This constitutes an unfair demand on the voluntary services of the visiting ophthalmic surgeons and should be resisted by a refusal to examine unless the case is obviously one for hospital treatment. The patient should be referred to his approved society and advised how to obtain an ophthalmic medical examination at a reduced fee without recourse to hospital.

Similarly ophthalmic surgeons are experiencing a great increase in their work at hospitals on account of the growth of hospital contributory schemes. For members of these schemes the services of the honorary medical staff should be available only for such conditions as can best be treated at a hospital. A general eye examination for example is not essentially a hospital service. In their own interests the visiting staffs of hospitals are advised to watch carefully the inauguration and development of contributory schemes and to oppose vigorously any provision for ordinary medical services such as are available outside the hospital.

A book entitled *What is Osteopathy?* has just been published by J. M. Dent and Sons at 7s. 6d. The authors are Dr. Charles Hill, Deputy Medical Secretary of the British Medical Association and Dr. H. A. Clegg, Deputy Editor of the *British Medical Journal*. A preface is contributed by Mr. H. G. Wells.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

Units of Credit

A question at the last meeting of the London Insurance Committee, arising out of the statement that the payment of doctors for the year 1936 would amount to 9s. 2.5254d per unit of credit, brought a reply from the Chairman of the Medical Benefit Subcommittee which he not unreasonably asked permission to read. The questioner and the committee were treated to an elaborate exposition of the constitution of the Central Practitioners Fund its distribution between areas, and further distribution to doctors in each area. This was followed by an exhaustive supplementary question, which showed that the questioner had failed to grasp the real content of the discourse to which he had listened. The inquiry was prompted by the fact that the capitation fee was 9s., why therefore 9s. 2.5254d? It was not the four places of decimals which mystified the inquirer, but the 2½d excess over the 9s. In other years when the payment had fallen short of 9s. it does not appear that any member of the committee was prompted to investigate.

Most practitioners know by this time that owing to the day-to-day movements of the insured population no payment can be made of an agreed capitation fee on the count of the doctors' lists. The only true record necessarily approximate, of the insured population can be made by an actuary who takes as his basis the stamp sales for the year, and then makes a series of mysterious calculations designed to secure that the doctors in the country as a whole receive their full payment. In the distribution of this central pool so calculated the Ministry has the advice and assistance of a distribution committee upon which the medical profession is well represented. A distribution having been made between the several insurance committee areas, the doctors within each area are paid quarterly their respective proportions of the pool for that area according to the quarterly count of the number of persons on their lists.

In London some years ago there was an extensive clearance from the doctors' registers of names of persons who had passed out of insurance and of duplicate names, etc. This had the effect of increasing the payment for each entry on the doctors' lists, although it did not increase the total amount distributed. As there are always a certain number of persons for whom the doctors are at risk—that is, persons who have not yet found their way on to a doctor's list—the effect of smaller lists is still further to increase the payment for each separate entry, or unit of credit as it is called. Those readers who are sufficiently interested will find the whole matter described in Chapter 12 of the new edition of *Medical Insurance Practice*.

Delay in Choosing a Doctor on Removal

A very reasonable commentary on the note on this subject which appeared in the *Supplement* of March 13 (p. 131) is made by a correspondent in the *Supplement* for April 3 (p. 168). He says:

I cannot agree that the present method results in even "a rough and ready measure of equity." Various areas have different rates of expansion or contraction and the fact that say 10,000 residents enter a particular area owing to employment economics and slum clearance schemes does not mean a similar number must leave the area. In fact the total increase of insured persons in certain rapidly expanding areas may be 1,000 to 5,000 per annum over a period of years. It is not in the least equitable for the panel doctors in such areas to have only 20 to 30 per cent of this number joining their lists. Until an influenza epidemic occurs to stimulate choosing a doctor by the patient the doctor will be giving attendance to almost 100 per cent of his panel during the year.

which is not at all compatible with the theory of the standard capitation fee for both sick and well

The London Insurance Committee has an excellent scheme which if adopted by all other insurance committees would help to ameliorate the inequity. A label is affixed to each medical card issued informing the patient that he will be allotted to a doctor's list unless he chooses his own doctor within a certain period (two months I think). There would necessarily have to be good liaison between all committees to ensure that movements from one area to another were notified for action. Surely this is not too big a problem for the Insurance Acts Committee to tackle.

Taking this correspondent's last point first, it may be stated at once that the only possible liaison between insurance committees where movements of the insured population are concerned is that which is at present in operation. When an insured person makes his presence known in a new area by presenting his medical card to an insurance practitioner, who sends it to the insurance committee, the committee communicates with the insurance committee for the area from which the insured person has removed so that the transfer is made effective. With regard to the assignment of insured persons the system in London is done as effectively as possible, as shown by the following extract from the minutes of the last meeting of the committee:

On January 28 1937 we informed the committee that in accordance with the decision of the committee of October 25 1934 we had arranged to assign to the lists of local insurance practitioners 28 272 insured persons who having become entitled to medical benefit in London since July 1 1934 and who having continued to reside in the area and to be entitled to medical benefit for a period of three months or more had failed or neglected to select a method of treatment. We are now in a position to report that a further 10 378 assignments of a similar nature have been made bringing the total number of insured persons so allocated to 38 650.

There is of course no reason why a similar system should not be operative in every area so far as new entrants to insurance are concerned. But the problem of dealing with those areas where there is an abnormal increase in the insured population can only be effectively met—and is no doubt fully considered where the information is made available—by the distribution committee referred to above in its advice to the Minister as to the distribution of the central pool between areas. If the area pool is duly loaded by reason of special circumstances the proper distribution of the local pool must then be secured in the local distribution scheme.

The Improving Medical Service

In a letter in the *Supplement* of April 3 Dr F. A. L. Burges writes: "During my last year as chairman of the Birmingham Insurance Committee with a population of nearly 400 000 insured persons there were only three complaints brought before the Medical Service Subcommittee and none of these complaints was substantiated. What better proof could you have that the service was a good one and appreciated by the insured population?" It was noted in this column recently that no medical service cases during the preceding month had been presented to the Insurance Committees of London and Glasgow. An examination since made of the minutes of these two committees for the following month reveals the same interesting result.

Owing to an increase in the work of the West Middlesex County Hospital the Public Health Committee of the Middlesex County Council has recommended the appointment of three additional assistant medical officers at a salary of £400 rising by annual increments of £25 to £475 and emoluments valued at £100.

British Medical Association

OFFICES BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQUARE W.C.1

Departments

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and Business Manager, Telegrams: Articulate Westcent London)
MEDICAL SECRETARY (Telegrams: Medisecra Westcent London)
EDITOR BRITISH MEDICAL JOURNAL (Telegrams: Anthology Westcent London)

Telephone numbers of British Medical Association and British Medical Journal Euston 2111 (internal exchange five line)
B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumshigh Garden, Edinburgh (Telegrams: Associate Edinburgh Tel. 2401 Edinburgh)

Insh Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street Dublin (Telegrams: Bacillus Dublin Tel. 2550 Dublin)

Diary of Central Meetings

APRIL

- 16 Fri Public Medical Services Subcommittee 11 a.m.
- 20 Tues Joint Committee of B.M.A. and T.U.C. 11.15 a.m.
- 23 Fri Health Services Committee 2 p.m.
- Journal Committee, Exchange and Free List Subcommittee 11.30 a.m.
- Joint Subcommittee re Provident Schemes and Payments to General Practitioners for Treatment 2 p.m.
- Police Surgeons Subcommittee 4 p.m.
- 27 Tues Interim Committee re Provident Schemes 3 p.m.
- 28 Wed Insurance Acts Committee Prescribing Subcommittee 2.30 p.m.
- 29 Thurs Charities Committee 2.30 p.m.
- 30 Fri Organization Committee Grants Subcommittee 2.30 p.m.

MAY

- 7 Fri Journal Board 11.30 a.m.
- 14 Fri Journal Committee 2 p.m.
- 18 Tues Organization Committee 2 p.m.
- 20 Thurs Committee re Organization of the Medical Profession in India 2.15 p.m.
- 21 Fri Naval and Military Committee 2.30 p.m.
- 24 Mon Dominions Committee 2.15 p.m.

Branch and Division Meetings to be Held

FIFE BRANCH—At Station Hotel, Kirkcaldy, Thursday, April 22. Afternoon clinical meeting. Mr. J. J. Robb (Dundee). Actiology and Treatment of Duodenal Ulcer.

KENT BRANCH, BROMLEY DIVISION—Joint meeting with Bromley Medical Society at White Hart Hotel, Bromley, Wednesday, April 21, 8.45 p.m. Dr. H. Gardiner Hill. Thyrototoxicosis. Preceded by supper at 7.45 p.m.

KENT BRANCH, EAST KENT DIVISION—At Grand Hotel, Cliftonville, Thursday, April 22, 8.45 p.m. Mr. John Hosford. Modern Treatment of Fractures. Preceded by dinner at 7.40 p.m.

LANCASHIRE AND CHESHIRE BRANCH, WARRINGTON DIVISION—At Carter's Café, Bridge Street, Warrington, Thursday, April 22, 7 p.m. Annual dinner.

METROPOLITAN COUNTIES BRANCH, CAMBERWELL DIVISION—At Constance Road Institution, Tuesday, April 20, 9 p.m. Dr. H. A. Dunlop. Recent Advances in Pharmacology.

METROPOLITAN COUNTIES BRANCH, CHELSEA DIVISION—At Fulham Town Hall, Thursday, April 22, 8.30 p.m. Air raid precautions discussion. Address by Dr. N. W. Hammer.

METROPOLITAN COUNTIES BRANCH, GREENWICH AND DEPTFORD DIVISION—At Miller General Hospital, Greenwich, S.E., Tuesday, April 20, 9 p.m. Dr. H. V. Merle. Some Points in the Diagnosis and Treatment of Chest Diseases.

METROPOLITAN COUNTIES BRANCH, TOWER HAMLETS DIVISION—At Mile End Hospital, L., Friday, April 23, 3.30 p.m. Clinical meeting. Demonstration of cases by Dr. A. Randle.

NORFOLK BRANCH—At Norfolk and Norwich Hospital, Friday, April 23, 3.30 p.m. B.M.A. Lecture by Dr. W. S. C. Copeman. The Fight against Rheumatism.

NORTH OF ENGLAND BRANCH, GATESHEAD DIVISION—At White House, Tuesday, April 20. Clinical evening.

NORTH OF ENGLAND BRANCH, NEWCASTLE-ON-TYNE DIVISION—At 7 Windsor Terrace, Newcastle-on-Tyne, Tuesday, April 20, 9 p.m. Election of representatives and deputy representatives.

NORTH OF ENGLAND BRANCH, NORTH NORTHAMPTON DIVISION—At Blue Bell Hotel, Belford, Wednesday, April 21, 3 p.m. Consideration of programme for summer and autumn.

SOUTHERN BRANCH, WINCHESTER DIVISION—At Royal Hampshire County Hospital, Winchester, Wednesday, April 21, 8.15 p.m. Mr. Hugh Cairns. Recent Advances in Rheumatism.

SOUTH WESTERN BRANCH—At Bournemouth, Wednesday, April 21, 4.30 p.m. In emergency meeting.

SOUTH WEST BRANCH, CRESSWELL DIVISION—At Royal Cornwall Hospital, Truro, Tuesday, April 20, 10.15 p.m. Mr. M. J. S. G. Lecture on Rheumatism.

Election of Representative Body, 1937-8

The Council hereby gives notice that Representatives and Deputy Representatives for 1937-8 must be elected by the Constituencies (see below) not later than Saturday, May 15 and their names received at the Head Office not later than Thursday, June 3, 1937

It is a matter for the Executive Committee of the Division (or, where a Constituency comprises more than one Division, for a joint meeting of the Executives of the Divisions) to decide whether the Representative(s) and Deputy Representative(s) shall be elected by a *General Meeting* of the Constituency or by *Postal Vote*. The meeting of the Constituency must be called (and, where the election is by voting papers, these must be issued) by the Secretary of the Division (or, in the case of Constituencies comprising more Divisions than one, by the Secretary of the Division containing the largest number of Members)

I CONSTITUENCIES IN GREAT BRITAIN AND NORTHERN IRELAND

The Council has formed the Divisions in Great Britain and Northern Ireland into the Constituencies for election of the Representative Body, 1937-8, shown below

II CONSTITUENCIES IN THE IRISH FREE STATE

The Branches in the Irish Free State Medical Union (Irish Medical Association and British Medical Association) have been grouped as follows for the election of three Representatives

{ Connaught	{ Munster
{ Monaghan and Cavan	{ South Eastern of Ireland
Leinster	

III CONSTITUENCIES NOT IN GREAT BRITAIN OR IRELAND

The Council has made each Division and Division-Branch outside Great Britain and Ireland an independent Constituency

CONSTITUENCIES IN GREAT BRITAIN AND NORTHERN IRELAND FOR ELECTION OF REPRESENTATIVE BODY 1937-8

(Divisions bracketed together form one Constituency)

Aberdeen— { Aberdeen and Kincardine Counties { Orkney { Shetland City of Aberdeen	Dorset and West Hants— Bournemouth West Dorset
Bath Bristol and Somerset— Bath Bristol East Somerset West Somerset	Dundee
Bedfordshire	East Yorkshire
Berks Bucks and Oxford— Buckinghamshire Oxford Reading	Edinburgh— Edinburgh and Leith Lothians South Eastern Counties
Birmingham— Birmingham Central Coventry Dudley Nuneaton and Tamworth Rugby Warwick and Leamington West Bromwich and Smethwick	Essex— Mid Essex North-East Essex South Essex
Border Counties— Cumberland Dumfries and Galloway Westmorland	File
Cambridge and Huntingdon— Cambridge and Huntingdon Isle of Ely Isle of Peterborough	Glasgow and West of Scotland— Angus Ayrshire Dumfriesshire Glasgow Lanarkshire Renfrewshire and Butheshire
Derbyshire— Buxton Derby Chester	Gloucestershire
	Hertfordshire— { Barnet { St Albans East Hertfordshire Watford
	Isle of Man
	Kent— Bromley Dartford East Kent Faversham and Dover Gravesham Rochester and Chatham, and Gillingham Tunbridge Wells

Lancashire and Cheshire—

{ Ashton under Lyre
{ Oldham
Birkenhead
Blackburn
Blackpool
Bolton
Burnley
Bury
{ Chester
{ Crewe
Furze
Hyde
{ Stockport, Macclesfield and East
Cheshire
Lancaster
Liverpool
Manchester
Mid-Cheshire
Preston
Rochdale
St. Helens
Salford
Southport
Warrington
Wigan

Leicester and Rutland

Lincolnshire—

Grimsby
Holland
Kesteven
Lincoln
Scunthorpe

Metropolitan Counties—

Camberwell
Chelsea
City
Finchley
Greenwich and Deptford
Hampstead
Harrow
Hendon
Kensington
Lambeth and Southwark
Lewisham
Marylebone
North Middlesex
St. Pancras
South Middlesex
South West Essex
Stratford
Tower Hamlets
Wandsworth
West Middlesex
Woolwich and Holborn
Willesden
Woolwich

Norfolk—

East Norfolk
Norwich
West Norfolk

Northamptonshire

Northern Counties of Scotland—

Banff Moray and Nairn
Caithness and Sutherland
Inverness
Islands
Ross and Cromarty

Northern Ireland—

{ North East Ulster
{ Derry
{ Belfast
{ Fermanagh
{ Tyrone
Portadown and West Down

North of England—

{ Bishop Auckland
{ Durham
{ Blyth
{ Morpeth
Cleveland
{ Consett
{ Hexham
Darlington
Gateshead

North of England—(continued)

{ Hartlepool
{ Stockton
Newcastle-on-Tyne
North Northumberland
South Shields
Sunderland
Tyne-side

North Wales—

Denbigh and Flint
North Carnarvon and Anglesey
South Carnarvon and Merioneth

Nottingham

Perth

Shropshire and Mid Wales

Southern—

Guernsey and Alderney
Isle of Wight
Jersey
Portsmouth
Southampton
Winchester

South Wales and Monmouthshire—

Cardiff
Monmouthshire
North Glamorgan and Brecon
South West Wales
Swansea

South-Western—

Barnstaple
Cornwall
Exeter
Plymouth
Toquay

Staffordshire—

North Staffordshire
South Staffordshire
Walsall and Lichfield

Stirling

Suffolk—

North Suffolk
South Suffolk
West Suffolk

Surrey—

Croydon
Guildford
Kingston-on-Thames
Reigate
Richmond

Sussex—

Brighton
Eastbourne
Haslemere
West Sussex

Wiltshire—

Salisbury
Swindon
Trowbridge

Worcestershire and Herefordshire—

Hereford
Worcester and Bromsgrove

Yorkshire—

Barnsley
Bradford
Dewsbury
Doncaster
Goole and Selby
Wakefield, Pontefract, and
Castleford
{ Halifax
{ Todmorden
Harrrogate
Huddersfield
Leeds
Rotherham
Scarborough
Sheffield
York

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses of proctology at Gordon Hospital April 26 to May 1, psychological Medicine at Maudsley Hospital April 26 to May 29, dermatology at St. John's Hospital May 3 to 29, thoracic surgery at Brompton Hospital May 24 to 29, infants diseases at Infants Hospital April 24 and 25, cancer at Royal Cancer Hospital April 24 and 25, chest diseases at Brompton Hospital May 8 and 9, physical medicine at St. John Clinic and Institute of Physical Medicine May 22 and 23, children's diseases at Princess Elizabeth of York Hospital May 29 and 30. Detailed syllabuses of all courses can be obtained from the Fellowship of Medicine, 1 Wimpole Street, W. The

annual dinner-dance of the Fellowship will take place on Friday May 28 at Claridge's Hotel. Tickets can be obtained from the secretary or from any member of the ladies committee. All members of the medical profession and their friends will be welcome.

A short course of lectures on leading symptoms in ophthalmology will be given in the Tennent Memorial Building Church Street, Glasgow, on Tuesdays at 5 p.m. from April 20 to May 18 both dates inclusive. The course has been arranged by the Department of Ophthalmology of the University of Glasgow and the Principal Sir Hector J. W. Hetherington will give a short introductory address on the occasion of the first lecture of the series.

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road W.—Daily 10 a.m. to 4 p.m., Medical Clinics, Surgical Clinics and Operations, Obstetrical and Gynaecological Clinics and Operations. *Mon* 2.30 p.m. Dr C. W. Buckley Arthritis. *Tues* 12 noon Clinical and Pathological Conference (Medical). 2.30 p.m. Dr J. Vaughan Sedimentation Rate. 3 p.m. Clinical and Pathological Conference (Surgical). 4 p.m. Mr J. E. H. Roberts Surgery of the Chest. 4.30 p.m. Dr W. E. Gye Experimental Cancer Research. *Thurs* 2.30 p.m. Dr Duncan White Radiological Demonstration. 3.30 p.m. Mr A. K. Henry Demonstrations on the Cadaver of Surgical Exposures. 3.30 p.m. Mr Malcolm Donaldson Radiation Therapy in Gynaecology. *Fri* 2 p.m. Operative Obstetrics. 3 p.m., Clinical and Pathological Conference (Obstetrical and Gynaecological).

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole Street W.—*West End Hospital for Nervous Diseases* Welbeck Street W. All-day Course in Neurology. *Infants Hospital* Vincent Square SW. Sat and Sun., Course in Infants Diseases. *Royal Cancer Hospital* Fulham Road SW. Sat and Sun. Course in Cancer.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL Gray's Inn Road W.C.—Daily Course in Anatomy and Physiology.

HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale W.—*Thurs* 3 p.m. Dr W. G. Wyllie Clinical Demonstration.

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—*Thurs* 2 p.m. Clinical Lecture. Sir Lancelot Barrington Ward Developmental Abnormalities of the Mesentery and Gut. 3 p.m. Clinicopathological Lecture. Dr Bertram Shires Slagographic Appearances in Rickets, Scurvy etc. Out-patient Clinics mornings 10 a.m. to 12 noon. Ward Visits afternoons 2 p.m. to 3.30 p.m.

INSTITUTE OF MEDICAL PSYCHOLOGY Malet Place, W.C.—*Mon* 5.45 p.m., Dr Emanuel Miller Mental Dynamics—the Unconscious. *Tues* 11 a.m. and *Thurs* 8.30 p.m. Prof E. Kretschmer (Marburg). (1) Heredity and Constitution in the Aetiology of Psychic Disorders. (2) The Structure of the Personality in Relation to Psychotherapy. (3) Insulin and Hysteria. *Thurs* 3 p.m. Dr H. Crichton Miller Enuresis Nocturna. 4.20 p.m. Dr Cedric Shaw Physical and Psychic Factors in Symptom Formation. 5.45 p.m. Dr Miller Personality Types.

NATIONAL HOSPITAL FOR DISEASES OF THE HEART Westmoreland Street W.—*Tues* 5.20 p.m. Dr B. T. Parsons Smith Right Heart Failure.

ST JOHN CLINIC AND INSTITUTE OF PHYSICAL MEDICINE Ranelagh Road SW.—*Fri* 4.0 p.m. Demonstrations of various methods of physical treatment at the Rheumatic Unit at St. Stephen's Hospital.

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE Hammersmith W.—Daily 2 p.m. Operations, Medical and Surgical Clinics. *Mon* 10 a.m. Dr Post. A Ray Film Demonstration. Skin Clinic. 11 a.m. Surgical Wards. 2 p.m. Surgical and Gynaecological Wards. Eye and Gynaecological Clinics. 4.15 p.m. Mr Green Armistage Endometrioma. *Tues* 10 a.m. Medical Wards. 11 a.m. Surgical Wards. 2 p.m. Throat Clinic. 4.15 p.m. Mr Wood Walker Adhesions around Joints. 11 a.m. Children's Ward and Clinic. 11 a.m. Medical Wards. 2 p.m. Eye Clinic. Gynaecological Operations. 4.15 p.m. Mr Hasler Lie anaesthetic Medication. *Thurs* 10 a.m. Neurological and Gynaecological Clinics. 12 noon Fracture Clinic. 2 p.m. Eye and Genito-Urinary Clinics. *Fri* 10 a.m. Medical Wards. Skin Clinic. 12 noon Lecture on Treatment. 2 p.m. Throat Clinic. Sat. Children's and Surgical Clinics. 11 a.m. Medical Wards. The lectures at 4.15 p.m. are open to all medical practitioners without fee.

ALFRED MEDICAL SCHOOL—At Aberdeen Royal Infirmary. *Tues* 3.15 p.m., Prof I. S. P. Davidson Investigation and Treatment of a Case of Jaundice. *Thurs* 3.15 p.m. Prof I. S. P. Davidson Investigation and Treatment of the Hemorrhagic Disease.

BIRMINGHAM UNIVERSITY—At Medical Faculty Buildings, Edmundo Street. *Thurs* 4 p.m. William Withering Lecture. F. I. of W. N. Haworth F.R.S. Chemistry of the Carbohydrates. Ascorbic Acid and Other Water-Soluble Vitamins.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION—At Western Infirmary. *Tues* 4.15 p.m. Dr J. G. M. Macgregor Role of Venereal Disease in Men.

GLASGOW UNIVERSITY—At Tennent Memorial Building Church Street Glasgow. *Tues* 5 p.m. Prof A. J. Ballantine Vascular Defects of Gradual and Sudden Onset. Preceded by a short introductory address by Sir Hector J. W. Hetherington.

MANCHESTER ROYAL INFIRMARY—*Tues* 4.15 p.m. Mr G. J. G. Jefferson Surgery of Intracranial Aneurysms. *Fri* 4.15 p.m. Dr Crichton Bramwell, Demonstration of Medical Case.

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

General Meeting of Fellows *Tues* 5.30 p.m. Ballot for Election to the Fellowship.

Section of Neurology—*Thurs* 8.30 p.m. Pathological Meeting. Specimens will be shown.

Section of Urology—*Thurs* 10 a.m. Annual General Meeting. Election of Officers and Council for 1947-8. Papers by Mr Clifford Morson The Harris Operation and its Modification. Mr Kenneth Walker Transurethral Operations on the Prostate Gland. 9.30 a.m. to 1.30 p.m. Exhibition of Urological Instruments. 2.30 p.m. Meeting at Royal College of Surgeons. Demonstration of Museum Specimens and Report of Experimental Urinary Work. 8 p.m., Dinner at Langham Hotel. *Fri* 10.15 a.m. Papers by Sir John Thomson Walker The Bladder in Spinal Injuries in War. Prof G. Grey Turner The Place of Surgery in the Undescended Testicle. 2.30 p.m. Operations and Demonstrations at All Saints Hospital, St. Paul's Hospital, St. Peter's Hospital, Middlesex Hospital and King's College Hospital.

Section of Disease in Children—*Fri* 5 p.m. (Cases at 4.30 p.m.) Cases which have previously appeared before the Section will be shown.

CHITSEA CLINICAL SOCIETY—At Hotel Rembrandt, Thimble Piece SW. *Tues* 7.30 p.m. Discussion. The Doctor and his Dependents. To be opened by Mr E. Rock Carling.

VACANCIES

ALDERLEY EDGE ANGLICAN HOSPITAL CONSULTANT HOME GIE Watford.—Hon. Visiting M.O. Honorarium £50 p.a.

BAGHDAD ROYAL COLLEGE OF MEDICINE—(1) Professor of Pathology. (2) Professor of Bacteriology. Salaries £150 per month each.

BARNSELY BRACKETT HOSPITAL AND DISPENSARY—R.S.O. (male). Salary £300 p.a.

BARKING BOROUGH—Assistant M.O.H. and Assistant School M.O. Salary £500-£25 £700 p.a.

BATH ROYAL UNITED HOSPITAL—H.S. (male, unmarried) for the Ear, Nose and Throat Department. Salary £150 p.a.

BECKENHAM BELLFIELD ROYAL HOSPITAL—(1) Consulting S. (2) Radiologist. Honorarium £157 10s. p.a.

BEDFORD COUNTY HOSPITAL—(1) First H.S. (2) Second H.S. Males, unmarried. Salaries £155 p.a. and £150 p.a. respectively.

BRADFORD ROYAL EYE AND EAR HOSPITAL—H.S. (male). Salary £180 p.a.

BRIDGWATER GENERAL HOSPITAL—H.S. Salary £150 p.a.

BRISTOL CITY AND COUNTY—Fourth A.M.O. (male, unmarried) for Bristol Mental Hospital. Salary £500 p.a.

BURY INFIRMARY—Third H.S. (male). Salary £150 p.a.

BURY ST EDMONDS WEST SUFFOLK GENERAL HOSPITAL—H.S. Salary £180 p.a.

CARDIFF KING EDWARD VII WELSH NATIONAL HOSPITAL ASSOCIATION—H.P. (female) for Adeline Park Hospital, Cynffwrdd, Swansea Valley. Salary £150 p.a.

CHICHESTER GENERAL AND EYE HOSPITALS—H.S. (male) to the Eye, Ear, Nose and Throat Department. Salary £150 p.a.

CHESTER ROYAL INFIRMARY—H.S. (male). Salary £150 p.a.

CHICHESTER AND NORTH DEPTFORD ROYAL HOSPITAL—H.S. (male) to the Ophthalmic and Ear, Nose and Throat Departments. Salary £150 p.a.

CONVENTRY AND WARWICK SHIRE HOSPITAL—R.C.O. Salary £125 p.a.

CRAYFORD COUNTY BOROUGH—Two J.R.A.M.O.s (male) for Medical Hospital. Salaries £300 p.a. each.

DARLINGTON MEMORIAL HOSPITAL—H.S. (male). Salary £150 p.a.

DUNDEE CORPORATION—Medical Superintendent to Dundee Mental Hospital. Liff. Salary £850-£25 £1000 p.a.

EASTLEIGH PRINCESS ALICE HOSPITAL—R.H.S. (male) Salary £150 p.a.

ELIZABETH GARRETT ANDERSON HOSPITAL Lecturer in Pathology. Staff Appointment of Part-time Pathologist to the Department of Morbid Anatomy and Bacteriology. Salary £350 p.a. (2) Part-time Pathologist. Honorarium £200 p.a. (3) Hon. Asst. S. to the Throat, Nose and Ear Department. (4) Hon. P. to the Children's Department. Lecturer in Forensic Medicine. Salary £200 p.a.

FAIRFAX CITY AND COUNTY—First A.M.O. Salary £350 p.a. M.O. and Asst. M.O.H. (male) Salary £450 p.a.

FAIRFAX ROYAL DENTAL AND INFIRMARY—(1) H.S. (2) H.S. to the Ear, Nose and Throat Department. Salaries £150 p.a. each.

GLASGOW PULMONARY HOSPITAL—F.R.C.S. (male) Salary £450 p.a.

- GRINSBY AND DISTRICT HOSPITAL—J.H.S. (male) Salary £150 p.a.
GUILDFORD ROYAL SURREY COUNTY HOSPITAL—Assistant Pathologist Salary £500 p.a.
HALIFAX COUNTY BOROUGH—J.R.M.O. (male) for Halifax General Hospital Salary £250 p.a.
HARTLEPOOL HARTLEPOOLS HOSPITAL—J.H.S. (male) Salary £150 p.a.
HASTINGS ROYAL EAST SUSSEX HOSPITAL—Senior H.S. (female) Salary £200 p.a.
HERTFORD COUNTY HOSPITAL—Senior H.S. (male) Salary £200 p.a.
HOSPITAL FOR SICK CHILDREN Great Ormond Street, W.C.—Half time Out Patient Medical Registrar (male) Salary £175 p.a.
HUDDERSFIELD ROYAL INFIRMARY—Two H.S. (males) Salaries £150 p.a. each
HULL ROYAL INFIRMARY—(1) H.P. to the Sutton Branch (2) Second H.P. to the Main Hospital Males Salaries £160 p.a. and £150 p.a. respectively
ILFORD KING GEORGE HOSPITAL—H.S. (male) Salary £100 p.a.
KING'S COLLEGE HOSPITAL S.E.—M.O. in charge of the Squint Clinic Salary £80 p.a.
LANCASHIRE COUNTY COUNCIL—Consulting Obstetrician (male) Salary £1,000 p.a.
LANCASHIRE MENTAL HOSPITALS BOARD—Whole time Deputy Medical Superintendent for Calderstones Certified Institution for Mental Defectives, Whalley Salary £750-£25 £850 p.a.
LANCASTER ROYAL LANCASTER INFIRMARY—Two J.H.S. (males unmarried) Salaries £130 p.a. each
LIVERPOOL AND DISTRICT HOSPITAL FOR DISEASES OF THE HEART—H.P. Salary £100 p.a.
LONDON COUNTY COUNCIL—(1) Assistant Pathologist for the White chapel Clinic for the treatment of venereal diseases, Turner Street E. Salary £500 p.a. (2) A.M.O. S. (Grade I) to (a) St James Hospital, Balham S.W. (b) St Stephen's Hospital Fulham Road S.W. Salaries £330 £25 £425 p.a. each (3) A.M.O. S. (Grade II) to (c) Bethnal Green Hospital E., (d) Dulwich Hospital, S.E. (e) St Alfege's Hospital, Greenwich S.E., (f) St Francis Hospital, East Dulwich, S.E., (g) St Giles Hospital, Brunswick Square S.E., (h) St Nicholas Hospital Plumstead S.E. Unmarried (b) (c) (d) (f) (g), and (h) are male appointments only
LONDON HOSPITAL Whitechapel E.—First Assistant to the Gynaecological and Obstetric Department Salary £250 p.a.
MANCHESTER CITY—(1) Deputy Medical Superintendent for Booth Hall Hospital for Children (2) R.J.A.M.O. (male Grade II) for Baguley Sanatorium Salaries £550 p.a. and £250 p.a. respectively
MANCHESTER ROYAL INFIRMARY—Whole time J.A.M.O. (non resident) to the Radiological Department Salary £350 p.a.
MIDDLESBROUGH NORTH ORMESBY HOSPITAL—H.P. (male unmarried) Salary £120 p.a.
MIDDLESEX COUNTY COUNCIL—(1) Assistant Pathologist for Redhill County Hospital Edgware Salary £650-£25 £800 p.a. (2) J.R.A.M.O. for North Middlesex County Hospital Edmonton Salary £250 p.a.
MINISTRY OF HEALTH Whitehall S.W.—Temporary Serologist Salary £850 p.a.
NELSON HOSPITAL Merton S.W.—R.H.S. (male unmarried) Salary £100 p.a.
NEWARK GENERAL HOSPITAL—R.H.S. (male unmarried) Salary £175 p.a.
NORTHAMPTON MANFIELD ORTHOPAEDIC HOSPITAL—J.R.M.O. (male) Salary £150 p.a.
NORTHUMBERLAND COUNTY COUNCIL—A.M.O. (unmarried) at Wooley Sanatorium near Hexham Salary £350 £25 £450 p.a.
NORWICH NORFOLK AND NORWICH HOSPITAL—H.S. (male unmarried) to the Special Departments Salary £160 p.a.
NOTTINGHAM GENERAL DISPENSARY—Resident S. (unmarried) Salary £300-£25 £350 p.a.
NOTTINGHAM GENERAL HOSPITAL—(1) R.C.O. (male) (2) H.S. for Ear Nose and Throat Department Salaries £150 p.a. each
OLDHAM COUNTY BOROUGH—R.A.M.O. (unmarried) for Boundary Park Municipal Hospital Salary £200 p.a.
PENDLEBURY ROYAL MANCHESTER CHILDREN'S HOSPITAL—R.S.O. (unmarried) Salary £150 p.a.
PLYMOUTH PRINCE OF WALES'S HOSPITAL Devonport—J.H.S. Salary £120 p.a.
PRINCE OF WALES'S GENERAL HOSPITAL N.—Hon. Clinical Assistant PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue W.—Hon. Radiologist
RADCLIFF INSTITUTE Ridgway House Street W.—R.M.O. (male unmarried) Salary £250 p.a.
REDHILL EAST SURREY HOSPITAL—J.H.S. Salary £100 p.a.
ROTHERHAM HOSPITAL—Hon. Anaesthetist
ROYAL CHEST HOSPITAL City Road E.C.—(1) R.M.O. Salary £150 p.a. (2) H.P. Salary £100 p.a.
ROYAL FREE HOSPITAL Gray's Inn Road W.C.—(1) Assistant P. in the Department of Physical Medicine (2) Part time First Assistant (non resident) to the Children's Department Honorarium £100 p.a.
RUMFORD URBAN DISTRICT COUNCIL—Temporary Part time M.O.I.I. and Medical Superintendent of the Infectious Diseases Hospital Salary £200 p.a.
ST ALBANS AND MID-HERTS HOSPITAL—R.H.S. Salary £150 p.a.
ST HELENS COUNTY BOROUGH—Assistant M.O.I. (female) Salary £500 £25 £700 p.a.
ST HELENS PROVIDENCE FREE HOSPITAL—H.S. (male) Salary £250
- SALISBURY GENERAL INFIRMARY—H.P. (male, unmarried) Salary £125 p.a.
SHEFFIELD CHILDREN'S HOSPITAL—H.S. (male, unmarried) Salary £100 p.a.
SHEFFIELD CITY—A.M.O. (female) for Nether Edge Hospital. Salary £350 £25 £450 p.a.
SHREWSBURY ROYAL SALOP INFIRMARY—R.H.P. (male unmarried) Salary £160 p.a.
STAFFORDSHIRE COUNTY COUNCIL—R.A.M.O. (male unmarried) for Wordsley Hospital Salary £250 p.a.
STOCKTON-ON-TEES STOCKTON AND THORNABY HOSPITAL—H.P. (male unmarried) Salary £150 p.a.
STOKE-ON-TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY—Hon. Anaesthetist
STOURBRIDGE CORBETT HOSPITAL—H.S. Salary £100 p.a.
SUNDERLAND ROYAL INFIRMARY—(1) C.O. Salary £150 p.a. (2) Two H.S. (males) Salaries £120 p.a. each
SWANSEA GENERAL AND EYE HOSPITAL—C.O. (male, unmarried) Salary £150-£175 p.a.
SWANLEY HOSPITAL CONVALESCENT HOMES Parkwood—R.M.O. (female) Salary £200 p.a.
SWINTON AND PENDLEBURY BOZOLGH—Part time A.M.O. (female) Salary £250 p.a.
TAUNTON AND SOMERSET HOSPITAL—H.S. Salary £100 p.a.
TUNBRIDGE WELLS KENT AND SUSSEX HOSPITAL—H.S. (male) to the Ear Nose, and Throat and Ophthalmic Departments Salary £150 p.a.
VICTORIA HOSPITAL FOR CHILDREN Tite Street, S.W.—C.O. Salary £200 p.a.
WEST END HOSPITAL FOR NERVOUS DISEASES W.—(1) Hon. Psychotherapist (2) Hon. Clinical Assistant to the Out patient Department
WESTMINSTER HOSPITAL Broad Sanctuary S.W.—A.M.O. to the X Ray and Electrical Department
WOLVERHAMPTON NEW CROSS HOSPITAL—Laboratory Technician. Salary £170 £10 £240 p.a.
WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill S.E.—(1) H.P. (2) H.S. Males Salaries £100 p.a. each
YORK COUNTY HOSPITAL—H.S. to Eye, Ear, Nose and Throat Department Salary £150 p.a.
YORK DISPENSARY—Two R.M.O.s (females unmarried) Salaries £175 p.a. each
- CERTIFYING FACTORY SURGEONS—The following vacant appointments are announced Youlgreave (Derbyshire) Fouldhouse (West Lothian) Applications to the Chief Inspector of Factories, Home Office, Whitehall, S.W.1 by April 27

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 46 47 48 49 50 51 52 53 and 56 of our advertisement columns and advertisements as to Partnerships assistantships and locumtenencies at pages 54 and 55

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

APPOINTMENTS

- BINNING Rex MRCS LRCP Honorary Assistant Anaesthetist Royal Alexandra Hospital for Sick Children, Brighton
PAYNE R. Vaughan, M.Chir. FRCS, Hon. Surgeon Maidenhead Hospital
SMITH N. Ross M.B. Ch.M. FRCS Honorary Orthopaedic Surgeon, Royal Victoria and West Hants Hospital Bournemouth
WESTERMAN Arthur M.D. Medical Officer to the Mercers School Holborn E.C.
CERTIFYING FACTORY SURGEONS—P. G. Levick MRCS LRCP, for the Bungay District (Suffolk) G. W. May, MRCS LRCP, for the Ware District (Hertfordshire)

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which must be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

BIRTH

- GRANT NICOL—On April 8 to Greta wife of Dr C. Grant Nicol of Carshalton a daughter

DEATHS

- BOOYSEN—On April 7 after a short illness Dr Cecile Booyesen LRCP MRCS 12 Kent Terrace N.W.1 and of Graaff Reinet South Africa aged 43
JACKSON—On April 6 at a Southsea nursing home John Jule Jackson M.B. B.Ch. beloved husband of Fanny Elizabeth Jackson and son of the late Rev. John Jackson D.D. Ballycastle Interred at Rowan Hamplshire on April 8

found post mortem) died under an anaesthetic. Among the twenty-two deaths associated with pregnancy or confinement the most common cause of death was heart disease. One satisfactory feature is that among the 15 681 patients attending the Council's ante natal clinics only eight cases of eclampsia developed, with one death.

Council Hospital Finance

Figures for hospital costs, as the recent report of a Departmental Committee has shown, can be very misleading especially when they are set out as cost per patient or occupied or available bed because the circumstances of hospitals are so diverse. If such statistics might ever be expected to tally it would be in a series of hospitals all admitting the same kind of cases and all belonging to the same public authority. Yet if one takes the twenty-seven general hospitals of the London County Council for the treatment of acute medical and surgical patients, as set out in the annual report, very considerable differences are revealed. Omitting from the comparison Hammersmith Hospital where the British Post Graduate School is established and which is exceptional in many ways we find the net cost per week per occupied bed ranging from £2 9s 6d at St James Hospital Balham, to £3 9s 6d at Highgate Hospital and at Mile End. The average for the whole range of these hospitals is £3 3s 11d per week leaving out of account any charges for superannuation funds pensions or other establishment charges and annual charges in respect of capital outlay which, if they were apportioned would bring up the cost to £3 17s 7d. Of the weekly figure provisions and stimulants roughly cost 6s 4d surgery and dispensary 4s 3d medical services 4s 4d nursing services 9s 9d general domestic services 9s 11d heating and lighting 4s 11d and laundry 3s 6d. The item for medical services differs remarkably. At St Mary, Islington it is 3s 5d, and at St Pancras 5s 6d. The nursing services also cost much more at some hospitals than at others. At St Peter's the cost of the nursing service per occupied bed is 12s 5d and at St Mary Islington only 7s 10d.

The cost in fever hospitals works out at very much the same total—£3 15s 9d a week—but here again the cost varies very considerably among the nine comparable hospitals from £3 8s 8d at the North Western to £4 9s 8d at the Brook. Nursing costs at fever hospitals are heavy ranging about 2s 6d per week per bed above those at general hospitals for acute cases. The tuberculosis hospitals cost less the average for the group being just below £3 a week and in the children's hospitals the cost is lower still.

Many figures of much interest to statisticians and hospital administrators are to be found in this report. The ambulance service for example is unexpectedly costly amounting to 17s for each patient carried. The total number of articles washed at hospital laundries in a year is over 55 millions and the average cost works out at just under one penny each. The London County Council during the year ending March 31 1936 spent in salaries and wages on its hospital service £2 109 000 as compared with £1 755 000 five years ago and on medical and surgical requisites and pathological services £220 000 as compared with £137 000.

¹ London County Council Annual Report 1935 Vol. 4 (Part II) Public Health—H. P. S. King and Son (1936).

THE HEALTH OF SCOTLAND

REPORT FOR 1936

Commenting on the general health of the people of Scotland the report of the Department of Health for 1936 states

On the whole the gradual trend towards better health continues but there is cause for regret in that the low record death rate for children under 1 year attained during 1935 (76.8 per 1 000 births) was not held during 1936 when the rate rose to 82 per 1 000. High infantile and maternal death rates constitute one of the most stubborn and difficult of Scottish health problems. There is no doubt that nutrition could be further improved by supplementation of diet and other appropriate measures particularly in the case of expectant and nursing mothers and pre school children but examination of unemployed males even after prolonged periods of unemployment shows that their nutritional status, as assessed by body weight or by blood haemoglobin content is not sensibly inferior to that of the employed and does not show any progressive deterioration with duration of unemployment.

Causes of Death

The general death rate for 1936 was 13.4 as compared with 13.2 in 1935. The principal causes of death were heart disease (13 696), malignant tumours (7 907), cerebral haemorrhage (6 365), pneumonia (4 793) and tuberculosis (all forms) (3 663). The report makes special comment upon the large number of deaths of young people from heart disease of rheumatic origin year after year at least 1 000 lives are lost from this cause in Scotland. The number of deaths from tuberculosis shows a slight increase over the low record figure for 1935. Technical improvements have made possible the use of portable x-ray apparatus in areas remote from hospital facilities and for some time a portable plant has been in use in the county of Dumbarton with excellent results. There has been a gratifying increase in the care given to the supervision of active cases of tuberculosis in order to prevent their becoming sources of infection.

Infectious Diseases and Health of Children

Except for a sharp rise in the incidence of measles the prevalence of infectious diseases showed no considerable departures from the normal. In the autumn poliomyelitis was unusually prevalent especially in South East Scotland. Few of the cases came to light before the onset of paralysis but most of them received treatment in large well equipped hospitals and steps were taken to provide adequate after care. The number of school children who received medical treatment under school health schemes has increased from 210 000 in 1925-9 to 291 000 in 1935-6. The report states that although the incidence of physical defects is still too high there has been steady improvement of recent years in the general health of school children. Average weight and height has increased noticeably. In the West Central industrial belt since 1929 the percentage of children suffering from anaemia has fallen from 2.03 to 1.14 and the percentage suffering from rickets from 1.34 to 0.79. With regard to nutrition returns relating to the medical inspection of school children show that of 241 565 children examined during the year the number whose state of nutrition was classified as below average was 11 555 or 4.91 per cent, while the number classified as very bad was 5 000 or 0.18 per cent. This represents an improvement on the preceding year when

development of ante-natal and post-natal services provided by local authorities, and that a number of new maternity institutions are in course of erection or projected. There are now no fewer than 254 maternity and child welfare centres in Scotland and 1085 nurses employed by local authorities as health visitors or school nurses. Four new maternity and child welfare centres were provided during the year, and proposals were approved for five centres to replace those in which the existing accommodation was unsatisfactory.

Housing

Overcrowding in Scotland is relatively six times greater than it is in England. More than 22 per cent of Scottish houses are overcrowded and a minimum of 160 000 new houses is needed merely to relieve these conditions. Fully one-third of all the houses in Scotland are without a separate water closet and a still greater number are without a bath. The surveys carried out by local authorities under the Acts of 1930 and 1935 show that it will be necessary to provide nearly a quarter of a million houses in order to wipe out the slums and to put an end to overcrowding. Contracts for over 27 000 State assisted houses were approved by the Department during the year, an increase of 65 per cent on the total approved during 1935. Owing mainly to the difficulty of obtaining sufficient skilled labour however this increased activity was not reflected in building progress and only about 16 000 houses were actually completed during the year. In the light of the total measure of Scottish housing needs the report concludes an annual output of 16 000 houses by local authorities cannot be regarded as satisfactory.

Water Supply and Drainage

The Department held a number of conferences with local authorities during the year with a view to the establishment of regional water supply schemes under which local authorities in the same drainage area would act in combination for water supply purposes. Considerable progress has also been made with the provision of new sewerage and sewage disposal schemes and the Commissioner for the Special Areas has undertaken to give financial assistance to schemes of this nature whose capital cost totals over £120 000.

Highlands and Islands Medical Service

The Highlands and Islands Medical Service continues to operate upon established lines and approximately £78 000 was expended on this service during the year. Important developments are projected in the provision of new hospitals and good reports continue to be received of the general practitioner and nursing services provided with assistance from the Highlands and Islands Medical Assistance Fund. The aeroplane ambulance has now become a recognized means of transporting urgent cases of illness from the islands to Renfrew.

National Health Insurance

As compared with the previous year the number of persons coming within the scope of the national health insurance scheme rose from 1 933 000 to 1 967 000. Continued improvement in industrial conditions has been reflected in a considerable increase in the contribution income. There was however a large increase in the total expenditure on sickness and disablement benefits which rose from £1 762 000 in 1935 to £1 875 000 in 1936 despite the fact that the incidence of influenza was much lower in 1936 than in the previous year. The Department states that it is difficult in face of all the evidence to the contrary to believe that this increased morbidity is due to any appreciable deterioration in the health of the insured population. It is to be attributed rather to the fact that as public opinion becomes attuned to higher health standards there is an increasing readiness to stay off work during illness and a tendency to remain off longer in an effort to secure full restoration to health.

QUEEN CHARLOTTE'S HOSPITAL

PROGRESS IN RESEARCH AND REBUILDING

No. 10, Downing Street opened its doors to the friends of Queen Charlotte's Hospital on April 6, when the annual meeting took place of the National Council of the Mother-Saving Campaign. Princess MARIE LOUISE presided. The annual report, presented by Mr SEYMOUR LESLIE, stated that during the ten years that had elapsed since the first meeting of the Council over £250,000 had been raised, of which £34 000 had been found since the last meeting. The rebuilding fund now stood at £231 564. Queen Charlotte's was the only large scale combined research and treatment centre in the world for puerperal fever. Though practically unendowed and actually poor for its size Queen Charlotte's was engaged in a vitally important national research for which and for the rebuilding scheme help was badly needed.

Dr T. WATTS EDEN, senior consulting obstetric surgeon to the hospital, spoke on the progress made during the past year and the future plans. He thought that nobody acquainted with the structure in Marylebone Road would be surprised that a rebuilding programme had been undertaken. A beginning had been made by building an isolation hospital and research laboratory on a large new site at Hammersmith. Valuable scientific work, now generally recognized all over the world, had been done by the research staff. Recently there had been submitted for trial a new remedy from Germany for the treatment of puerperal fever, and during the year in which it had been tried it had given very encouraging results. The organization at Hammersmith was an ideal centre for the scientific testing of new remedies—so important if exaggerated claims were to be avoided.

A Housing Problem

The problem now before the hospital, Dr Eden continued, was that of providing accommodation for the 1 500 patients who, metaphorically speaking, were now annually turned away from its doors. The old building could neither be reconstructed nor modernized, the only solution was to rebuild. To begin by building the whole block would be completely beyond present resources, and so a definite start had been made by the erection of a portion which would provide 112 additional beds and this while not enabling the hospital completely to meet the demands made upon it, would go a long way in that direction. There was the difficulty however that when the new block was opened it would require a large staff of nurses and so for the present the top floor would have to be used for their accommodation, reducing the number of additional beds available for patients to 82. It was proposed to use some of the space to provide accommodation for patients of moderate means who could not afford ordinary nursing home fees. Small single bed wards to the number of fourteen would be reserved for patients of this class and attached to these wards there would be a special set of delivery rooms kept completely for private use. The patients would be received at a charge which would cover no more than their actual cost to the hospital. In connexion with the new hospital it would be necessary eventually to provide accommodation for a large number of students. The cost of carrying out the whole scheme would be £500 000. Dr Eden concluded with a reference to Mrs Stanley Baldwin's interest whereby Queen Charlotte's had been in a position during the past two or three years to provide the services of a skilled anaesthetist for every patient confined in the hospital. The hospital had however been in search of a method which could safely be used by midwives and with the co-operation of the British College of Obstetricians such a method had apparently been found.

Mrs BALDWIN added a tribute to the work done by the doctors and nurses at Queen Charlotte's especially for the amelioration of suffering in childbirth. She also sug-

gested that Queen Charlotte's through its ante-natal clinic should carry out experiments on the bearing of nutrition on safe maternity. It was mentioned by Mr. H. B. Stokes, secretary-superintendent of the hospital that a certain number of anaesthetic machines of the Minnitt type but incorporating improvements by Mr. Rivett and known as the Queen Charlotte's model had been distributed to the districts, and were being used by midwives with great success.

THE BOURNEMOUTH TYPHOID OUTBREAK

JUDGE COTES PREEDY'S REPORT

The following is the report by His Honour Judge D. Cotes-Preedy, K.C., M.A., LL.M., L.S.A., on the epidemic of typhoid fever in Bournemouth and neighbourhood in the late summer of 1936. We have inserted cross-headings.

Nature of the Inquiry

At the joint invitation of the boroughs of Bournemouth, Poole and Christchurch and the Anti-Typhoid League I undertook to hold an inquiry into certain allegations, criticisms and demands of the League in connexion with the outbreak of typhoid fever which occurred in the said boroughs during August and September last.

I sat at the Town Hall, Bournemouth, on February 3, 4, 5, 12 and 13, and at the conclusion of the inquiry reserved my determination of the matter. I would point out that in no sense did the inquiry proceed on formal or legal lines, and by general consent I did not strictly enforce the rules of evidence. The extensive latitude allowed to the spokesmen on behalf of the League and the disclosure of all material facts requested by me from the officials of the boroughs will I trust reassure all interested and concerned that the inquiry was exhaustive.

Previous to the sittings the Anti-Typhoid League formulated in writing certain allegations and demands, and to these the three councils replied in writing. It was mutually agreed between the contending parties that the sittings should be held *in camera* and with this decision I agreed. In consequence I feel I am able to set forth the view I have formed in a manner conducive to brevity and without detailed examination of the evidential value of the information laid before me. I trust this course will be less likely to cause distress or annoyance to any concerned or in any way inflame any scores caused by the public agitation before the inquiry was decided upon.

At the outset I would like to make it clear that it was no part of my duty to decide as to the source of the typhoid fever outbreak—this doubtless will be amply dealt with by the Ministry of Health in its forthcoming report. But the inquiry proceeded on the assumption that the source of the trouble was to be found in milk supplied by a certain dairy.

The Allegations

Mr. S. H. Wall, chief spokesman on behalf of the Anti-Typhoid League, and who discharged a difficult task with ability, insisted that the League had not come forward to emphasize private grievances. It did not seek to blame individuals but rather to condemn regulations under which the latter acted, which it contended had caused the uneasiness that existed. The vital allegations, said the speaker, relied upon by the League were that the councils, having ascertained that there were cases of typhoid in their area, had failed in

Other allegations described as important were:

- (i) that the councils should have left in their homes patients for the care and isolation of whom reasonable facilities existed in their own houses in order to be able to remove immediately to isolation hospital patients for the care and isolation of whom no reasonable facilities existed in their own homes, and that in consequence certain patients for whom no facilities existed in their homes were unable to obtain immediate admission to isolation hospitals or were compelled to undergo long journeys to isolation hospitals in other areas;
- (ii) that improper pressure was brought to bear on persons with facilities at home to induce them or persons in their charge to be removed to isolation hospitals; and
- (iii) that orders under the provisions of the Public Health Act 1875 were obtained or sought to be obtained without the necessary conditions precedent to the granting of such orders being fulfilled.

Though not set forth in the allegations and demands, Mr. Wall, in the course of his speech, alleged that the councils had concealed the true facts of the outbreak in deference to the desire of the majority of people who were financially interested in the district. He added that he did not suggest any deliberate plot by anybody in particular, but described the situation as that of an atmosphere which was created to save the towns' revenue.

Early in the inquiry it was clear that the allegations had little or no relation to the borough of Christchurch, and I was able to release the officials of that borough from participation in the inquiry.

Questions of Responsibility

In the first place it should be borne in mind that from the onset of the outbreak the responsible officials of the boroughs had the assistance and guidance of the Ministry of Health in the person of the late Dr. Shaw, the well-known epidemiological expert, whose recent death is greatly to be deplored. I am satisfied that his views and advice were accepted and acted upon by the local officials, although the latter admitted their responsibility for any orders or directions that were given.

Secondly, I would point out that it was established that the symptoms of paratyphoid and typhoid are extremely difficult to differentiate in the early days of the disease, while in addition there are certain ailments of a less serious import, such as food poisoning, which are liable to occur during the summer and autumn months and present similar symptoms at the outset.

Again, it is important to realize that the laboratory tests for paratyphoid and typhoid do not produce immediate results leading to certainty. Though perhaps of little importance, it appears that "paratyphoid" and typhoid are often eluded together under "enteric fever" in the returns of the Registrar-General, which may tend to confuse the public.

In my view once the situation was established there was no endeavour on the part of the authorities to conceal the true facts about it

Nursing in Hospital or at Home

If the charges (iv) and (v) had been in any degree supported by reliable evidence they would possibly have called for serious consideration but in my opinion there was no evidence given tending to establish such allegations. The fullest information was afforded to me showing that the sudden and serious difficulty of accommodating a large number of patients was tackled with great efficiency by the medical officers and the Health Committees.

Under the advice of the Ministry of Health's representative isolation of patients in hospital was urged and in my opinion rightly so. Naturally one is able to understand and sympathize with the feelings of anxious relatives for the patient's own home to be used but from a public welfare point of view there seems to be no doubt isolation in a hospital under strict and careful supervision is the more desirable course. It is not without interest in this connexion to note that the evidence showed that in Poole out of 197 cases treated in hospital twelve died and that of thirteen cases nursed in their own homes five died. But I do not suggest any certain deduction can be drawn from these figures.

In one case in Poole it appeared that the medical officers strongly urged upon those in charge to allow the patient to be removed which was strongly resented and that an application for a magistrate's order ordering the removal was unsuccessfully made. Apart from this case which in my view did not exhibit undue pressure no reliable testimony was forthcoming showing that such pressure had been exerted over relatives or patients themselves. From several witnesses I received favourable accounts of their treatment while in hospital.

Vindication of Officials

On reflection I feel sure that the members of the Anti-Typhoid League will share my regret that the charge was ever put forward alleging that the true facts concerning the outbreak were concealed owing to the financial interest which the majority of the inhabitants had. There was not a scintilla of evidence put forward to support such a serious allegation. Moreover I am confident no one could believe that officials responsible for the health of the community would lend themselves to such a proceeding. There were other criticisms made by the League but they were of a minor character and do not call for serious consideration.

I have no hesitation in saying that the inhabitants of the three boroughs should realize that Dr C. F. Pedley, deputy medical officer of health for Bournemouth, Dr R. J. Maule, medical officer of health for Poole, Dr Walter Asten, chairman of the Bournemouth Health Committee, and the other officials of the boroughs grappled with a sudden and serious situation with efficient vigour and a keen appreciation of the proper steps to take in order to deal with the emergency that faced them. They deserve the confidence of their fellow citizens.

In conclusion I would like to emphasize the fact that all who took part in the inquiry evinced an earnest desire to sift thoroughly all the matters in question and with the ultimate benefit of the three boroughs in mind. This heartens me to believe that any bitterness engendered before the hearing may have been permanently dispelled. I must thank all those who addressed me and others who gave me their kind assistance during the inquiry.

D. COTES PREDD

April 4 1937

In Belgrade there is one doctor to every 300 inhabitants. There is a total of 789 male and 171 female practitioners. The economic conditions under these circumstances are very unfavourable, and are believed to account for the high mortality in the medical profession especially among the younger doctors.

Reports of Societies

ACTIVE IMMUNIZATION AGAINST DIPHTHERIA

At a meeting of the Section of Epidemiology and State Medicine of the Royal Society of Medicine on April 9 with Surgeon Rear-Admiral S. F. DUDLEY in the chair, a lecture was given by Dr CLAUS JENSEN, director of the department of biological standards, State Serum Institute, Copenhagen, on active immunization against diphtheria with special reference to a combined subcutaneous and intranasal method.

Dr Jensen said that it was with diffidence he spoke to an English audience on a subject on which so much excellent work had been done in this country, especially under the aegis of the Medical Research Council. In Denmark the actual number of individuals inoculated against diphtheria was relatively small owing partly to the fact that the number of cases of diphtheria had been low for some years, with no real epidemics, and also to the unwillingness of the authorities of the State Serum Institute to endorse propaganda for mass immunization until a thoroughly efficient and convenient method was available. In some countries the three-injection method of Ramon had been tried, but for mass immunization it had several drawbacks. From the point of view of practical administration it was desirable to obtain a diphtheria antigen of such marked immunizing power that a single injection would confer a sufficient degree of immunity without causing undue local or general reactions. Much work had been done in recent years towards making effective, easy and cheap this ideal of the public health administrator.

In Denmark the preparation chosen was purified toxoid with aluminium hydroxide. The toxoid used was a diphtheria toxin detoxicated by formaldehyde and heat, and put through a thorough process of purification which removed most of the unspecific more or less decomposed proteins, salts and other substances present in the crude toxoid. Before distribution the purified diphtheria toxoid was mixed with a sterile suspension of aluminium hydroxide. For details as to the properties of this substance he referred his audience to the work of Schmidt and Hansen (1933 *Acta path et microbiol Scandinavica* Suppl. 16). For active immunization by a single subcutaneous injection from 1 to 1.5 ccm of this preparation equal to 35 to 50 flocculation units of the purified toxoid stimulated antitoxin production in 96 to 98 per cent of cases. In children below 7 years of age the injection of antigen seldom caused reactions. In 82 per cent there was no reaction in 11 per cent a very slight local reaction and in 7 per cent moderate to strong local reactions or possibly some fever. Older children showed more often a mild local reaction within the first twenty-four hours after the injection, appearing as a little swelling and redness at the site or sometimes a stronger local reaction accompanied by a moderate rise of temperature. In adults such reactions were to be expected more often but they lasted as a rule only for a day or two and no serious condition resulted. The antitoxin production might begin three to four days after the injection of antigen and as early as two weeks afterwards immunity might be well developed. From experience so far gained it appeared as if the immunity to diphtheria acquired by the use of this antigen preparation lasted for a considerable time. The effect of increasing the dose up to as much as 400 flocculation units had been studied but no significant increase in response was found. Doses smaller than 35 units had not been tried.

Intranasal Instillations

Attempts to improve the effect of the single injection method by increasing the dose given had not been very

satisfactory especially from the point of view of duration of immunity in the group of patients who responded most poorly. Therefore attention had been turned to a combination of subcutaneous and intranasal methods of administration. In the first place Dr Jensen detailed some results of the use of the combined method in experiments on rabbits. The antitoxin response to nasal instillations of increasing doses of purified toxoid showed that in previously immunized rabbits when compared with rabbits untreated the nasal method acted as a potent secondary stimulus. The purified toxoid used intranasally was absorbed very readily but the effect was too poor to permit of dependence on the nasal method alone. In rabbits the single subcutaneous injection of the purified toxoid was followed four weeks later by three or six nasal instillations at stated intervals and this was found to produce even in otherwise poor responders an excellent effect and duration. The toxoid could be given intranasally without risk in big doses and could be applied at the most opportune moment. Even the shortening of the interval to two weeks instead of four did not prevent the nasal instillation from acting as a potent secondary stimulus. The rabbit experiments were undertaken in such a way that parallel investigations could be made in children the doses in the rabbits being fixed in most cases at one tenth of the dose intended to be used in the human subject. For both the subcutaneous injection and the nasal instillation preparations of the highly purified toxoid were used but for the nasal drops the diphtheria prophylactic was more diluted. Dr Jensen showed tables indicating the good and uniform response in groups of rabbits.

Clinical Experience

The investigation was then transferred to large groups of children in Copenhagen institutions and to nurses. It was shown again that the protection against diphtheria afforded by a single injection under the skin of the purified diphtheria prophylactic with aluminium hydroxide was reinforced and prolonged considerably when four weeks after the injection the children were given a few drops of a highly purified and diluted prophylactic intranasally. This treatment was repeated one week later and two weeks later so that each child received three instillations altogether. The result showed that the group of poor responders were transformed into good ones. In at least 96 per cent of the cases the antitoxin production was 0.1 unit or more six weeks after the injection and nasal reimmunization one year later gave a still better response. The reactions to the original injection were as already indicated but there were no reactions to the intranasal instillations.

In the next place 596 probationers were examined and thanks to their generous co-operation three different methods of immunization were tried. Some were subjected to exclusively nasal instillation of the purified toxoid others received repeated subcutaneous injections of Schmidt's toxoid and 319 were immunized by the combined method the dosage being the same as for the children—namely for the injection 1 to 1.5 ccm of the purified toxoid with 10 volumes per cent of the aluminium hydroxide, followed, after an interval of four weeks by three or six nasal instillations (25 flocculation units) at stated intervals. Antitoxin production in 94 per cent was more than 0.01 unit, and in 85 per cent it was more than 0.1 unit only 1 per cent of the cases were refractory. In rare cases there were reactions to the intranasal instillations in the shape of transitory headache, nausea, or fatigue.

Emergency Prophylaxis

These investigations had shown that it was possible to obtain very considerable immunity by purified Schmidt toxoid, one subcutaneous injection being followed by

three intranasal instillations. This method had now been made obligatory for nurses in one of the large Danish hospitals. He was aware that the social and economic conditions in Denmark could not be compared with those in England but in his country, in institutions such as schools the practical administration of such a procedure was quite easy to arrange collectively, and in the family, in most cases the instillation could be given by the child's mother after instruction. In infants and children up to 2 or 3 years of age the nasal instillations could easily be administered during sleep. He was convinced that intranasal applications as a harmless means of reviving and prolonging the active immunity to diphtheria conferred by the subcutaneous injection could be the subject of successful propaganda. The method avoided the necessity for more than one subcutaneous injection, and consequently the child was spared possible reactions. He strongly recommended that in children below 6 years of age the nasal instillations should be repeated every year in September and at the beginning of and during a diphtheria epidemic, this applied also to older children who previously had been immunized as the protection against diphtheria was in this way reinforced and prolonged.

While immunization by the nasal route alone gave a poor result and should not usually be relied on, yet in emergency prophylaxis at the outbreak of a diphtheria epidemic it had a role to fulfil. Dr Jensen gave the following scheme for emergency prophylaxis.

1 Individuals not immunized previously

(i) immediate passive immunization of all possible contacts (members of households, institutions, schools, etc. where cases had occurred) by anti-diphtheric serum from goat or sheep dosage 600 units in children up to 5 years 1,000 units in children up to 10 years and 1,500 units in older children and adults given intramuscularly.

(ii) Simultaneous combined subcutaneous and intranasal immunization according to the method already set out but with an interval of only two weeks between the single injection and the first nasal dose.

(iii) Nasal immunization of specially exposed children above 15 years of age and adults by nasal instillations six applications of 25 flocculation units over a period of twelve days.

2 Individuals immunized previously immediate nasal re-instillations at all ages

Discussion

The brief ensuing discussion was mostly in the nature of compliment to Dr Jensen and his fellow workers. Surgeon Rear Admiral DUXLEY said that if it was worth while to protect the country from diphtheria it was worth while maintaining the immunity and to do that it was necessary to reinforce it at various periods after the original injection. He thought that from the point of view of the public health services it would be of great advantage to be able to follow up the primary injections by nasal instillations—though perhaps the mothers should not be trusted with the procedure as they were in Denmark. This purified aluminium toxoid seemed to have less objections to it than some other preparations. Professor W. W. JAMESON thought the method would be feasible with the staff of health visitors such as local authorities possessed. Dr ALEXANDER JOE expressed some scepticism about nasal immunization. Sir HENRY DALE cited the parallel of insulin. He agreed as to the difficulty of putting these procedures into the hands of parents. On the other hand who would have supposed some fifteen years ago that there would now be thousands of people of all classes in this country injecting themselves safely two or three times a day with insulin? If this could be done successfully with one preparation it might be done with another.

LOBECTOMY AND BRONCHOSCOPY

At a meeting of the Liverpool Medical Institution on March 18, with the president Professor R E KELLY in the chair, Mr HUGH REID read a paper on lobectomy.

Mr Reid said that he proposed to outline the common indications for and the complications following lobectomy, and to describe the technique which was illustrated by means of a colour film. Only recently had the mortality following this operation been so lowered as to bring it within the sphere of practical surgery. Brunn described the one stage operation in 1929 and although various refinements had been added his fundamental principles had not been altered, this was the method adopted by the speaker. It was pointed out, however, that the one stage operation had not been accepted by everyone for every case of lobectomy. Alexander, for instance made out a very good case for the two stage method, particularly as regards complications. The technique of the operation was then described in detail and the various complications which might ensue were discussed. Mr Reid said that the greatest field for the operation was in bronchiectasis and in carcinoma of the lung. Regarding the fate of the cavity left after the operation and the reaction of the remaining lobe or lung, it had been shown that if the whole lung was removed from one side the hemithorax filled up with a reticulated fibrin while the remaining lung increased in size by hyperplasia and hypertrophy without emphysema and the mediastinum was pushed over, the ribs on the affected side falling in, and the diaphragm rising in an attempt to obliterate the cavity. If only one lobe was removed it was surprising to notice that after a few days the remaining part of the lung had enlarged to obliterate the cavity completely.

The Time to Operate

In the discussion which followed Dr N B CAPON spoke of the great benefit which a patient of his had received from the operation described, and referred to other cases in which still more extensive lobectomy had been successfully performed. The cases required careful diagnosis and selection with full investigation of the supposedly unaffected lobes in order to avoid disappointments. A satisfactory course of medical treatment with postural drainage should be given a thorough trial before operation was undertaken. The ideal was, of course, to prevent bronchiectasis whenever possible, and more positive efforts should be made to attain this.

Dr ROBERT COOPE agreed that to advise lobectomy was a serious responsibility. The physician in charge of a patient with bronchiectasis was in a difficulty. On the one hand, the operation was a severe one with a high risk though surgeons skilled in lung surgery were now achieving far better results especially in the young with the development of their technique. On the other hand, the natural history of the disease made it certain that many a patient with bronchiectasis though reasonably well at the moment, would in perhaps five seven or ten years time be a distress to himself and to those about him. To wait until the patient and his friends were desperate before advising operation was fair to neither patient nor surgeon. By that time an originally unilateral bronchiectasis might have become bilateral widespread damage to the lungs might have occurred and in any case the patient would be a poor subject for surgery. If operation was to offer any chance of cure someone with expert knowledge of the disease had the duty of advising it after full careful and unhurried consideration at a time when the patient was fit enough to have a good chance of recovery from an extremely severe operation. That was at a time when there was a temptation to carry on with merely palliative treatment for while the doctor knew the course and prognosis of the disease the patient and his friends could hardly be expected to grasp it. With the modern advance in lung surgery the physician could feel reasonably happy in passing on young and otherwise

healthy subjects to the competent thoracic surgeon, where older patients were concerned there was still need for the utmost caution in weighing up the pros and cons of surgical treatment with a bias at present against it. In spite of occasional recorded cases of lobectomy or total pneumonectomy for bronchial carcinoma both physicians and surgeons would agree from actual experience that the number of cases suitable for this procedure must be very few indeed.

Mr H V FORSTER said that Frenckner of Stockholm had described a close fitting bronchial catheter and an ingenious instrument called the "spiropulsator" which could be used for producing positive pressure narcosis in one lung alone. These instruments might be of use in the operation of lobectomy or pneumonectomy. The laryngologist had been a pioneer in the study of lung disease by bronchoscopy but he saw how these aids were now being employed by the physicians or surgeons themselves. Possibly the bronchoscopist by helping to avoid pulmonary atelectasis in children would be able to contribute to the prevention of established bronchiectasis.

Bronchoscopic Clinics

Mr J E G MCGIBBON and Dr E T BAKER BATES contributed a joint paper on the value of a bronchoscopic clinic. The necessity and difficulties of accurate diagnosis in certain cases of pulmonary disease, even after the most careful clinical examination and investigation, was stressed. The fact that the bronchoscope which was originally employed forty years ago, was very little utilized owing to the special technique required the need for team work and the fact that it lay between the province of the laryngologist and chest physician, were also noted. If bronchoscopy was properly carried out under local anaesthesia it was a safe and harmless procedure even in the presence of serious lung disease. The work of and the methods employed at the bronchoscopic clinic of the Royal Southern Hospital Liverpool were then reviewed. The number of foreign body cases was small. Suspected bronchial neoplasm pulmonary suppuration as in bronchiectasis and lung abscess, dyspnoea due to tracheal and bronchial obstruction, collapse of the lung, recurrent haemoptysis of obscure origin, and certain doubtful cases of asthma, all called for bronchoscopic inspection and appropriate treatment when possible, and formed the bulk of the work of the clinic. Foreign bodies were classified as radiologically opaque and radiologically non-opaque and with regard to their composition as organic and inorganic. The clinical features of these types were described. The organic foreign bodies were dramatic and serious, and called for immediate removal. Several cases of non-opaque organic foreign bodies were encountered which had previously been thought to be lung abscess, unresolved pneumonia and new growth. Bronchoscopy revealed an unsuspected foreign body, removal of which brought about resolution of the lung condition and cessation of symptoms in the majority of cases. The necessity for careful investigation whenever possible by direct and lipiodol x-ray examination was emphasized. A further point was that undue haste in attempts at unskilled removal proved as great a source of danger as the foreign body itself.

Pulmonary suppuration in the widest sense was next discussed. It was necessary to examine with the bronchoscope all cases of unresolved pneumonia localized non-tuberculous pulmonary fibrosis lung abscess and bronchiectasis in order to exclude suppuration and pneumonitis distal to simple and malignant bronchial new growths and foreign bodies. The existence of true unresolved pneumonia and localized non-tuberculous pulmonary fibrosis was rare in their experience and in most cases referred to the clinic with this diagnosis an aetiological factor such as a foreign body or new growth had been found. The diagnosis of unresolved pneumonia or localized pulmonary fibrosis should only be accepted with caution after a process of exclusion especially in the adult. The results of broncho-

scopic aspiration and failure in chronic lung abscess and bronchiectasis were in their experience disappointing and no better than that obtained by postural drainage when properly carried out.

Simple new growths were rare. All cases discovered during life had been revealed by bronchoscopy and what had been thought to be an extremely rare condition might prove to have a much higher incidence when bronchoscopy was more generally employed in obscure lung lesions. The majority of these growths were curable by endoscopic methods: simple removal, diathermy and radium—if left untreated they ultimately gave rise to serious secondary effects. Angiomata and fibromata had been seen and treated successfully at the clinic. Malignant bronchial new growths were common by bronchoscopy; the diagnosis of these cases could be made beyond doubt. In cases with suppuration distal to a bronchial occlusion by growth dilatation with bougies of a carcinomatous stricture, removal of exuberant portions of growth by biting forceps and the introduction of radon seeds or a radon tube in certain cases lead to re-aeration of the collapsed portion of lung and drainage of secretions. By such means the complicating suppurative lesion was usually relieved, the toxæmia lessened and the sufferings of the patient minimized. Cure of course was impossible at this stage and probably would remain so in view of the situation of the growth and its mode of spread into the lung parenchyma and mediastinum.

The early cases of bronchial carcinoma were next discussed—the clinical and radiological findings were negative and the patients looked well. Recurrent hæmoptysis was the presenting symptom. If any successful treatment were possible for this terrible condition its success would depend on early diagnosis and for this bronchoscopy was essential. A case suitable for lobectomy had not yet been seen. In some cases the diagnosis of malignant disease had been disproved by bronchoscopy and foreign bodies removed. The value of the method of examination in obscure hæmoptysis was illustrated. Except in cases of emergency bronchoscopic examination should always be preceded by complete clinical and radiological examination including lipiodol bronchography. The cases should be followed up so that the significance of unusual findings might be assessed as it was not always possible to remove suitable fragments for pathological examination. Bronchoscopy would always mean teamwork, necessitating the closest liaison between laryngologist, physician and radiologist in a well equipped clinic to which cases would be sent from a wide area. The paper was illustrated by radiographs, bronchoscopic reproductions and a cinematograph film of the technique of the commoner bronchoscopic procedures.

General Discussion

In the discussion which followed Mr H. V. FORSTER said that only on one occasion had he seen a peanut removed from a bronchus and the patient died. He used to wonder why so many peanut inhalation accidents occurred in America until he was informed that peanut eating gymnastics formed part of the expression of excitement of spectators at baseball matches. He agreed with Dr Baker Bates that an inhaled tooth was also a particularly undesirable type of foreign body. He would like to understand better the value of diathermy cautery as used in a bronchus when compared with the insertion of radon seeds in cases where the obstructing growth had not been proved to be malignant. Some cases after operations on the upper abdomen by the general surgeon used to develop either pneumonia at least in his early student days. The inhibition of diaphragmatic respiration had something to do with this. The laryngologist rarely saw such complications in spite of the greater danger in his operations of inhalation of blood and secretions. He had not met a case of lung abscess after such operations in the practice of his teachers and fortunately so far had been spared this complication in his own

Further, he had found the asthmatic patient stood ether narcosis wonderfully well, though he had seen an asthmatic paroxysm take place under nitrous oxide.

Mr COURTENAY YORKE said that in his opinion the principal use of the bronchoscope would always be for the removal of foreign bodies of which very many were not opaque to x rays and were quite unsuspected. He felt dubious as to the value of radon seeds in the treatment of bronchial carcinoma. The inaccessibility of the lower edge of the growth and the limitations of radon seeds, both in range and in duration of action made him feel that on balance the possible temporary relief would hardly outweigh the risk and discomfort involved in their insertion. He referred to the fact that malignant disease in the larynx was a hundred times commoner in men than in women and thought on that account an inquiry as to the relative sex incidence in bronchial carcinoma would be very interesting and might raise important questions in regard to aetiology. Dr V. COTTON CORNWALL said that in investigating the cause of hæmoptysis bronchoscopy was sometimes the only means by which a correct diagnosis could be made. He quoted a case at Fazakerley Sanatorium where all investigations, including bronchography had been negative and bronchoscopy revealed a bronchial carcinoma.

STONE IN THE UPPER RENAL TRACT

At a meeting of the Section of Surgery of the Royal Academy of Medicine in Ireland on March 12 with the president Mr A. A. McCONNELL in the chair, Mr J. SWIFT JOLY read a paper on the treatment of stone in the upper urinary tract.

Mr Joly began by pointing out that no general rule could be laid down: each case must be judged separately, and the treatment be suited to the conditions found. He described four conditions: aseptic lithiasis, infected lithiasis, bilateral stone and calculous anuria. In aseptic lithiasis the stone was usually small, round and single and commonly composed of calcium oxalate—it was found in a kidney the function of which was well preserved until impaction in the pelvis occurred, when the stone became triangular in shape and renal function was impaired. For the removal of this type of stone the most suitable operation was pyelotomy. The rarity of branched calculi in cases where the urine was sterile was mentioned: the only example of this had been a cystine calculus. The danger of attempting pyelotomy was stressed in cases where for various reasons proper access could not be gained to the pelvis. The treatment of ureteric calculi was discussed and valuable rules for their management laid down: wounds in the ureters and pelvis were always sutured in these cases. Infected lithiasis was more serious when of the coecal type rather than when due to *B. coli* while a proteus infection was the worst; the reasons for this grading were given. With good function and mild infection removal of the stone was advisable. When the kidney was severely damaged and its fellow was uninfected Mr Joly favoured nephrectomy, and indicated the importance of Hinman's law of renal counter-balance. In cases of bilateral infection, in addition to removal of the stone the value of temporary nephrostomy was emphasized. He again mentioned the value of Hinman's law in speaking of bilateral stone and stressed the need for operating on the second side as soon as possible after the first operation. In calculous anuria he advised as a first step in all cases an attempt to pass a ureteric catheter. If this proved successful the cases could be thoroughly examined and a set operation be planned and performed under good conditions. If catheterization failed temporary nephrostomy should be performed on the side thought to be last obstructed.

Sir ARTHUR BALL said that the question of recurrence of stone had always been an anxious one, but he thought that this was only likely in infected kidneys. In one

case in which he had practised the incision advocated by Mr Joly a very unpleasant secondary haemorrhage had occurred. Mr T J D LANE said that he was sceptical of a report of the presence of *Staphylococcus albus* when the urine was clear. Professor H S MEADE referred to cases of stone in the lower end of the ureter and to the advisability of removing the kidney in infected cases with very poor kidney function. He mentioned a case in which the whole kidney was a mass of calcareous deposit.

Mr J H COOLICAN said that it was difficult to know how far to carry investigation in cases where a suspicion of renal stone arose but in which there was not much clinical evidence. Mr J C FLOOD doubted the justifiability of retrograde pyelography in the absence of infection in one kidney. It seemed to him that there was some doubt about the law of renal counterbalance. Dr G C DOCKERAY referred to the occasional difficulty in deciding on operation. Mr SETON PRINGLE thought it difficult to understand how a kidney could contain a stone as large as the one which Mr Joly had shown and yet remain aseptic when a stone had been present for any length of time he always considered it septic.

At the March meeting of the Society of Public Analysts and Other Analytical Chemists with the president Dr G Roche Lynch in the chair, a paper on the properties of calciferol was contributed by Messrs F W Anderson, A L Bacharach, and E Lester Smith. In this the physico-chemical properties of seventy three samples of calciferol prepared under standardized conditions were reviewed. It was suggested that the melting point should be described as 'unsharp 116° C'. Nearly 80 per cent of the figures for specific absorption in the ultra violet region fell within the anticipated range based on experimental error but the figures for optical rotation showed unexplained deviations outside the expected range. Nevertheless all the samples fell well within the range laid down in the 1936 Addendum to the *British Pharmacopoeia* 1932 and in the authors' opinion that range was unnecessarily wide.

M. Pepere (*Arch. ital. Chir.* vol 45 Fasc 1, 1937, p 57) as the result of experiments on rabbits comes to the following conclusions. Apart from other morbid factors which may affect it the blood pressure during operations is directly dependent on the type of anaesthetic employed, the gravity of the operation and the site where it is performed. Of the various types of anaesthesia the local regional type causes the least change in pressure while all the others cause a fall of pressure which may or may not be preceded by a temporary hypertension. There is a considerable hypotension following splanchnic and spinal anaesthesia which is less marked in the case of ether than of avertin. The operations which are chiefly responsible for hypotension are those conducted on the abdominal viscera especially those situated in the neighbourhood of sensitive nerve centres. Laparotomy in itself when the intestines are exposed to the air but are still contained in the abdominal cavity does not cause any appreciable change in the blood pressure whatever anaesthesia is employed whereas manipulation and evisceration of the intestines under local anaesthesia causes a sudden and considerable rise of pressure followed by more or less hypotension. Traction on the stomach, liver and kidneys causes a rapid and considerable fall of pressure which may last for a certain period after the stimulation has ceased. Operations on the thorax and especially on the pleural cavity cause a fall of pressure which may prove fatal. Trephining of the parietal bone under local anaesthesia causes an appreciable fall but not a state of hypotension amounting to shock. Operations on the true pelvis cause only a very slight change except when they are prolonged and necessitate traction on the intestines and mesentery.

Local News

ENGLAND AND WALES

Welsh Temple of Peace and Health

On April 8 Viscount Halifax, Lord Privy Seal, laid the foundation stone of the Welsh National Temple of Peace and Health in Cathays Park, Cardiff. The site was presented by the Cardiff City Council and Lord Davies has given the munificent sum of £60,000 for the erection of the building. It will accommodate the administrative staff of the King Edward VII Welsh National Memorial Association founded by Lord Davies for the prevention, treatment and eradication of tuberculosis in Wales, and it will also serve as the headquarters of the Welsh Council of the League of Nations Union. In the course of his address Lord Halifax said that the new building would symbolize the dedication of thought to two great purposes—national health and international peace—and he dwelt on the important part occupied by public health in enabling the people of this country to discharge worthily the duties of citizenship. Lord Davies remarked that as Welshmen they might well feel proud that the first edifice specifically designed and built in this country and dedicated to the cause of international justice and peace would be erected on Welsh soil. After the ceremony a luncheon party was given by the Lord Mayor of Cardiff in the City Hall.

Extensions at Devonshire Hospital, Buxton

The Devonshire Royal Hospital, Buxton, the dome of which was said to be the largest unsupported span in existence, has decided upon a large programme of further development. This includes the extension of the thermal departments, with additional bathing accommodation and rest rooms, new wards for cases requiring prolonged treatment, more adequate reception and consulting rooms, and the modernization of the existing building. The cost is estimated at from £30,000 to £35,000, and an appeal is made on the ground of the great work—national, not local in character—which the hospital has done during nearly eighty years, and—a point to which Lord Horder draws attention in a foreword to the brochure which has been issued—its value as a unit for treatment and research should the National Campaign against Rheumatism be successful. This hospital of 300 beds the largest of its kind in the kingdom, treats some 4,000 patients annually, and the number of treatments—thermal, massage and electrical—administered every year is close upon 100,000. It is intended for cases of rheumatism subacute and chronic, gout, sciatica, and neuritis in all their forms, fibrositis, rheumatoid and osteo arthritis, spondylitis, and crippling conditions arising from these diseases or from strains, fractures and other causes all of which are capable of being benefited by the Buxton waters. An annual report of the hospital for 1867 recently came into our hands. This was nine years after the hospital was built or rather adapted to hospital use from a range of magnificent ducal stables. There it was stated that during its first nine years 9,574 patients had been under treatment of whom 8,460 had been treated beneficially. Six sevenths of the cases were of some form of rheumatism the others being such as are ordinarily met with in hospitals. More than 8,000 cases of rheumatism embracing every single variety of this obstinate disease were extensively relieved by the remedial agency of the Buxton mineral waters. The following interesting remark is added: 'The great cost of the hospital is due to the unrestricted dietary of animal food and to the general excellence of the food that is provided and the amount of benefit afforded must be partly referred to this circumstance aiding by so much as this must do the valuable.

medicinal effect of the air of the mountain limestone and the restorative and curative power of the nitrogenous and saline waters. The number of patients benefited since then has been multiplied twentyfold and the opportunities before the hospital are greater than ever given the public support which it deserves.

Central Midwives Board

The Central Midwives Board for England and Wales has unanimously re-elected Sir Comyns Berkeley as its chairman for the year ending March 31, 1938. Mr John Bright Banister consulting obstetric surgeon to Queen Charlotte's Hospital and obstetric physician to Charing Cross Hospital and Mr Eardley Holland obstetric and gynaecological surgeon to the London Hospital have been appointed to fill vacancies in the membership of the Board. The remaining members all of whom have been re-appointed until March 31, 1938 are Counsellor R. W. Brose, Dr J. J. Buchan, Miss K. V. B. Conti, Dr W. Allen Daley, Miss A. Davies, Miss E. E. Greaves, Mr A. B. MacLachlan, Miss A. A. I. Pollard, Lady Richmond, Miss K. J. Stephenson and Mr Arnold Walker.

Rheumatism Research in Leeds

The second annual report of the Leeds Advisory Committee on Research into Rheumatism contains a reference to a new appointment made by the Leeds Public Dispensary and Hospital where members of the honorary staff have been actively working for some time on investigations. A full-time research post has been instituted there and Dr William Goldie who holds it has been granted by the University the status of research fellow. Dr Douglas H. Collins the research Fellow of the Advisory Committee was sent by it to the United States for four months in 1936 to conduct an extended tour of the medical centres in that country where the rheumatic diseases are being specially studied and treated. He has now been given charge of ten beds in the Harrogate Royal Bath Hospital in order to conduct detailed investigations into methods of treatment. In the present report Dr Collins stresses the importance of basing the investigation of rheumatism and chronic arthritis on an indisputable pathological basis. He remarks that the development of this side of the work demands some new apparatus and further technical assistance for the specialized pathological examination of bones and joints. Papers on these and kindred topics have been read to medical societies during the period under review.

SCOTLAND

Discoverer of Ether Anaesthesia

A bronze memorial plaque to Crawford Williamson Long, the reputed discoverer of ether anaesthesia was presented on March 30 to the Royal College of Surgeons of Edinburgh by the Southern Society of Clinical Surgeons, U.S.A. The presentation was made by the United States Consul in Edinburgh, and the plaque bears a bas-relief of Dr Long with the dates 1815-1878 and the inscription, "Discovered ether anaesthesia at Jefferson Georgia March 30 1842." Mr Henry Wade President of the Royal College of Surgeons who received the plaque, said that the Southern Society of Clinical Surgeons visited Edinburgh last June, under the leadership of Dr William Perrin Nicolson of Atlanta and had decided to present this memorial to the city of Edinburgh where James Young Simpson had discovered the anaesthetic properties of chloroform. Mr L. B. Wevill explained that Long at the age of 26 after he had been in practice for only a year, first used ether with the deliberate intention of abolishing pain during a surgical operation. If this had been done in some world famous clinic it would have commanded respect and admiration, but it was the achievement of an

unknown young general practitioner working in a small town over a hundred miles from the nearest railroad. It had demanded great courage on the part of both Dr Long and his patient, Mr Venable. Dr Long, after working as a student in Georgia and Kentucky had gone to Pennsylvania University, then the premier school of medicine in America and later worked in New York hospitals. Finally he settled down as a country practitioner in Jefferson, and one day he took part in a discussion about the itinerant chemists who amused gatherings by getting someone to inhale nitrous oxide or ether, and entertain the crowd with their antics. Long's friends offered to let him try it on them, and Mr Venable, who had often inhaled ether requested Dr Long to remove a wen after the inhalation of ether so that this might be done painlessly. The operation was completely successful but it was some years before the use of ether as an anaesthetic spread.

Honorary Medical Graduates

At the spring graduation ceremony of Aberdeen University on March 31, Principal W. Hamilton Fyfe presiding the degree of LL.D. was conferred among others upon Naughton Dunn M.A. M.B. Ch.B. lecturer on orthopaedic surgery in the University of Birmingham. The Dean of the Faculty of Law in submitting his name said that Mr Dunn was a graduate of Aberdeen University who had made an international name in the sphere of orthopaedic surgery and who had shown a steady devotion to the cause of the cripple. As assistant to the late Sir Robert Jones he had been intimately connected with his original scheme for orthopaedic treatment and had given unsparingly of his time, energy and skill to many hospitals concerned with this admirable purpose.

The University of Glasgow has announced that at its commemoration on June 16 it will confer honorary LL.D. degrees upon the following members of the medical profession: Jan Boeke, Professor of Histology and Embryology University of Utrecht; John Marshall Cowan physician in Glasgow; the Right Hon. Walter Elliot Secretary of State for Scotland; Thomas Kirkpatrick Monro Emeritus Professor of Medicine University of Glasgow; Sir Robert Muir, Emeritus Professor of Pathology University of Glasgow; and Ralph Stockman Emeritus Professor of Materia Medica, University of Glasgow.

Services of Glasgow Samaritan Hospital to be Extended

At the annual meeting of the Royal Samaritan Hospital for Women Glasgow Lord Rowallan who presided submitted a draft of a provisional order to enlarge the objects of the hospital. He said he believed the time had come to extend the usefulness of this hospital beyond the purely gynaecological services it rendered and to provide maternity services. Under existing legislation they could not extend the institution in that direction but they contemplated doing so in the immediate future. Professor James Henry said that there was an increasing tendency for women to seek the advantages of a hospital for their confinement. In Vienna Budapest and Stockholm 80 per cent of confinements took place in hospital in Scotland the percentage was about 30 and ten years ago it was 11. In the London County Council area 60 per cent of confinements took place in hospitals and the death rate was the lowest in England and Wales.

Birth Control Conference in Edinburgh

The National Birth Control Association of which Lord Horder is president has arranged a medical conference to be held on Friday April 30 in the hall of the British Medical Association 7 Drumsheugh Gardens Edinburgh. At the afternoon session (3 to 6 p.m.) with Dr Douglas Miller in the chair Dr Helena Wright will introduce a discussion on the "Technique of Contraception" and after this the birth control clinic at 90 East Crosscauseway will be open for inspection. The evening session

(8 to 10 p.m.) with Professor F. A. E. Crew in the chair, will be devoted to a discussion on 'Recent Advances in the Scientific Study of Chemical Contraception' introduced by Dr J. R. Baker. During the afternoon and evening the museum of contraceptives, under the direction of Professor P. S. Lelean in the Usher Institute of Public Health, Warrender Park Road, will be open for inspection. Application for tickets (price 2s for the whole conference) should be made beforehand (enclosing a postal order) to the Headquarters Organizer, N.B.C.A. (26 Eccleston Street, London, S.W.1). The conference is open to doctors and a few lay workers from birth control clinics.

Leith Hospital

At the annual meeting of contributors to Leith Hospital it was announced that £50,000 had been received towards the hospital extension fund, which aimed at collecting £60,000. The number of patients treated in the wards had been 1,897, with 18,276 out-patients. The ordinary income for the year had been £17,809, with an ordinary expenditure of £20,182 but the deficit had been amply covered by an extraordinary income of £11,512, with extraordinary expenditure of £1,120. Mr. P. H. Watson said that the extension would cover in the first place a new nurses' home and after this had been completed the medical side of the hospital would be rebuilt and would then be the most modern building of its kind in the city.

FRANCE

[FROM OUR CORRESPONDENT IN PARIS]

The *Soi-Disant* Benevolent Dispensary

At the last general meeting of the *Confédération des Syndicats Médicaux de France* there was an informative discussion about a certain type of dispensary which combines benevolence with business in that happy spirit of compromise that makes the best of both worlds. Such a dispensary on the one hand appeals to the charity of street collections, the sale of badges etc. and on the other hand charges the patients more or less substantial fees for services rendered, at the same time its benevolent side is shown to the tax collector who is expected to let such a good work enjoy fiscal immunity. It is obvious that in the competition for patients such an institution is given a running start in relation to the frankly commercial enterprise or the bona-fide dispensary serving the poor for little or no material recompense. It was decided by the *Confédération* that as from March 1, 1937 it would collaborate with the dispensaries giving free treatment exclusively to the poor and it would 'black list' this morally amphibious type of institution. The local branches of the *Confédération* will be expected to invite those of their members who are attached to these questionable dispensaries to send in their resignations failing which such doctors will be invited to appear before a body of their colleagues to explain their conduct, and if their explanations are unsatisfactory to submit to exclusion from the *Confédération*.

Tuberculosis as Seen by the General Practitioner

Reference has been made more than once in these columns to the enterprise of Dr. Godlewski, the father of the *Assises de l'Assemblée Française de Médecine Générale*, an organization for the pooling and sifting of the experiences of general practitioners throughout France. The twenty-fourth meeting of this body, presided over by Professor Bezançon, was devoted to tuberculosis in general and tuberculin skin tests in particular. The contributions of certain speakers on this subject brought out in clear contrast the behaviour of Parisians and country dwellers at the present time. Among well-to-do Parisian children not more than 12 per cent up to the age of 15 are tuberculin positive and in the country some 75 per cent

of young adults are tuberculin negative. At the other extreme there are the medical students who even at the beginning of their career are tuberculin positive eighty-eight times out of a hundred. Several speakers dealt with the danger to school children of teachers suffering from progressive tuberculosis and refusing to give up work. In this connexion a resolution was adopted recommending the employment of the tuberculin skin test in schools at least once a year among the tuberculin negative children. This task should be undertaken by the family doctor or failing him by the school medical officer. A certificate dealing with the findings of this test should be issued for each child at the beginning of each scholastic year.

Leprosy Contracted in Paris

What was described at the time as disquieting by Professor Marchoux of the Pasteur Institute was the communication made to the French Academy of Medicine on March 16 by Drs. C. Flandin and J. Ragu on the origin, mode of contagion, and incubation period in ninety-five cases of leprosy, six of which had been contracted in the Paris area. It has hitherto been taught that leprosy has long ceased to be contracted in Paris and in this connexion two alternatives may be raised. Was this notion mistaken or has leprosy again become transmissible in Paris? Drs. Flandin and Ragu incline to the latter alternative as being the more plausible. Of the six cases of leprosy contracted in Paris four represented sexual infections and so far there is nothing very strange in the development of leprosy in a bed-fellow, but in the remaining two cases the patients had merely lived at one time in a leprosy environment, one of the patients being a 26-year-old school teacher who since birth had lived in a veritable Chinese colony in the neighbourhood of Paris. It remains to be seen what will befall her class of sixty girls from whom she has but lately taken a prolonged leave of absence. When Dr. Flandin was appointed at the end of 1934 to the leprosy service of the St. Louis Hospital there were only four lepers in it. He traces the remarkable rise from four to ninety-five cases to: (1) the consideration he has shown the lepers fearful of being exhibited as curious beasts to medical students; (2) strict respect of professional secrecy and of the liberty of the individual; and (3) the success of intravenous injections of chaulmoogra cholesterol. It seems that the lepers of Paris have established an informal freemasonry among themselves, passing on to each other by unsuspected channels of communication information about therapeutic advances. It might have been supposed that most of the ninety-five patients belonged to the coloured races or were half-castes, but in fact only twenty-two of them belonged to the former category and only nine to the latter. The majority of the patients were in other words, whites who had been born in the colonies or had at least spent some time there.

Proposed Abolition of State Regulation of Prostitution

The proposal of M. Henri Sellier, Minister of Public Health, shortly to introduce a Bill to abolish the State regulation of prostitution is receiving the support of the International Abolitionist Federation. It intends to organize an international congress in Paris from May 20 to May 22—that is at the moment when important decisions will be taken in France in this matter. The congress will study the problems of prostitution and venereal disease from the legal, medical and moral points of view and the value of abolitionist principles will be put before the French public in the light of their application in Great Britain, Holland and the Scandinavian countries. Professor Paul Gemähling of the Strasbourg University and president of the French branch of the Federation will open the discussion. Dr. Veldhuyzen, director of the Wilhelmine Hospital in Amsterdam, will open the discussion on the medical aspect of prostitution. Further information about the congress may be obtained from the Secretariat of the Federation, 8 Rue de l'Hotel-de-Ville, Geneva.

Correspondence

The Factories Bill

SIR—The Factories Bill at present passing through its committee stage in the House of Commons is obviously one of the most important Bills of the session. Its provisions affect directly more than 7,000,000 people. The present Bill purports to be a consolidating measure incorporating and superseding a round dozen of previous Acts, the earliest dating from 1894. The last Act dealing specifically with factories and workshops was passed in 1901—that is, more than a generation ago. The present Bill therefore will in all probability legislate for and consequently stabilize conditions for a whole generation to come. Obviously it is of essential importance that its medical provisions be brought into line as soon as possible with medical science of the present day.

Part 1 (Health General Provisions) Part 3 (Welfare, General Provisions) Part 4 (Health Safety and Welfare, Special Provisions and Regulations) and Part 5 (Notification and Investigation of Accidents and Industrial Diseases) deal as their short titles indicate principally and indeed almost exclusively with medical questions. Part 6 (Employment of Women and Young Persons) including as it does questions of fitness, hours of employment and rest hygienic regulations etc. again is concerned with predominantly medical problems. The committee specially appointed to consider the Bill numbers seventy persons, and it bristles with lawyers but I myself am the only medical man sitting upon this committee—Major Neven Spence who was appointed a member having been obliged to absent himself from its meetings owing to his election to another committee which meets at the same hour.

I have received from many important bodies, such as the Royal Sanitary Institute, the Society of Medical Officers of Health, the National Union of Teachers, the London Teachers Association and the Industrial Welfare Society, innumerable and well-considered suggestions for altering the provisions of the Bill and as I have had a long personal experience of industrial diseases of the skin so often causing absence from work in factories I have certain modifications of my own which I should like to press. As a result I have had to put down such a number of amendments as seems inordinate for any single member to move, and partly no doubt owing to this unfortunate position amendments which I have tabled are often not called. The ignorance of medical questions and consequent apathy towards them of the average lay Member of Parliament makes it difficult for me to get support for what so many members regard as mere medical fads. The conservatism of the typical Parliamentary draughtsman springing from *vis inertiae* rather than from conviction again brings difficulties and impedes modifications although these are necessitated by changed conditions and are supported by authentic medical opinion.

May I cite as an illustration Clause 64, which declares five diseases to be notifiable. Three of these diseases have, for practical purposes, disappeared as industrial diseases. When I pointed this out I was informed by the Home Office that the reason for their inclusion was that 'as a matter of convenience we are in Clause 64 simply re-enacting Section 73 of the Act of 1901 in which those five diseases are mentioned. In the thirty-six years which have intervened since the Act of 1901 other diseases have become much more important notably for example, cancer of the skin, but no attempt to deal with these

is made in the Bill beyond a sort of blunderbuss clause (No. 151) that Orders made by the Secretary of State since 1901 remain in force and the certifying factory surgeon is saddled with the task of finding out what these Orders are. Surely it would be more sensible to cancel the regulation requiring notification of diseases which since 1901 have become practically obsolete and to schedule in the Bill all the diseases which would be notifiable under the forthcoming Act.

The moral to be drawn from this letter I submit is that there are too few medical Members of Parliament, and it is therefore all the more deplorable that Oxford and the Combined English Universities should have missed their opportunity of returning such distinguished members of the profession as Sir Farquhar Buzzard and Sir Henry Brackenbury—I am etc.

House of Commons April 19

E GRAHAM LITTLE

The Tavistock Clinic

SIR—The Council of the Institute of Medical Psychology have decided after much deliberation to change its title and revert to the original name of The Tavistock Clinic. I should like through your columns to notify the profession of this fact so that no confusion may arise in their minds.

The Tavistock Clinic was the original name adopted when in 1920 the work of providing psychological treatment was begun in a house in Tavistock Square. As the clinic grew its name became well known among the profession at home and also on the Continent and in the United States. A good many people seem hardly to have realized that it was changed some four or five years ago and to them there will seem nothing unusual in our new title.

The change has seemed advisable largely because of the constant confusion which arises as a result of the non-medical institutes of psychology and psychotherapy which have arisen during the past few years. Some of these have gone so far as to copy our literature and our stationery evidently feeling that this was likely to be of value to them. Any hospital is reluctant to change its name, because there is inevitably some loss of goodwill, particularly among those who support or might support the work. I am confident however that we can rely upon our many friends in the profession to see that such loss does not occur and that whatever good reputation the Institute of Medical Psychology had shall be carried over to the Tavistock Clinic, which certainly needs all the help that they can give it—I am, etc.,

HENRI B BRACKENBURY,
Chairman of the Council

The Tavistock Clinic, Malet Place
W.C.1 April 12.

The General Practitioner and Urinary Infections

SIR—The frequency with which the common complaint of pain, frequency of micturition and scalding is met and the hit or miss methods often adopted in its treatment lead me to think that the following may be of interest to my fellow general practitioners.

In all humility I describe a method of control that I have evolved in the midst of general practice which enables one to state with some certainty whether the condition is or is not yielding to treatment. Not for one instant do I suggest that the general practitioner should attempt to usurp the functions of the properly equipped and expertly superintended pathological laboratory in this,

connexion, neither does the method aim at any definite classification of the infecting organism. There are, however, many cases with which the practitioner himself has to deal and which, for one reason or another, it is not practicable to refer to the specialist.

I used to treat my cases of pyelitis and cystitis—after excluding gross pathological lesions to the best of my ability—with heavy doses of potassium citrate and five or ten minims of tincture of hyoscyamus in an infusion of buchu until the more unpleasant symptoms had subsided. If all went well I was fairly satisfied. If the symptoms persisted I followed the best textbook traditions and tried the effect of a sudden switch to an acidified urine and doses of hexamine in the hope of formaldehyde being liberated in the acid medium with antiseptic results. I administered the acid sodium phosphate mixture before meals and the hexamine after meals in the belief that the formaldehyde must not be liberated from the hexamine until the urinary tract had been reached if any inhibitive effect was to be exerted on the growth of the organisms.

Whether individual cases improved or not I always had the feeling that I was working in the dark. This led me to try to obtain assistance from my microscope. First attempts were with films made from a drop taken from the bottom of a urine vase after a few hours standing. Except in cases of gross infection the resulting slides were disappointing and showed little connexion with the clinical severity of the case.

The centrifuge seemed out of place in my surgery, and after experiment I evolved the following method.

Six to eight ounces of the urine—a catheter specimen in the case of women and a mid stream specimen in the case of men—are placed in a folded 12 inch filter paper in a large glass filter which has been previously sterilized and allowed to stand covered by a second unfolded filter paper to exclude dust. The time taken for the urine to pass through the paper gives a useful indication of the amount of mucin present. Phosphates and urates do not seem to hold up filtration to any great extent. The clear filtrate may be used to test for the presence of albumin. When only half an inch or so remains it is poured off and a film is made on a clean slide of the material removed from the sides of the filter paper near its apex with a sterilized platinum loop. The slide should be dried as rapidly as possible by waving it in the air and then stained by Leishman's method. In an acute infection with coliform bacilli a 1/6 objective is all that is required to show vast numbers of the bacilli epithelial cells with their large irregular outline and small nuclei, red blood cells if present and possibly renal casts. Urinary crystals may be seen but their presence in a film should not be taken as conclusive evidence of their presence in the bladder or urinary tract, since they (particularly oxalates) crystallize out so rapidly in standing and cooling urines and may be absent at body temperature. Later pus cells may become increasingly numerous.

Examination by this rapid method every five or six days gives one a very satisfactory indication of the success or failure of one's treatment quite independently of the patient's own description of his or her suffering. The latter is a most unreliable index since I have often found traces of a heavy residual infection in the urine of patients who have reported a complete cessation of unpleasant symptoms.

For the past year or more I have been using mandelic acid in the form of its sodium or ammonium salts together with ammonium chloride or acid sodium phosphate as an acidifying agent. Where the reaction has been kept at a pH of 5.3 or lower—not always an easy matter—and in the absence of a persistent cause of infec-

tion such as a calculus or diseased kidney, the results as shown by my periodical slides and the subsidence of the patient's symptoms have been most satisfactory.

The importance of maintaining the acid reaction of the urine in treatment with mandelates is I think, generally accepted and a simple control that may be used by the patient is furnished by the B.D.H. Universal Indicator, which gives the approximate pH from 3 to 11 corresponding to a variation of colours formed by the addition of a few drops of the indicator to half an inch of urine in a test tube.

Slides examined without cedar-wood oil will remain clear for several weeks and there is a fascination in watching a labelled series of films changing from a mass of organisms and cells to an almost clear slide that amply repays the slight extra trouble involved. When circumstances permit I send a specimen of the urine to a pathologist for culture as soon as I am getting fairly clear slides. The report that no pathogenic organisms have been grown on incubation is a most satisfactory termination to the case—I am, etc.,

Rookwood Reading March 26

E. E. S. WHEATLEY

Angina Innocens

SIR—Dr Geoffrey Bourne's article on angina innocens (*Journal* April 3 p. 695) and Dr A. G. Auld's letter (April 10, p. 784) will be of interest to every practitioner. A patient of mine had what I thought until last week was pseudo angina, or using Dr Bourne's new terminology angina innocens. He was 37 when he first consulted me eleven years ago. The pain was precordial radiated to the left arm and lasted a few minutes. Its relation to exercise was incidental; sometimes it came on when he was walking or playing golf but it would come on also when he was lying in bed or sitting down quietly in a chair. Its severity varied; it might be a dull ache or an acute gripping pain. Its frequency varied also; sometimes there were four or five attacks in twenty-four hours; sometimes a few days were free from pain altogether. There was no evidence whatsoever of cardiovascular disease by physical examination, radiograph, or electrocardiogram. His blood pressure was normal, his Wassermann reaction negative and the pulse rate usually between 80 and 90. He was seen several times by consultants who agreed that his was a case of pseudo angina. He was a nervous subject, and amyl nitrite did not relieve the attacks.

He like Dr Auld's patient fulfils all of Dr Geoffrey Bourne's criteria for angina innocens except that the course of the disease proved that it was not innocent. A week ago after having expressed the opinion earlier in the day that he had not felt so well for years and while sitting down quietly playing cards he died—I am, etc.,

Stewen Glamorganshire April 10

TREVOR DAVIES

Auditory Nerve Section

SIR—In the *Journal* of March 27 (p. 660) Mr R. Rutherford in his paper on operative section of the auditory nerve suggests that with the use of a suitably designed endoscope operative trauma might be reduced to a minimum. With the use of precise mathematical measurement it is shown to be possible to identify the internal auditory meatus with considerable precision and to expose the auditory nerve by the insertion of a graduated retractor to a calculated depth. Mr Rutherford goes no further than to show that the exposure of the nerve is practicable by his method but should the sug-

gested advantage of reduced tissue trauma be regarded as a recommendation for Mr Rutherford's procedure in preference to the open operation of Dandy, Cairns, and Mackenzie, some comparison should be made between the principles and technique of the two operations.

The extent of the operative exposure which Mr Rutherford has employed for the insertion of the graduated retractor—namely an opening in the skull two inches by one and a half inches—is no smaller than that employed by neurological surgeons at the open operation. If the external magna had been evacuated and had inhalation narcosis been avoided intracranial tension would have been reduced to such an extent that the auditory nerve could have been easily exposed through the approach employed. The passage of a retractor down to the auditory nerve if not carried out under direct vision would endanger the veins passing from the cerebellar cortex to the sigmoid and inferior petrosal sinuses.

The use of an endoscope with the necessity for dividing the nerve with a hook knife would carry the additional risk of injury to the anterior inferior cerebellar artery. The relations of this vessel to the auditory nerve are variable; it commonly lies between the facial and auditory nerves or between the cochlear and vestibular parts of the latter; it may form a loop in front of the auditory nerve in which situation it is especially exposed to injury. Haemorrhage from a vessel of such size would be disastrous for it could never be controlled through the narrow orifice of an endoscope. In the open operation the nerve can be perfectly exposed after the surrounding arachnoid has been incised and adjacent blood vessels can be either avoided or electrically coagulated. By transfixing the auditory nerve with a small right angled hook it can be drawn away from the facial nerve and any intervening blood vessels and the section can be limited to its vestibular portion. The latter procedure is of special value when some hearing still remains but it requires for its successful performance a standard of precision which could never be attained without the perfect exposure which only the open operation can afford.

The suggested method of the identification of the auditory nerve by its action currents would appear to be an admission not only of the inadequacy of the exposure as judged by the standards of the open operation, but also of the limitations of the accuracy of the original premises—I am, etc.,

A R D PATTISON FRCS

Newcastle upon Tyne March 30

Medicinal Kaolin in Food Poisoning

SIR—Dr N Mutch in his article on medicinal kaolin in food poisoning in the *Journal* of March 20 (p 595) compares a number of commercial specimens of medicinal kaolin in respect of grittiness and sedimentation. He then selects one of these specimens and carries out a number of tests of its adsorptive capacity. From these results he draws certain conclusions as to the value of different methods of testing which do not appear to be entirely warranted by the facts.

It is well known that kaolin peptizes more readily in a neutral or slightly alkaline medium than in a slightly acid medium whereas its adsorptive power is greatest in an acid medium. Since it must be assumed that slight differences in reaction are neutralized in the body it follows that sedimentation tests carried out *in vitro* at different pH values are of little use as indications of what will happen in the body. Actually the difference in reaction between the two kaolins Nos 4 and 5 tested by Dr Mutch is quite sufficient to explain the slight differences in the rates of sedimentation.

The methylene blue test has been widely used as a means of comparing the adsorptive powers of different specimens of kaolin. It has the advantage of being

simply carried out and giving results which can be expressed as numerical values. (Incidentally on physico-chemical grounds the rational method of carrying out the test is to use an excess of methylene blue and to calculate the amount adsorbed after a definite time. The pH should also be adjusted to a standard value.) Dr Mutch condemns the methylene-blue test not on the ground that it gives anomalous results with different specimens of kaolin, but because the particular sample of kaolin which he examined in its adsorptive power for different dyes showed qualitative differences from magnesium trisilicate. Is there really any more ground for the selection of an arbitrary food poison as the test medium than an arbitrary dye? Dr Mutch does not suggest which of the food poisons is the most suitable for testing kaolin, nor does he give any comparative values for the adsorptive powers of different commercial kaolins, either for food poisons or dyestuffs. It seems possible that the anomalies might be just as great in the one case as in the other. In any event the comparatively simple conditions of testing *in vitro* must be vastly different from the complex environment occurring in the body—I am, etc.,

London, E.2, April 5

NORMAN EVERS, B Sc, F I C

Intranasal Ionization by Electrotherapists

SIR—It has recently come to my knowledge that certain masseurs and electrotherapists not medical men are claiming to perform intranasal ionization for hay fever and allied conditions, and are circularizing medical men for their support. While this may be done in all good faith, I think it only fair to both patients and doctors to point out that this treatment can be efficiently carried out only by those who, through practice, have familiarized themselves with the anatomy of the nose. If this form of treatment is to be successful attention to details of technique is essential. The nose is first sprayed with a 2 per cent solution of cocaine hydrochloride to allow for shrinkage and anaesthesia to take place, it is then carefully packed, by reflected light, with ribbon gauze soaked in zinc sulphate solution. It is imperative that the gauze be in contact with every part of the nasal mucosa. It would be a pity if this form of treatment for hay fever and spasmodic rhinitis should fall into disrepute owing to its being attempted by persons unqualified to carry it out—I am, etc.,

Bournemouth April 5

ROY SALKFELD.

Blood Sugar Worship

SIR—Dr Leyton (*Journal* April 10, p 782) states that I am mistaken in believing that hyperglycaemia without glycosuria or ketosis is as little likely to cause complications as a 'normal' blood sugar in a diabetic. I should like to know on what grounds he bases this statement and whether he considers that hyperglycaemia alone produces the complications?—I am, etc.,

London SW1 April 11

OLIVER WALKER.

Reaction Time of Motorists

SIR—I have not heard nor read of it being suggested that the reaction time test as applied to those wishing to be aviators could be used in the case of the motorist whose 'fitness to be in charge' is under question. I think we are all agreed that 'slowness of reaction' is the chief cause of a motorist being a danger to himself and to other road users. Could some authority on the use

of such a test say if its employment would be practical, clinically and financially?

We accept 60 to 80 as a normal pulse rate by investigating a large number of motorists (say a thousand) a wide normal reaction time could be gauged. The test would be applied at the time of the primary examination at the police station, and the next day the results of a second test would be compared. Those who have been cross examined know too well what a boon it would be to have a test that was as near certain as possible—I am, etc.,

Hampton Middlesex, April 9

G C L WOODROFFE.

Alcohol and Motoring Accidents

SIR,—In view of the recent mock trial (*Journal* January 23, p 128) the following case may be of interest

A motorist had a fairly severe accident with head and left hip injuries and on recovery was warned that alcohol would act with more than usual strength but he was allowed a little cider. Six months later I was called to see him at a police station at 8 a.m. and heard the following story: he had had an evening with friends and had taken a few glasses of cider. Later he had gone to a night club where he had ordered non-alcoholic beer. He took a friend's glass of wine as a mild practical joke. Driving home to a distant suburb at about 2 a.m. he felt extremely drowsy and as he thought himself a danger on the road he turned into a quiet side road and slept peacefully till 7 a.m.

He awoke stiff and in not too good form backed his car to turn out and sent his rear wheel and truly into a lamp post. On getting out to see the damage he was seen by a passing constable who said that he was unsteady and drunk in charge. At the police station I was informed that the police surgeon had already certified to that effect before I was called. At 8.45 a.m. the patient was somewhat irascible his tongue was furred his eyes were very bloodshot tendon reflexes were exaggerated ocular convergence was slightly defective and the pupil reactions were normal. Writing and diction were normal walking was not quite perfect but this might have been accounted for by his hip injury.

I was prepared to say that at the time I saw him he was quite capable of driving, but if pressed I should have had to admit that I thought him to have taken during the evening and night considerably more alcohol than he admitted, and I should not have been very strong if asked my opinion of his probable condition one and three-quarter hours before I saw him. However if his story was correct he had had very little alcohol and all of that at least six to nine hours before the incident. In other words an estimation of the blood alcohol ought to have demonstrated his truthfulness or otherwise. The figure obtained was 0.003 per cent and his solicitor who had even considered the wisdom of pleading guilty was able on that evidence to have the case dismissed.

—I am, etc.

F HARWOOD STEVENSON, M.D., M.R.C.P.

Edgware Middlesex April 8

Local Anaesthesia for Perineal Tears

SIR—I was interested in Dr Stanley Way's communication on local anaesthesia in the repair of the torn perineum (*Journal* April 10 p 753) and I agree that general anaesthesia is often undesirable and unjustifiable. I do not think however that infiltration of all the tissues is the method of choice in producing analgesia as soddening in a potentially infective area is certainly not desirable.

I have found that all that is needed in the way of anaesthesia is the raising of a wheal by the intradermal injection of 1 per cent novocain at the site of the proposed suture on either side of the tear. When no local anaesthetic is used very little pain is experienced on intro-

ducing the needle but in its exit through the skin of the opposite side there is a great deal of pain. A series of two or three wheals may be raised by a single cutaneous puncture and this minor operation may be conveniently carried out with the patient in the left lateral position.

I always use silk-worm gut sutures in preference to absorbable sutures, as with the latter there is a greater local reaction during the process of absorption, which thereby increases the liability to infection—I am, etc.,

TREVOR HUGHES, L.R.C.P., L.R.C.S., L.R.F.P.S.

Ruthin April 12

SIR—I read with interest Dr Stanley Way's article on the use of local anaesthesia in the repair of a torn perineum. As a general practitioner I have been using local anaesthesia for some time in repairs, and have never had a case break down or go septic and this method rather than general anaesthesia has been much preferred by my patients. I have lowered the number of tears in my own cases by doing a routine episiotomy under local anaesthesia. I use as a rule 2 per cent novocain in a 2 c.c. syringe, and just prior to crowning and while the pains are at a maximum infiltrate the labia at the usual site on both sides with 1 c.c. of local anaesthetic: the incisions and subsequent suturing can then be done painlessly—I am, etc.,

East Bergholt, Suffolk April 12

J R B McBRIDE.

Erysipelas Treated by Prontosil

SIR—The importance and interest of the prontosil treatment of streptococcal infections leads me to follow the example of my friend and neighbour Dr W H Palmer (*Journal* February 27, p 472), by putting on record my experience of prontosil in three cases of facial erysipelas which I have dealt with in the past three weeks.

The first case was in a woman of 60. When first seen the right external ear and adjacent part of the face showed typical erysipelas of moderate severity, with great pain and the usual constitutional disturbance.

Prontosil album the oral preparation two tablets thrice daily was prescribed. Within twenty-four hours the condition was checked and progressive improvement followed.

The second case in a woman of 30 was of a very severe type. Both eyes were closed there was intense conjunctivitis, a rapid march of the line of induration, severe pain and prostration with a temperature of 103.5 F. This case was admitted to hospital and had one injection of prontosil in addition to the two tablets of prontosil album thrice daily. Four short wave treatments of five minutes duration were also given. In a matter of hours the spread was checked and the pain greatly relieved. Within forty-eight hours the temperature fell to normal and there was no further rise.

The third case was in an old woman of 79 bedridden all winter with severe bronchial catarrh and cardiac debility. The onset of severe facial erysipelas involving in a few hours the whole face appeared to be a terminal complication. She had a temperature of 103° F, dyspnoea and cyanosis, severe pain and distress. However I put her on prontosil album two tablets thrice daily and by the following day she felt better. Another day showed obvious improvement and by the third day she was out of danger.

—I am, etc.

Camborne April 7

R H BLAIR

The Birching of Children

SIR—Dr P G Bantley in discussing the punishment of children (*Journal* April 10 p 785) seems like many writers on this subject to be inconsistent. In his third paragraph he says: "A mischievous spirit is part of every healthy boy's character and if punishment is given,

painful though it may be, he accepts it as part of the game. In his fourth paragraph he says 'The increase of juvenile crime during the last ten years has been a difficult problem to tackle but I am of the firm opinion that corporal punishment carried out humanely and with every consideration for the particular case in point is a far better method of controlling crime than a lot of indiscriminate dabbling with a science about which so few of us know so very little'.

Thus in one paragraph Dr Bentlif approves and applauds the mischievous spirit that results in juvenile crime and in the next he is advocating a means of controlling or at least partially suppressing the manifestations of that spirit. He apparently regards the administration of justice as a game not as a means of preventing crime and curing or deterring criminals—I am, etc.,

J E J PALSER M.R.C.S., L.R.C.P.

London N 10 April 9

SIR—Dr Bentlif's letter on the birching of children is inspired by his personal experience in seeing this punishment carried out but I believe it is a fact that there is considerable variation in the severity or otherwise with which the flogging is administered, and it would appear that in Jersey justice is tempered with mercy¹. It is not always so, however, and I could quote instances in which the victim does not appear to have got off as lightly as the cases mentioned by Dr Bentlif.

However, I am not so concerned with the physical side as with the psychological, and here Dr Bentlif will find his opinions in opposition to those of the vast majority of those well qualified to judge. Thus Sir Walter Langdon-Brown writing in the *Daily Telegraph* says 'Medical psychologists are unanimous in their disapproval of a barbarous practice which does even more harm to the mind than to the body and has a diametrically opposite effect to that presumably intended'. I could quote many such opinions. Dr Bentlif's view that juvenile crime can be controlled by the infliction of corporal punishment is completely at variance with the facts. Some time ago the Board of Education published an investigation showing that no less than 80.34 per cent of boys who had undergone a judicial birching had been recharged within two years. Mr Justice du Parcq speaking from the Bench on December 5, 1933, said, 'In my life's experience I have always noticed that a judicial child-flogging is the first sentence in tragedy of a life of crime'. At Ealing Juvenile Court last month three boys who had been birched only a fortnight before on a charge of theft again appeared, charged with a similar offence. Dr Norris, chief inspector of the Children's Branch of the Home Office, gave his opinion that police court birching is not effective, and I would like to see it abolished.

Dr Bentlif seems to think it is the business of the law to punish, but it is not, except when it acts as a deterrent from further anti-social behaviour, and all the facts show that the birching of juveniles completely fails in that respect. A thrashing administered by parent or teacher in the familiar surroundings of home or school is one thing, but one carried out under the circumstances portrayed in the leading article in the *Journal* (March 20, p. 618) which led to my first letter is quite another. However little respect Dr Bentlif may have for the science of psychology, I still maintain and so do those far better qualified to speak than I, that such punishments are as harmful as they are demonstrably ineffective—I am, etc.,

Hove Sussex April 11

W N MAPLE

Inhalational Therapy

SIR—As one of the three trustees for the Duke-Fingard inhalational treatment I feel compelled to say a few words in answer to your correspondent's letter published on March 13 (p. 587).

I have been conversant with this particular form of therapy for the past two years, and am quite convinced of its undoubted value in selected cases. I am also well aware of the ethical policy which has been adopted in every instance, and therefore cannot allow to go unchallenged certain remarks made in Dr Boswell's letter.

I feel that Dr Boswell is erring when he states that his patient answered an advertisement in the lay press. No such advertisement to my knowledge has ever appeared. A film actor, it is true, attained a deal of publicity following benefit obtained from the inhalation, but this can hardly be construed as an advertisement. Dr Boswell also stated that his patient was 'referred to a medical man'. An imputation of this nature stands in need of immediate correction. In order that patients may be spared the trouble and expense of unsuitable treatment, and that their medical attendants may be given every facility it has been the policy to suggest to these patients that they might care to consult one of the many medical men experienced in the treatment, and to ascertain what benefit, if any, they may hope to receive.

Dr Boswell attributes the unfortunate death of his patient partly to the abrupt change in temperature experienced in passing from the warm treatment room to the cold outside air and partly to the inhaled vapour. One cannot help but feel that his abrupt change against which every patient is warned, should not have been permitted, and that any ill effects however produced, should have been noted and the treatment modified accordingly. Obviously one cannot merely switch on and leave the rest to the machine—I am, etc.,

H B FAWCUS M.B., B.S., D.P.H. Camb

London SW 1 April 7

SIR—I was much concerned over Dr Boswell's letter in the *Journal* of March 13 regarding effects of chill following the Duke-Fingard treatment which ended fatally. I have had both personal experience in my own case and experience in treating patients by this method, being the first medical man in this country who tried out this new therapy. My first two cases were those of confirmed bronchial asthmatics who were sufferers of over twenty years standing. These were both cured and have remained so, and thus was awakened my deep interest in the treatment. I have also followed its progress in various hospitals and clinics.

Bronchitic patients are a chilly race and cannot take sufficient exercise when out to keep the body warm in cold weather. Their bronchial mucous membrane is sensitive and liable to be affected by cold, also their vasomotor systems are unaccustomed to rapid changes in temperature and therefore this class of patient must be managed accordingly. Dr Boswell is quite right in his conclusion that it is unsafe for a patient to spend his nights in such a warm medicated atmosphere and to go out by day into the rigours of our climate, but I would add that in my experience it is quite safe to do so if precautions are taken. I never allow a patient to venture out after treatment till sufficiently cooled down which takes roughly an hour. Another matter that is worth attending to with these imperfectly aerating folk is the taking of something warm on going out if the 'something' is alcoholic it is injurious as alcohol dilates the surface vessels of the skin and increases heat loss when out of doors, and they have no body heat to lose. Let it be a warm fluid—milk tea or a drink of beef tea with some condiment in it. They are too scant of breath to endure the weight of heavy clothes so these should be light enough to be borne warm enough to

keep them from catching cold. If further precautions are deemed desirable I may say a word on the merits of the unsightly respirator after treatment in these cold days or a warm muffler. This stops the cold air from chilling the respiratory tract. Regarding the odour it is distinctive and penetrating and certainly does linger in the house somewhat, particularly if the house be not flushed with fresh air but if an ozone apparatus be installed in the house and used for an hour or so after treatment the odour vanishes. This tip I learnt from a colleague.

I can assure Dr Boswell that I have never experienced any qualms over any patient I have treated by this method (and some have been under treatment over a year) provided the patient was a suitable case—I am, etc.

Weybridge April 8

A C GREENE

Falling Mantles

SIR—In your issue of March 27 (p 665) under the title of "The Mantle of Whitridge Williams, you review the seventh edition of Williams's *Obstetrics*. This excellent work is deservedly praised, but one sentence of the review states: "A few typographical errors have escaped detection. I have read the book almost through, and I find that far from being a few there are very many typographical errors. This brings me to the point of my letter. Why do medical authors read the proofs so badly? I have noticed this defect in other medical works particularly in books which have been taken over by a new author and revised. Whole pages appear to be passed over without being looked at, and errors in the original work are perpetuated. I could name many works in which I have noticed this defect. It is most annoying when trying to take an intelligent interest in the subject-matter to find the statistics the wrong way round, or a reference to an illustration which has been left out, or a reference to a page in the last edition. I feel it is up to medical authors to take a little care over the production of their works or else the mantles will soon fall off—I am, etc.

Dublin April 8

E E D GRAY M.D. M.R.C.P.

Prevention of Silicosis

SIR—It was unnecessary and irrelevant, since Mr McLachlan believed his microbiological growth suggestion means then it is only natural that it [coal] will adsorb dyes (*Journal* March 27 p 686) that he should have asked for my evidence that coal dust was an adsorbent. And much more so that having so needlessly been troubled to advance it, one's obligation should be transmuted into a species of affront by its requester.

For the rest it is of course obvious that in dispersing iodine toxic doses should not be used. The same precaution would be required but more so with ultra violet rays which must be applied gradually even in daylight under resting conditions. How much more so in the relative darkness of a coal pit for example under the strain and perspiration of hard manual labour. The use of electrical devices is moreover being more than ever discouraged in coal mines because of explosive danger—which is a very practical reason for preferring iodine—so that such an alternative cure might be worse than the disease not only as regards application but also as regards positive explosive danger. Neither do the relative expense and intricacy of ultra violet rays commend themselves quite apart from the relative difficulty of disseminating them. Unlike vapours rays do not diffuse automatically and permeate every space. Mr McLachlan seems to confuse the adsorbent with the material adsorbed. It is of course the former not the latter which is more

definitely-particulate. And in any case until further advance can satisfy a still-searching scientific world how far there is an approach by the size of the smallest "particles" ingested to the size of molecules the question of monomolecular films seems premature. He would be indeed bold who should state the size of the finest ultra microscopic particles ingested into the lungs without approaching the molecular boundary. Premature also would seem the conclusion for the preceding reason that there is no adsorption after the examination of but one lung specimen. And in any case no adsorption of what? As Mr McLachlan would expect the adsorption to be of the order of monomolecular thickness, it is difficult not to wonder how he arrived at so definite a conclusion so very rapidly—I am, etc.

Leeds March 30

S C BLACKTIN

* * This correspondence is now closed—ED. B.M.J.

Why "Nocifensor"?

SIR—The letters of Dr F J Allen (*Journal* March 27, p 687) and of 'Lucifer' (April 10, p 786) make me yearn to continue this correspondence and hear some more 'barbarous howlers'. "Lucifer" would be wise to hide his light under a bushel since apparently, after he and his friends have blushed, "the fact remains that *noceo* turns into *nocivus*, *medeor* belonging to the same group into *medicabilis* and *medicatio*. It matters little that *nocivus* like *noctivus* is very rare in Latin. But *medicabilis* and its companion happen to be derived from *medicor* (-atus), although I freely admit that *medicus* and *medicina*—common Latin words—are derived from *medeor*.

Dr Allen says that years ago he called attention to the fact that 'for verbs in -eo the compounding stem ends in -u'. It is a pity that no one has corrected him in the interval. Since he believes that *nocifensor* is as wrong as document it seems worth while to point out that the rather common English words 'doctor' and 'doctrine' are, like the rare Latin word *documen* derived from *doceo*. Since I am innocent (from *in noceo*) of any monstrous motives (both from *monito*), I hope Sir that I shall not be prohibited (from *prohibeo*) from timidly (from *timor*) admonishing (from *ad moneo*) him that the horrid (from *horreo*) letters M.D. after his name do not stand for Medicinac Doctor—I am, etc.

Oxford April 10

'PETER SHAW

Oral Surgery Club

SIR—May I beg the courtesy of your columns to bring to the notice of those of your readers who may be interested the fact that an oral surgery club has been formed in England.

The club has been formed with the object of advancing the science and art of oral surgery by providing for contact between its members also by arranging visits to various British and foreign centres for the purpose of seeing work done by different surgeons. Membership is confined to those who specialize in oral surgery or hold a hospital or other appointment embracing surgery and who possess a medical or dental qualification. The following have agreed to serve on the first committee: *President* Professor T Talmage Read of Leeds, *Members of the Committee* Major S H Woods A.D.C. Mr T Hall Felton of Grimsby. If any of your readers are interested and would like information I would be pleased to hear from them—I am, etc.,

R S TAYLOR

Honorary Secretary

83 Portland Place W 1 April 8

The Anatomists at Toronto

SIR—The University of Toronto played host to anatomists from the United States and Canada at the fifty third session of the American Association of Anatomists from March 25 to 27. The papers numbered 151, and the subject matter was most varied, representing much that in former generations would have been classed as physiology. Indeed the meetings were attended by many physiologists, biochemists, pharmacologists and others, to whom the morphological point of view and the dynamic interpretations proved of great value. Functional changes in the various endocrine tissues, as revealed by the newest techniques, provided matter for a long list of papers. Other numerous titles were those dealing with blood cells, limb transplantations, development of teeth, the sense organs, and the gonads. It was necessary to sectionalize the programme, and at times five or six papers would be going on at once. Round-table conferences drew together six groups to consider such lively subjects as blood capillaries, neurons, sperm production, and gross anatomical investigations. Much was said about Berger waves and acetylcholine in the central nervous system, indeed H. S. Gasser, director of the Rockefeller Institute, came up to introduce the newer conceptions of the neuron at the round table presided over by Rioch, which ended by viewing the central nervous system either as a 'reverberatorium' or as a 'soup kitchen' with acetylcholine acting as the soup.

Dr. McMurrich, emeritus professor of anatomy in the University of Toronto, addressed the gathering at its annual dinner on the subject of two early Canadian anatomists, and the president of the association, Professor Frederic T. Lewis, delivered an address on "The Fundamentals of Cell Shape." A gracious greeting was sent by Lord Tweedsmuir, the Governor General, which was enthusiastically seconded by President Cody of the University. Among those who spoke at the concluding general session was C. U. Ariens Kappers of the University of Amsterdam.

Altogether the presentations and deliberations afforded a vivid view of modern anatomy, with its emphasis on living animal structure in all its manifold aspects. This science has grown to almost unbelievable dimensions and seems only in its infancy. Seven of the sixty demonstrations were motion pictures—I am, etc.,

University of Western Ontario CHARLES C. MACKLIN
London, Canada, March 30

Obituary

Dr. GEORGE HERBERT SPENCER of Jesmond, Newcastle-on-Tyne, died on March 31. He was a native of Austerfield, Yorkshire, and went to school in Doncaster, with which district his family had been associated for many years. A student of the London Hospital, he qualified M.R.C.S. L.R.C.P. in 1900 and practised for some years at Wallsend, after holding house appointments at the Hospital for Sick Children, Newcastle-on-Tyne, at the London Hospital, and the Tynemouth Infirmary. In 1914 he took command of the Military Hospital at Catterick Camp as lieutenant-colonel R.A.M.C.(T) and held that post until the end of the war. Since 1919 Dr. Spencer had practised in Newcastle; he was a member of the local clinical society and of the Northumberland and Durham Medical Society. Dr. Spencer joined the British Medical Association in 1907, and leaves a widow, one daughter, and one son.

Dr. ROBERT MCELROY, whose death took place at his home in Blackhill, Co. Durham, on March 6, at the age of 59 years, was a native of Co. Tyrone and qualified as L.R.C.P.I. and L.M., L.R.C.S.I. and L.M. in 1906. He had been in general practice in Blackhill and district for thirty years and was universally popular with his patients and colleagues. His kindly and sympathetic manner and his unflinching good humour endeared him to his patients. He was a member of the Consett Division of the British Medical Association, Divisional Surgeon to the St. John Ambulance Brigade, and a Freemason. Dr. McElroy was a faithful and loyal colleague who will be greatly missed by his fellow practitioners and a large circle of friends.

Dr. BERNARD SCOTT, who died on March 12 at his residence in Bournemouth at the age of 78, was born in Brighton where his father was in medical practice. He became a medical student at Guy's Hospital at the age of 16 and in 1881 obtained the diplomas M.R.C.S., L.S.A. After holding the appointments of house-surgeon to the Sussex County Hospital and surgeon to the Helen Bridge Alexandra Hospital for Hip Diseases, he joined his elder brother in practice in Bournemouth in 1884, devoting special attention to surgery. In 1892 he was appointed honorary surgeon to the Royal Victoria Hospital, Poole Road, and later to the Cornelia Hospital, Poole. Despite the claims of his large practice, he spared no pains to keep himself abreast of the modern developments in surgery and paid frequent visits to London in order to study the new applications and advances in technique. On retiring from the active staff he was elected consultant surgeon to the Cornelia Hospital. Dr. Bernard Scott joined the British Medical Association in 1890, and was very popular with his colleagues by whom he was highly respected for his skill and great devotion to professional work. He is survived by his wife and nine children, two of whom are in medical practice; one daughter is Elizabeth Scott, the well-known architect.

Dr. ALEXANDER DYCE DAVIDSON, who died at Highgate on March 17, aged 61, was a native of Aberdeen where his father, the late Professor A. D. Davidson, M.D., held the chair of *materia medica*. He studied at the University and graduated M.A., Aberdeen, in 1901, proceeding to the M.B. and Ch.B. degrees in 1904. After serving as house physician and ophthalmic house surgeon at the Aberdeen Royal Infirmary, Dr. Davidson came to London and became senior clinical assistant in the eye department of the London Hospital, ophthalmic examiner of school children under the London County Council at the Deptford Centre, and chief clinical assistant at the Royal London Ophthalmic Hospital. He joined the British Medical Association in 1911, and was a member of the Ophthalmological Society of Great Britain and Ireland.

Dr. BASIL WISEMAN CONWAY of Fallowfield, Manchester, died on March 19. He was a student at Owens College, Manchester, and took the M.R.C.S. and L.R.C.P. diplomas in 1889. After qualifying he acted as house surgeon at the Manchester Royal Infirmary before being appointed medical officer and public vaccinator to the Kirkmanshulme district. He had been living in retirement for some time before his death. He took a keen interest in the Manchester Pathological Society and had been a member of the British Medical Association for forty-one years.

Dr. CECILE BOOYSEN died on April 7, after an illness of five weeks' duration, at the early age of 42. Her father was a farmer in South Africa and she borrowed enough money to come to England to train for medicine, studying at King's College and Charing Cross Hospital. After obtaining the M.R.C.S. and L.R.C.P. diplomas in 1926 she became house surgeon at Charing Cross and then took up general practice in North West London, serving also for a time as clinical assistant at the Paddington Green Children's Hospital and the Royal Free Hospital. In 1936 Dr. Booyesen founded a voluntary birth control clinic known as the Goswell Women's Welfare Centre, in a

very poor overcrowded district of Finsbury. In recent years her interests veered towards Left Wing politics, and after attending the Brussels Peace Conference she started and worked actively for the Medical Peace Campaign. In 1936 she was elected an associate member of the City Division of the British Medical Association, and served as representative of the St Pancras Division at the Annual Meeting at Oxford. She was a woman of outstanding vigour and personality, whose untimely death has caused grief to many friends.

We regret to announce the death at a nursing home in Hove of Dr FREDERICK STAPLETON DICKEY HOGG who was for thirty-five years resident medical superintendent of Dalrymple House, Rickmansworth, a well-known home for inebriates. He was born in India in 1859, the eldest son of Sir Frederick Hogg KCIE and from Repton School went to Jesus College, Cambridge, and thence to St George's Hospital, obtaining the M.R.C.S. and L.R.C.P. diplomas in 1888. After serving as house-surgeon at the West London Hospital he was for a time chief medical officer to the Bengal-Nagpur Railway, returning to England in 1899 to take charge of Dalrymple House Retreat. He was an active member of the Society for the Study of Inebriety and contributed articles on the treatment and control of alcoholism and drug addiction to Quain's *Dictionary of Medicine*, to the *British Journal of Inebriety* and to the *Lancet*. Dr Hogg was a man of charming personality with many friends. He first joined the British Medical Association in 1899.

Dr DAVID SMART of Liverpool died suddenly on April 7 while examining a seaman on a ship in dock at Bootle. He was born in 1860 in Perthshire and from Dundee High School went to Edinburgh University, where he graduated M.B., Ch.B. with first-class honours in 1882, and obtained the B.Sc. in public health four years later. He won the Buchanan Fellowship and held for a time a gynaecological post at the Edinburgh Royal Infirmary. In Liverpool Dr Smart was for thirty-five years visiting medical officer at Smithdown Road Institution, and had also been assistant surgeon to the Hospital for Women and medical officer to the Toxteth Poor Law Hospital. He devoted many years to medical service in the old Volunteers and in the Territorial Army. With Dr Graham Martin he raised the Liverpool Bearer Company some thirty years ago and continued to serve until its members were transferred to field units of the 1st and 2nd West Lancashire Field Ambulances. During the war he was A.D.M.S. to the 57th and 73rd Divisions and retired with the rank of colonel A.M.S.(T). Dr Smart was one of the best known and most popular doctors in Liverpool, and his death is widely regretted.

Universities and Colleges

UNIVERSITY OF BIRMINGHAM

Lectures

A course of five William Withering Memorial Lectures on nutrition and nutritional disorders will be given in the large theatre of the Medical Faculty Buildings, Edmund Street, on April 22 and 29 and May 6, 11 and 13 at 4 p.m. The first lecture will be given by Professor W. N. Haworth, D.Sc., F.R.S., the second and third by Professor J. C. Drummond, D.Sc., and the last two by Professor Leonard G. Parsons, M.D., F.R.C.P. Members of the medical profession and students of medicine are invited to attend. Details of the lectures will be published in the post graduate diary column of the *Supplement* weekly.

The Ingleby Lectures 1937 will be given on Tuesday and Thursday, May 18 and 20 at 4 p.m. in the medical lecture theatre by Professor Arvid Wallgren, M.D. of Gothenburg. The subject of Professor Wallgren's first lecture will be "Erythema Nodosum" and of the second "Childhood infection and Adult Type of Pulmonary Tuberculosis."

Post graduate courses will be held in the Department of Industrial Hygiene and Medicine of the University as follows:

May 24 to June 4, On the Care of the Injured Workman
June 14 to 25 Intensive Course in Industrial Hygiene and Industrial Medicine. The fee for each course is £6 6s., and full particulars can be obtained from Dr H. E. Collier, Department of Industrial Hygiene and Medicine, The University, Edmund Street, Birmingham.

Provisional arrangements are being made for a course in neurology to be given in hospitals associated with the University of Birmingham (May to July) for practitioners desiring to enter for an examination for a Diploma in Psychological Medicine and for others. Further information may be obtained on application to the Dean of the Faculty of Medicine, the University, Edmund Street, Birmingham 3.

UNIVERSITY OF DUBLIN

TRINITY COLLEGE

The following candidates have been approved at the examinations indicated:

FINAL MEDICAL EXAMINATION—Part I (*Materia Medica and Therapeutics, Pathology, and Bacteriology*). *M. Herman, *G. E. Nevill, †F. D. FitzG. Steede, †Isabella M. Dorman, †Fallon, F. H. Counihan, Deborah Bloom, B. Kernoff, H. McV. Buchanan, M. F. X. Slattery, J. L. Mans, J. W. Cathcart, †W. Hanna, J. Morris, N. Marks, Mary A. Conyngham. Part II. M. B. W. Hayes, H. FitzG. Sloan, O. M. Harrison, S. Tomlinson, G. Donald, R. W. Duncan, C. J. S. Flood, Rebecca M. R. Pike, H. M. Carson, F. J. B. Convery, B. Ch. †Eileen D. Maunsell, †J. G. Steinbock, P. J. Mullaney, C. Mushatt, G. C. Reitz, D. S. Toole, F. J. B. Convery, J. G. Cunningham, D. J. H. Douglas, P. L. van Aardt, A. J. Reeves, J. McQuillan, M. Levy, B.A.O. *E. McG. Cochrane, *G. N. MacFarlane, *M. C. Brough, *R. E. Taylor, *H. J. Walker, †W. T. Kenny, †J. C. Lambkin, †J. E. Gillespie, †Stella M. Coen, †C. G. Reilly, †C. Cunningham, †J. A. Strong, †Jasmine Taylor, †F. C. Heatley, †H. F. MacFetridge, M.C. Warnock, F. A. Hanna, A. D. Parsons, R. Pollock, J. Freedman, D. G. Harrison, Grace M. Wild, J. N. G. Drury, Patricia M. J. Conway, J. G. Nixon, J. B. Plews, S. G. Heaton, M. C. Wood, J. H. Mitchell, J. R. Steen, R. Brass, C. M. Ludlow, S. Rubin.

DPH (Part I). *T. A. Austin, *Emily M. Booth, †H. W. Dalton, Mary S. Miller.

DIPLOMA IN GYNAECOLOGY AND OBSTETRICS—†K. Tatz, †M. M. Kneeman, †A. Wassef, V. D. Lespinasse.

DIPLOMA IN PSYCHOLOGICAL MEDICINE—Part II. *H. J. Eustace. *With first-class honours. †With second-class honours.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A council meeting was held on April 8 with the President Sir Cuthbert Wallace in the chair.

Diplomas and Awards

Diplomas of Membership were granted to Albert Ernest Harpin, Eades Kenneth Coate, Royes and Eric Vernon.

Diplomas in Child Health were granted jointly with the Royal College of Physicians of London to the following candidates:

Margaret D. Baber, H. B. Basu, M. L. Biswas, V. S. H. Davies, J. G. H. Frew, J. H. Green, Joyce B. Jewson, B. Kenton, A. H. M. Kersha, S. K. Lee, G. K. Lim, Louise A. Matheson, Dorothy Miller, A. L. Smallwood, S. E. L. Stening, Elisabeth J. McQu. Thomas, Enid L. Weatherhead, H. A. Williams, Margaret C. Winter, Shuan Shi Yang.

The following Members of twenty years standing were elected Fellows: Ernest Eric Young and Arthur Gorge Wells.

The Jacksonian Prize was awarded to William E. Underwood (St. Bartholomew's). The subject for the Jacksonian Prize for 1938 is: Surgery of the Heart.

The John Hunter Bronze Medal with the triennial prize of £50 was awarded to Laurence F. O'Shaughnessy, M.D., F.R.C.S. for his research work on the surgery of the thorax.

The additional post of fourth house surgeon at the Royal Surrey County Hospital, Guildford, was recognized for the six months surgical practice required of candidates for the final Fellowship examination.

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

At the monthly meeting of the College held on April 2 the following successful candidates at the Conjoint Final Examination with the Royal College of Surgeons in Ireland were admitted to Licences in Medicine and Midwifery:

J. D. Clinch, J. N. Duff, S. Kavanagh, R. M. Kirkpatrick, M. G. Linchan, P. F. Meenan, K. McCaul, I. O'Ryan, T. N. Pilkworth, D. W. Rice, Nora M. Staunton, M. Stein.

The recommendation of the Conference Committee with representatives of the Royal College of Surgeons that a letter be sent to the Minister for Home Affairs of Northern Ireland protesting against the recent Order with reference to the appointment of medical officers in Northern Ireland was adopted.

Medical Notes in Parliament

Business arranged for the House of Lords this week included the Hydrogen Cyanide (Fumigation) Bill and a debate on coroners.

In the House of Commons on April 6 the Prohibition of Vivisection on Dogs (Scotland) Bill, which had been awaiting second reading as a private member's Bill, was withdrawn.

The Contributory Pensions (Voluntary Contributors) Bill was read a second time in the House of Commons on April 8. Replying for the Government, Mr R. S. Hudson said the class affected by the Bill desired pensions and not health insurance. Between 1918 and 1925 45,000 persons became voluntary contributors for health insurance. From 1926 to the present time 650,000 persons had become voluntary contributors for pensions. Anyone who was a voluntary contributor to-day could continue being a contributor for health and for pensions insurance, or could become a contributor for one, dropping the other.

The Public Health (Drainage of Trade Premises) Bill, which has passed the House of Lords was read a first time in the House of Commons on April 8.

The House of Commons read the Ministers of the Crown Bill a second time and discussed difficulties arising out of the civil war in Spain. The Maternity Services (Scotland) Bill was set down for report and third reading. The House also considered the Army and Air Force Annual Bill in Committee.

A report by the Attorney-General on the Liverpool United Hospital Bill was presented to Parliament on April 13. On the same day a standing committee of the House of Commons completed its examination of the Livestock Industry Bill.

The Methylated Spirits Bill, which passed through the Standing Committee on Scottish Bills on April 13 with an amendment affecting surgical spirits, is set down for report stage on April 23, the last day allotted to private Members' Bills. It is not in the first place on that day.

On April 13, on the motion to go into Committee of Supply on the Civil Estimates, Mr Rowson drew attention to the evidence of malnutrition, which he said called for urgent administrative measures to restore and safeguard the physical well-being of the people. Sir Kingsley Wood said he had asked the authorities to review the scale of income observed in connexion with the requirement for repayment for milk or for food supplies. He had also asked the authorities to consider afresh the question of a properly organized system of meals, and he had reason to believe that the authorities would be able to continue and extend the work they were now doing. The Department would undertake certain dietary surveys which the Advisory Committee on Nutrition had recommended. This would take time, but would not stop the work now going on.

In the House of Commons on April 13, on the motion to go into Committee of Supply on the Civil Estimates, Wing Commander James called attention to the need to implement the Report of the Committee on Voluntary Sterilization and moved that, in the opinion of this House, the Government should give further consideration to the potentialities of voluntary sterilization for hereditary defectives in accordance with the unanimous recommendations of the departmental committee that reported to the Minister of Health on January 8 1934. Sir Kingsley Wood said that there was no question that opinion in this country was growing in favour of sterilization, but opposi-

tion remained and there was still much conflict of opinion, particularly on religious grounds. The medical profession was by no means unanimous on the matter. The amendment was withdrawn.

The report of the Charity Commissioners for England and Wales on proceedings during 1936 says of the Voluntary Hospitals (Paying Patients) Act 1936: "In pursuance of the provisions of the Act we made rules in relation to applications for Orders under the Act and other matters on September 15, 1936 and the rules were laid before Parliament as directed by the Act on October 10, 1936. Five applications for Orders under the Act were received by us before the end of the year, but we have reason to believe that several further applications will be received by us in the near future."

Physical Training and Recreation Bill

Mr OLIVER STANLEY in the House of Commons on April 7 moved the second reading of the Physical Training and Recreation Bill. He said the Bill applied to England, Wales, and Scotland and he proceeded to summarize its provisions (which have been previously published). He said that the Government did not desire under this scheme to substitute physical training for games but to supplement games by physical training. Public attention had been concentrated on the scheme from the health point of view. Not so widely known was the remedial effect that wise physical training with a scientific basis behind it could have upon the ills to which a highly civilized and industrialized society was liable. The president of the National Union of Teachers had said that existing machinery could ensure that every school child came to physical training with a well-nourished body. If that machinery was properly used there should be no question of malnutrition in the schools and Mr Stanley assured the House that he intended to impress on local education authorities the need to put the machinery into the fullest operation. The recent revision of the block grant would facilitate this. As for nutrition after school life, the first reports of the Advisory Committee on Nutrition had shown that the picture of a nation suffering from malnutrition was false. It was a problem of a small minority. The Government would carefully consider the remarks made by that committee on the possibility of extending the consumption of milk both in the schools and after children had left the schools. The problem was not only economic but one in which questions of taste and of belief in milk came into play. The trend of industrial commissions was towards shorter working hours and the regular leisure which these would provide would require more active occupation than just sitting about and resting. Physical activity alone was not going to be wholly satisfactory but the facilities provided in the Bill might lead to the development of other and wider interests.

PROBLEM OF NUTRITION

Mr LEES SMITH said the scheme of the Bill was based on the voluntary principle but there was a danger that Government assistance being based upon existing organizations would be given to those organizations which confined their efforts almost entirely to the black-coated workers whereas the greatest need of physical improvement was among factory operatives and those who worked in pits. He did not believe that strenuous physical exercises up to about 25 years of age would guarantee health for the rest of a long life. Lord Dawson of Penn had pointed out that even among Territorials—a group of selected men—50 per cent suffered from physical defects which mere exercises would not remedy. The scheme required not only the development of remedial exercises but development of open air recreation differing in type from violent physical exercise. Mill girls did not need more exercise but quietude and rest in the open air. The attendance of great crowds at football matches was a sign of the instinctive perception of the workers that what they required on a Saturday afternoon was some quiet interest in the open air. Mr Stanley had spoken of the connexion between this scheme and nutrition. The Labour Opposition agreed with the dictum

of Lord Baden Powell that it was no good imposing on underfed and ill nourished boys hard physical exercise. The figures of the Board of Education on the proportion of school children suffering from malnutrition were not reliable. They were based on the impression made upon medical officers of health when they looked at the children. The standard taken by a medical officer of health in looking at children was that to which he was accustomed in the neighbourhood where the school was situated.

Sir FRANCIS ACLAND said that where keep fit classes had been introduced they were a great success and could be provided more cheaply than the football fields, swimming baths and camping sites which were also part of the scheme. Women were at present keener on this keep fit work than men. His experience was that when young men who had engaged in hard manual work went to these classes in the evening they were not too tired to get great refreshment from them.

LADY ASTOR said the standard of health was now much higher but 95,000 children entering the elementary schools yearly were physically defective in some way. Of 100 medically examined children who entered the schools 15 needed medical attention, 15 needed observation, one half showed signs of rickets and two thirds had defective teeth. This could only be remedied by open air nursery schools. A great many of these children needed sleep, fresh air and proper play. Sleep was just as important as food. There were too few nursery schools. The London County Council had not built one.

MINISTER OF PLEASURE

Captain ELLISTON referred to a suggestion by Lord Horder in the House of Lords that there should be a Minister of Pleasure. The Bill made a first step in that direction. In spite of all the provision by clubs and societies, by such philanthropic bodies as the YMCA and by great business houses, 80 per cent of the boys of this country got no regular exercise after leaving school and the case of women and girls was worse. Magnificent pioneer work had been done in Lancashire in providing physical classes for women and girls in every industrial town throughout the country, and the organizers had been assisted by valuable medical advice. Physical training was being exploited by all sorts of cranks without sound knowledge of the physiological considerations. The local committees would require the advice and assistance of trained experts with the highest qualifications, both theoretical and practical. Given the right instructors there would be an immediate response from the people. He was glad the Bill empowered the Treasury to cover the cost of teaching the public the value of physical education. There would be opportunity for the Ministry of Health to include this subject in its coming campaign for educating the people in matters of health. He hoped to see on the gates of all public parks and gardens notices that an instructor would attend to give exercises to those who required them at convenient hours and that a medical man would be attached to these instructional courses to search for signs of malnutrition, to warn persons who were unfitted for violent physical exercise and to suggest to others ameliorative treatment to make them physically fit.

UNIVERSITIES OF SPORT

Mr GEORGE GRIFFITHS said schemes of physical training would be useless for boys between the ages of 14 and 18 working in pits who when they came home dragged themselves along like old men. He went on to cite evidence brought forward by Sir John Orr and Dr McGonigle on the small consumption of milk among the working classes. Sir SAMUEL CHAPMAN said that in Edinburgh a rate was levied for the purpose of meeting the athletic inclinations of young citizens. Four universities of sport should be established in the four great centres of Scotland.

Mr CLEMENT DAVIES spoke of the conditions under which children were educated in rural Wales. Some toddlers of 6 were called before 7 o'clock to walk four miles to school and when they got there there was no means of drying their clothes. At about 10.30 a.m., when they were allowed out they ate every scrap of the sandwiches in their satchels and when they

arrived home between 5 and 6 o'clock they had to help on the farm before a meal was ready for them. Why could not money be provided to help these rural children? Mr TINKER said those whose drudgery continued from early morning till late at night should have their hours lessened so that they could receive the benefits of the Bill.

LORD BURGHLEY said that the majority of the members of athletic teams with whom he had gone abroad were from the class to which Mr Tinker referred and had been placed in the Olympic Games. It was marvellous how working as hard as they did they found time to produce such physical fitness. Of the 150,000 members affiliated to the Amateur Athletic Association the great majority came from these classes. Champions were freaks and the House did not necessarily wish to produce them but to raise the general standard to make people take a pride in their physique, and to make them realize that in all physical fitness and in preparation for sports and recreations happiness was to be found. Mr PILINGTON said that he would like to see the universities have some scheme whereby every undergraduate would partake in physical exercises.

Mr G. A. MORRISON said nutrition was the basic element of physical fitness which also depended on attention to the health of the pre-school child. It depended upon attention to diet, to bodily hygiene, the care of teeth and adequate practice of physical exercises during school life. Of recent years physical exercises founded upon anatomical and physiological knowledge and accurately recorded practice had had a most beneficial effect. He had consulted medical men on this subject and was impressed with the humility with which they said they did not understand all that was involved. Perhaps a new kind of expert was required with medical training and special qualifications in physical training. Attention should be directed to the provision of facilities, accommodation, and apparatus for remedial work before the young persons got too old.

Mr WESTWOOD discussing the application of the Bill to Scotland said nutrition was absolutely necessary to make a success of the Bill and must be extended far beyond the school children. Professor Cathcart, in a speech which was reported in the *British Medical Journal* had emphasized that the problem of food was frequently as much psychological as physiological. Dr Elliot must press the local authorities to use their power to avoid malnutrition through the under-feeding of children in schools. Mr SHAKESPEARE said some 14,000,000 persons between the age of 14 and 35 might come under the Bill. In his own constituency working boys and girls coming out of the factories, however tired they were, tried to engage in some form of exercise such as swimming or gymnastics and if facilities were provided in the manner proposed by the Bill more would make use of them.

The Bill was then read a second time without a division and committed to a standing committee. The necessary monetary resolution was carried through committee without discussion.

Factories Bill in Committee

Major LLOYD GEORGE was again in the chair when a Standing Committee of the House of Commons resumed on April 8 the examination of the Factories Bill. The committee proceeded to consider Part IV—Health, Safety and Welfare (Special Provisions and Regulation).

DUST AND FUMES

On Clause 46 (Removal of Dust or Fumes) Mr RHYDS DAVIES moved to provide that the safeguards of the clause should apply not only to dust or fume but also to other impurity likely to be injurious or offensive to any person employed. He said that in some offensive trades such as those dealing with rabbits skins many impurities arose which could not be said to be fumes or dust. Mr GIFFORD LLOYD said that on further inquiry the Home Office found many impurities which would not strictly be covered by the words in the clause. Fume was defined in Clause 145 as including gas or vapour and would not cover liquid or the fumes of liquids which were given off by spraying from a chromium bath. Other con-

ditions were not sufficiently covered by the word "dust." The Government would therefore accept the amendment. Mr GRAHAM WHITE moved to alter the clause by leaving out the words "or offensive." He said that the governing word in the clause was "injurious." "Offensive" introduced an element of uncertainty. In his first employment as chemist in a factory where there was an ammonia plant on one floor those who worked there liked the aroma and had an idea that it was good for them. Under the clause it would have been necessary to close down that plant. Mr RHYS DAVIES said he was a member of a local authority in whose area was a tripe-dressing factory which was not injurious to the workers but was really offensive and the authority compelled the owner to remove the factory. Mr T. HUNTER asked how the clause would affect a linoleum factory where the continuous smell might be regarded as offensive except by the people engaged in the factory. Sir JOHN SIMON said it was not the smell as such with which the clause was concerned but the dust or fume, and the measures to be taken must be practical measures. The clause talked of dust or fume being offensive to "any person" but that did not mean someone with an idiosyncrasy like people who could not bear cats in the room. He was inclined to recommend the committee to substitute the words "the persons employed for any person employed." Mr WHITE said that alteration would secure what he had in mind. The clause was amended accordingly and Mr RHYS DAVIES's amendment to insert "or any other impurity" was added at the relevant point. The clause as amended was added to the Bill.

WASHING FACILITIES

On Clause 47 (Washing Facilities and Meals in Certain Dangerous Trades) Sir ERNEST GRAHAM LITTLE moved to leave out the word "washing" and to substitute "cleansing," in the provision that in processes liable to cause dermatitis or other eruptions of the skin, and in any rooms where lead arsenic or any other poisonous substance was used adequate and suitable washing facilities should be provided. He said he had to move amendments because as the only doctor in the committee he had received suggestions from the Royal Sanitary Institute and the Society of Medical Officers of Health. He said it was common for patients to show dermatitis and other injuries to the skin caused not by the substances with which they had worked but by the materials used for washing their hands such as strong soda or soap. In many processes special solvents were used and the best way of removing a substance from the hands was to apply the solvent which was used in the process. Washing was always understood as washing with soap and water and the amendment would give a wider choice.

Sir JOHN SIMON said "washing facilities" was an expression well known in the industrial code and must vary according to circumstances. It was better to use it rather than attempt to prescribe a sort of formula. The Home Office threw no doubt on the importance of the medical considerations urged by Sir Ernest Graham Little, but the committee was making a general code, and he thought that "washing facilities" was a phrase which in a proper case would include proper methods of cleansing. Sir ERNEST GRAHAM LITTLE withdrew his amendment.

INTERVALS FOR MEALS

On the subsection forbidding persons to remain during intervals allowed for meals or rest in any room where a process was carried on giving rise to highly siliceous dust or asbestos dust, Mr ALFRED SHORT moved to insert after the word "process" the words "prescribed by regulations made by the Secretary of State." Mr LLOYD said this amendment arose out of a proposal by Mr Short to leave out the word "highly." It would meet Mr Short's point. The Home Office was not satisfied with the words "highly siliceous dust" which might put the danger point too high but was opposed to leaving out "highly" since the clause would then apply to any room in which there was siliceous dust which could be chemically or physically detected. Siliceous dust in minute quantities and harmless from a pathological point of view was present in many workrooms and was probably present in the room in which the committee was then meeting. The committee was therefore forced back on the method of allow-

ing the Secretary of State to prescribe what was a room in which there was sufficient siliceous dust to be dangerous.

The committee accepted the amendment and Mr Short's subsequent amendment to leave out the word "highly." Mr RHYS DAVIES moved to extend the prohibition against remaining in the room during meal time to the taking of food and drink in that room. Mr LLOYD said siliceous and asbestos dust, while dangerous to breathe, was not dangerous to swallow, unless perhaps if taken deliberately by the sackful. It was therefore unnecessary to prohibit workers from swallowing a sandwich or a bar of chocolate or drinking a glass of water during the actual working period. The amendment was withdrawn and Clause 47 was added to the Bill.

SHUTTLE KISSING

On Clause 48 (Shuttle Threading by Mouth Suction) Mr RHYS DAVIES raised the debate by proposing to leave out the provision that regulations made by the Home Secretary on "shuttle kissing" should be special regulations. He said the habit of shuttle kissing which prevailed especially in the Lancashire cotton industry had grown up for the purpose of speed but both employers and workers would like to do away with it. A mechanical device for shuttle threading was shortly coming on the market. His amendment would enable the practice to be abolished once and for all without special inquiry. Mr J. HEPPWORTH said he found most employers in the woollen textile industry provided apparatus for threading the shuttle but the difficulty was to get the employees to use it. In Bradford one employer of 2,000 weavers provided every weaver with an apparatus for threading the shuttle but not one in a dozen would use it. If regulations were made there would have to be a special regulation to compel employees to use the apparatus.

Mr BURKE said there was not as much shuttle kissing in Yorkshire as in Lancashire. Apart from the injury to health it was injurious to the teeth. In Lancashire a condition commonly known as "weaver's teeth" resulted from shuttle kissing. Sir JOHN SIMON said it had not been proved that this practice produced injurious results but he would make inquiry into what Mr Burke had said. The words "special regulations" had been put in in order to get the views of everybody who had knowledge of the subject before the Departments proceeded to make regulations. Sir ALFRED LAW said that in some factories there was no shuttle kissing. He was a member of a firm which made woollen goods and he had not seen anything of the sort. Mr RHYS DAVIES withdrew his amendment on Sir John Simon promising to look into the matter further, and Clause 48 was added to the Bill.

Clause 49 (Prohibition of Use of White Phosphorus in Manufacture of Matches) was added to the Bill without discussion. Clause 50 (Humid Factories) was also added to the Bill with an amendment to deal with the case where combing and spinning were carried on in different rooms.

UNDERGROUND ROOMS

On Clause 51 (Underground Rooms) Mr SHORT moved to vary the conditions on which an underground room used not only for storage or excepted purposes could be certified by the inspector for the district to be suitable for factory use. The clause as drafted provided that the certification should be one of unsuitability. Mr Short said the amendment would bring factories into line with underground bakeries by ensuring that there should be certification for use. Mr LLOYD said that in the clause an underground room meant any room half of which was below the level of the ground. Underground rooms as defined in the clause were not necessarily bad especially having regard to the new provisions for lighting and ventilation. Information in the Home Office indicated that an improvement had taken place: there were good reasons for allowing basement rooms to be used for machinery.

Miss HORSBURGH said in large towns work was done in any number of small underground rooms and in many dressmakers' premises girls worked in underground rooms which were entirely unsuitable. Sir JOHN SIMON said the clause as drafted was in the form in which it appeared in the Factory Bills of 1924 and 1926. It would be a new provision in the law and

an improvement. A general census of underground rooms would take a long time and divert inspectors from other important work. Mr SHORT withdrew his amendment, and Mr SILVERMAN withdrew an amendment to provide that the height of such underground rooms should not be less than 8 feet 6 inches measured from the floor to the ceiling.

Sir ERNEST GRAHAM LITTLE moved to provide that the inspection should be by the district council in consultation with the factory inspector. He said he was advised by the Society of Medical Officers of Health that if the district council was invested with authority the provisions would be carried out. Sir JOHN SIMON said that on questions of unsuitability of the room or inadequacy of ventilation the factory inspector would be the better judge. He hoped the Society of Medical Officers of Health would be convinced that the Bill was better as it stood. The amendment was withdrawn and the clause was then added to the Bill.

BASEMENT BAKE HOUSES

On Clause 52 (Basement Bake houses) Mr BANFIELD proposed to provide that the exemption for existing basement bake houses should not extend beyond five years before the passing of the Act. The clause before the committee had been passed in 1901 when a Factory Bill was under discussion, and Government spokesmen had then said that within twenty years underground bake houses would be abolished. Thirty years had passed and underground bake houses were still numerous, particularly in London. It was now easy to construct baking ovens of steel and the House should say that the time had come when underground bake houses should be shut. Men worked there in an atmosphere of sulphur heat and steam.

Mr LLOYD said it was unlikely there could be evidence to justify prohibition of all basement bake houses five years hence. Bake-houses could only be used under the present law if they were certified by the district council as suitable. The strengthening of the law on new bake houses was to be considered in consultation with the Ministry of Health. Sir JOHN HASLAM, Mr RIOLEY and Mr MANOFF supported the amendment. Sir JOHN SIMON said the matter was important but the amendment had only been printed for the first time that morning and he wished to get his officials to inform him on it. He would like to see an opportunity taken to discourage the continuance of these old underground bake houses. On this assurance Mr BANFIELD withdrew his amendment and Clause 52 was added to the Bill as was Clause 53 (Laundries). Sir JOHN SIMON remarked that laundries were not necessarily factories. An Act of 1907 dealt with laundries as an addition to the general provisions of the Factory Code and that Act applied regulations in respect of ventilation and other matters to all the rooms in the laundries. The clause in the Bill merely proposed additional provisions. The clause was added to the Bill, and the committee adjourned until April 13.

Nutrition and Family Budgets

Mr DUNCAN SANDYS asked on April 8 whether it was the intention of the Government to institute the inquiries into income distribution, family budgets and diet recommended by the Advisory Committee on Nutrition in their recent report in so far as these were not already covered by existing investigations. Sir KINGSLEY WOOD replied that this was intended. The dietary survey had already begun. As regards family budgets it was hoped to obtain information as to food consumption in the course of the inquiry undertaken by the Minister of Labour for the purpose of the revision of the cost of living index number. The method of carrying out the inquiry into diet was receiving consideration.

Sir Kingsley Wood also assured Mr Sandys that recommendations made by the Milk Reorganization Commission for the increased consumption of liquid milk were receiving the Government's careful consideration. He had issued a circular on April 1 to maternity and child welfare authorities inviting attention to the Report of the Advisory Committee on Nutrition and urging them to review their arrangements for the supply of milk in the light of that report. Sir Kingsley further informed Mr Sandys that recommendations made by the Advisory Committee on Nutrition that the consumption

of potatoes should be increased were receiving consideration together with the other recommendations of the committee, but he could not say what further action might be taken.

Animals in Films

In the House of Commons on April 9 Sir ROBERT GOWER moved the Second Reading of the Cinematograph Films (Animals) Bill. He said its purpose was to prohibit production or exhibition of films depicting sufferings of animals or in the production of which suffering might have been caused to animals. Sir Francis Fremantle had pointed out that the Bill in its present form would prevent the exhibition of films to students in medical schools showing experiments upon animals and the result would be that more animals would have to be experimented upon. On behalf of the promoters of the Bill he had agreed with Sir Francis that if the Bill obtained a Second Reading that point would be dealt with in Committee.

Mr GRAHAM KERR said he could not support the Bill. The cinema had become a great factor in biological teaching and investigation. It gave access to the study of living creatures which would not otherwise be accessible and had become extraordinarily useful by its power to interfere with the time factor. If disease cells like cancer cells were examined with a microscope no movement could be seen although they were alive. But it was possible to take moving pictures at intervals and afterwards to run the film through projecting apparatus to show those cells in activity. That way would eventually lead to the full understanding of many diseases. Other movements were so rapid that they could not be followed with the eye but could be studied in the slow motion picture. Everyone even those people who thought experiments on animals justifiable agreed that the more the number of experiments on living animals could be reduced the better. The cinema film gave a method by which they could reduce such experiments.

Col MOORE intervened to repeat the assurance that such experiments would not be impeded by the Bill and said Sir Francis Fremantle representing the medical profession had suggested an amendment meeting every point which Mr Graham Kerr had raised. Mr GROVES said he had witnessed official cruelty to animals under the aegis of the Home Office at Hendon where surgeons made incisions in the belly of calves and the surgeon was followed by a student who rubbed in some pus. This deadly poison was eventually used as calf lymph to perpetrate the practice of vaccination. There was much cruelty involved in the process.

Mr GEOFFREY LLOYD said the Home Office was substantially in agreement with the objects of the Bill. The conditions normally imposed in licences issued under the Cinematograph Act 1909 gave local licensing authorities complete control over the films exhibited in cinemas. The Home Office felt that the existing powers were sufficient and so far as films produced in this country were concerned the ordinary law relating to cruelty to animals could be invoked.

The Bill was read a second time and sent to a Standing Committee.

Health Insurance Referees

On April 12 Mr HUDSON informed Mr Graham White that eight referees had been appointed under Section 90 of the National Health Insurance Act in England and Wales. Their remuneration was a fee not exceeding 10 guineas a day or 12 guineas where a hearing extended beyond seven hours.

Supervision of Nursing Homes

On April 12, Miss RATHBONE asked the Minister of Health if he would institute an inquiry into nursing homes all over the country in view of the many complaints of the inadequate and insufficiently qualified nursing staffs and the insufficient precaution taken in regard to the prevention of infection. She also asked if he had reason to believe that nursing homes were adequately inspected from the point of view of the sufficiency and qualifications of the nursing staff and that adequate care was given to the prevention of infection particularly when maternity patients were taken as well as general medical and surgical cases. Mr HUDSON said that

the attention of local authorities had recently been called to the importance of the adequate supervision of nursing homes in a circular letter of September 30 last. The Minister of Health saw no necessity for a special inquiry.

Medico-Legal Institute

Captain G. S. ELLISTON asked on April 8 whether in accordance with the recommendations of the Advisory Committee on the Scientific Investigation of Crime it was proposed to establish a medico-legal institute for pathological research and as a training centre for experts in medical jurisprudence. Sir JOHN SIMON replied that the committee's report was primarily concerned with measures for improving medical education in certain directions. He was in sympathy with the recommendations but these fell also within the province of the Minister of Health, with whom he was in consultation. The committee's proposals would involve a substantial charge upon the Exchequer.

Medicine Stamp Duties

On April 6 Sir ROBERT BIRD asked the Chancellor of the Exchequer whether he was aware of the great anxiety felt by those members of the Pharmaceutical Society who were engaged in trade over the recommendations in the report of the Select Committee on Medicine Stamp Duties and whether it was his intention to introduce legislation implementing the recommendations wholly or in part. He also asked what steps it was intended to take to terminate the loss to the revenue consequent upon the avoidance of the payment of medicine stamp duties disclosed in the report.

Mr CHAMBERLAIN said that due weight would be given to all relevant considerations in connexion with the committee's report, but he was unable at present to make any further statement on the matter.

Animal Experiments Without Licence—Mr WM LEACH asked on April 8 whether the Home Secretary had come to a decision whether the case mentioned in the annual return of experiments on living animals in the year 1935 of an experimenter who performed some inoculation experiments without the necessary licence and certificate was or was not in contravention of the Act, for which a penalty not exceeding £50 could be imposed. Sir JOHN SIMON in reply said the nature of this case was stated in the passage of the return to which Mr Leach referred. It was carefully considered whether there should be a prosecution but in all the circumstances, it was decided that the appropriate course was to suspend the granting of the licence for which application was made for six months.

Silicosis in Coal Miners—Mr JAMES GRIFFITHS on April 8 asked what progress had been made by the Medical Research Council in its investigations into the problem of silicosis and other lung disease among coal miners and when the investigation would be completed. To this question Mr RAMSAY MACDONALD answered that the standing committee appointed by the Medical Research Council to direct research into disease of the lungs among industrial workers had already promoted several investigations into silicosis and other conditions. The results had been published in official reports and scientific papers. These researches were in most cases not specially directed to the particular problem of lung disease among coal miners, but during recent months attention had been concentrated on this and a scheme of intensive investigation had been initiated in South Wales. The work already done showed the problem to be one of great difficulty and complexity and the investigation was not likely to be completed in less than two years.

Nursery Schools—Mr SHAKESPEARE told Mr LEONS on April 12 that eighty-six nursery schools were recognized by the Board of Education, of which eighty-three were recognized for purposes of grant, and three as efficient but not in receipt of grant. In addition thirty-four proposals for new nursery schools had been approved in principle and in a number of these cases final plans had been approved by the Board. Seven proposals were at present under consideration.

Medical News

A meeting of the Chelsea Clinical Society will be held at the Hotel Rembrandt, Thurloe Place, S.W. on Tuesday, April 20 at 8.30 p.m. when Mr E. Rock Carling will open a discussion on 'The Doctor and his Dependents'. The meeting will be preceded by dinner at 7.30 p.m.

At the meeting of the Royal Microscopical Society to be held at B.M.A. House, Tavistock Square, W.C., on Wednesday April 21 at 5 p.m. Dr E. S. Horning and Mr K. C. Richardson will present a paper illustrated with colour cinematograph film on 'A New Tissue Culture Technique'.

The Rt. Hon. A. Duff Cooper, Secretary of State for War, will speak on 'The Psychology of the Army' at a public luncheon on Thursday April 22, at the Princes Restaurant, Piccadilly, W. The luncheon is one of a series organized by the National Institute of Industrial Psychology, Aldwych House, W.C.2.

At a meeting of the Royal Sanitary Institute in the Tudor Barn, Well Hall, Pleasance, Eltham, on Friday, April 23 at 5.45 p.m., a discussion will be held on the provision of open spaces.

The inaugural meeting of the Greater London Provident Scheme for District Nursing will be held at Grocers' Hall, Princes Street, E.C., on Monday, April 19 at 4 p.m. The Earl of Athlone will preside and the speakers are Lord Horder, chairman of the council and Miss Wilms-hurst, general secretary of the Queen's Institute of District Nursing. The Scheme aims at providing an organization self-sufficient and auxiliary to various district nursing services in the metropolitan area. The object of the meeting is not to make any appeal for funds but to arouse interest.

The congress known as Journées Médicales de Paris will be held under the presidency of Professor Carnot from June 26 to 30, when hormones and endocrine treatment will be the subject for discussion. The subscription is 50 francs. Further information can be obtained from La Revue Médicale Française, 18, Rue de Verneuil, Paris 7e.

The attention of overseas members of the University of London Medical Graduates Society is drawn to the fact that the annual dinner will take place in the new buildings of the University, Bloomsbury, W.C.1, on Thursday May 6, at 7.15 for 7.45 p.m. It is hoped that as many as possible will be present, particularly as this is the first occasion on which the annual dinner is to be held in the new buildings. Members may bring guests, who may be medical or non-medical and who need not be graduates of any university. Applications for tickets should be made to the secretary, 9 Hardinge Road, London, N.W.10 if possible before April 29. The price of the ticket is 12s. 6d., exclusive of wines and a remittance, made out in favour of Mr Philip H. Mitchiner, M.D., M.S. should accompany the application.

An exhibition of water-colour drawings of game birds, duck, etc. from Iceland, Scotland, the Fens and Brecks by Dr E. A. R. Ennion will be on view at the Greatorex Galleries, 14 Grafton Street, W., until May 15.

A national industrial safety conference is being held this week-end at Balliol College, Oxford, under the auspices of the National Safety First Association, whose office is at 52, Grosvenor Gardens, S.W.1. The main subject for discussion is 'Training Young Workers for Safety'.

It is announced that the St. George's Hospital fever clinic reopened on March 30. Already 500 applications for treatment have been received, and no more can be considered at present. Last year 243 patients were given three treatments each.

The *Practitioner* for April is a special number containing articles on The Use and Abuse of Drugs and Preparations

The March issue of *Le Sud Médical et Chirurgical* is devoted to paediatrics and the issues of *Le Bulletin Médical* for March 27 and of *Paris Medical* for April 3 to gastro-enterology. The issue of the *Medizinische Klinik* for April 2 is devoted to skin and venereal diseases. The issue of the *Wiener medizinische Wochenschrift* for April 3 which is devoted to modern paediatrics, is dedicated to Professor Julius Zappert whose portrait it contains on the occasion of his seventieth birthday.

The 100 000-franc prize associated with the name of Albert I of Monaco has been awarded by the French Academy of Medicine to Dr Paul Boun and Dr Ancel whose work in collaboration on the sex hormones and on the interstitial glands in man is well known.

Professor Levaditi of the Pasteur Institute in Paris and a member of the French Academy of Medicine has been appointed by the Executive Committee of the French League against Venereal Diseases as scientific director of the Alfred Fournier Institute.

Professor Archibald Young and Dr J G McCutcheon have been appointed Deputy Lieutenants for the County of the City of Glasgow.

Dr L Montanari of Parma who recently celebrated his 104th birthday is in good mental and physical health.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL BMA HOUSE, TAVISTOCK SQUARE, W.C.1.

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QUERIES AND ANSWERS

Mementoes of Laennec

Dr AGNES F TURNER (County Buildings, Dumfries) writes: I have in my possession a Laennec's stethoscope which belonged to my grandfather with an accompanying booklet of translated extracts from Laennec's work. I should be glad to hear of any museum to which I might send this or any medical or scientific society which would be interested to have it.

Painful Feet

K. D. K. in reply to "Perplexed" (April 3 p. 738) writes: Sponge rubber in soles are used in the orthopaedic departments of many of the London hospitals and by chiropodists. Sponge rubber one-eighth of an inch in thickness is cut to the shape of the sole and brought forward from the heel to the metatarsal heads; a second layer is then placed on top stretching from the metatarsal heads backwards for about two inches—this should be skived anteriorly and posteriorly and fitted with the thickness coming just behind the heads of the metatarsals. The upper surface is then

covered with chamois leather and glued together with some rubber solution (such as is used for mending tyres). These in-soles can be removed from one shoe to another; the suction of the rubber on the under surface prevents any movement in the shoe; the slight thickness under the heel will stop any 'jarring' when walking, and the increased thickness behind the metatarsal heads will remove the excess pressure from the heads.

Oxaluria

Captain C. A. DE CANDOLE R.A.M.C. (Woolwich) writes in reply to "Perplexed" (*Journal* March 13 p. 593). I would suggest that the diet be modified to exclude the following: all fruit and vegetables except cauliflower, lettuce, and apples and even these in minimal quantities; tea, coffee, cocoa, chocolate, jam, pepper and anything containing gelatin. If oxalates continue to be passed in the urine, bread and potatoes should be forbidden and the fruit and vegetables still further reduced. Meat and eggs are permissible. As soon as the urine is free from oxalates, whichever prohibited article is most desired may be allowed and by watching the urine the maximum permissible discovered, others being added one at a time if the urine remains clear. Plenty of fluid may be taken and an alkaline mixture prescribed as by this means the absorption of oxalic acid from the intestine is hindered.

LETTERS, NOTES, ETC

Disclaimer

Professor A. E. NAISH M.D. writes: My attention has been called to recent articles in the provincial lay press in which it is stated that a research group is working at Sheffield University under my direction investigating the treatment of haemophilia. I wish to state most emphatically that these articles have been published without my knowledge and that although I have been associated with the work it is not being done under my direction.

Nutrition and Infectious Disease

Dr J. T. EDWARDS writes: In the report you have published (p. 773) of the discussion on Nutrition and its Effects on Infectious Disease at the meeting of the Comparative Section of the Royal Society of Medicine held on March 24 last I am stated to have said: "It was often observed by veterinary surgeons who had to deal with tuberculosis that high class stock fed and kept in the best conditions suffered more severely than lean beasts when disease was allowed to run its course. The disease dealt with in my paper in this connexion was foot and mouth disease, not tuberculosis."

Ascorbic Acid

In our account last week of the discussion on nutrition and infectious disease Mr A. L. Bacharach was twice reported on page 775 as having mentioned "ascorbic acid." This as he points out is incorrect. The accepted name—by workers in all English speaking countries except the American Medical Association—is ascorbic acid, originally suggested by Professor W. N. Haworth as more convenient than 3-keto-L-gulonolactone, the full descriptive name of vitamin C.

Classification of Serum Proteins

Dr HARRY COKE (London W.1) writes: May I be allowed to point out two slight errors in the report of a meeting of the Committee for the Study and Investigation of Rheumatism on page 778 of your issue of April 10. It was I and not Dr Frank Coke who spoke of the discovery of a new classification of serum proteins by the ultra-centrifugal methods of MacFarlane (*Biochem. J.* 1935, 29, 1175) and the more recent discovery of a very large protein molecule in certain acute conditions. I would wish to re-emphasize that this is entirely the original work of MacFarlane and is a point that was apparently not made completely clear. What I did mention was the confirmatory findings of this from a purely chemical and colloidal point of view.

Medical Golf

The qualifying round of 18 holes medal play in the Noel-out tournament of the Medical Golfing Society was played at Addington on April 8. The following qualified and will compete by match play for the prize: F. McG. Loughnan, J. A. Flaherty, J. Grace, J. D. McGrath, A. G. Palmer, Stanley Wyard, N. L. Eckhoff, Michael Smith and L. Bathurst.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

295 Erythema Nodosum in Adults

P. L. ROTNES (*Nord med Tidskr*, February 20, 1937, p. 281) gives an account of 182 cases of erythema nodosum observed in the Ullevaal Hospital in Oslo between 1928 and 1934. The ages of the patients, only nine of whom were males, ranged from 16 to 60, as many as 154 being between the ages of 16 and 30. Tuberculin skin tests were carried out on these 182 patients and on 182 controls—mostly women suffering from various other diseases at approximately the same age. All but ten in the first group proved tuberculin-positive, while seventy-two of the controls were tuberculin-negative. This difference gives support to the view that erythema nodosum is a manifestation of tuberculosis. Even some of the ten tuberculin-negative patients showed evidence of tuberculosis in the form of radiological shadows, a history of pleurisy, etc. The radiological examinations of 181 patients yielded positive findings in 110 cases, which, in twenty cases, were limited to hilar changes. In thirty-three cases there was a history of a sore throat about the time of the eruption, and in as many as seventy-seven cases the erythema nodosum was complicated by ailments of the muscles or joints. In some of these cases the clinical picture was typical of acute rheumatism of the joints. As a rule, the rate of sedimentation was much accelerated and in fifty-six cases there was a dry, hacking cough just before, during, or just after the appearance of the rash. No tubercle bacilli could be found in the sputum or in the skin of the twenty-four patients from whom a little of the tissues involved was removed for microscopical examination. A follow-up study was undertaken at the end of 1934 of 137 patients whose erythema nodosum had appeared from five to eighty-one months earlier. As many as thirty-seven were found to have developed tuberculosis in some form or other—pleurisy in seventeen cases, pulmonary tuberculosis in fifteen, meningitis in two, and various other forms of tuberculosis in the remainder. The author stresses these findings in his advocacy of the close supervision for a considerable time after the appearance of erythema nodosum of patients who develop this disease in adolescent or adult life. For though he admits that erythema nodosum in adults is more often non-tuberculous than it is in children, he considers it a manifestation of tuberculosis in the overwhelming majority of cases.

296 Rectal Absorption of Water

M. TAUBENHAUS and E. AMANN (*Wien klin Wschr*, February 19, 1937, p. 214) have given sodium fluorescein solution rectally in amounts of 20 c.c., and by testing successive specimens of the urine have compared the rate of absorption of water from the rectum in normal and in habitually constipated persons. Since an increased water absorption from the caecum and ascending colon in constipation has long been recognized the writers were surprised to find that severe constipation—whether 'spastic' or 'atonic'—was associated with a greatly diminished rate of water absorption from the rectum. This rate was increased when the constipated subject had been 'cured' by a large-residue-producing diet, was little affected by giving opium to the non-constipated, but was much diminished in normal persons who had been given large doses of calcium carbonate. Alkalinization of acid products of intestinal fermentation would appear to have a decisive influence on the rate of resorption from the rectum.

297 Neurological Findings in Cases of Peptic Ulcer

F. W. KROLL (*Münch med Wschr*, February 19, 1937, p. 281) investigating twenty cases of gastric and duodenal ulcer found in every case some neurological sign or symptom.

These signs were either exaggerated reflexes partly combined with pyramidal symptoms or absent patellar or tendo Achilles reflexes. In addition there were some sensory disturbances in almost every case. These disturbances manifested themselves either in a decrease of the stereognostic sense of the skin or in atactic disorders or rarely in oversensitiveness in the form of Head's zones. There were also often segmental sympathetic disturbances, usually dermatographia, which were either accentuated or decreased between the ninth and tenth thoracic segments. There were also deep sensory disturbances which showed themselves either in an ataxy of the lower limbs or in a positive Romberg's sign. These disturbances never affected the upper limbs. The symptoms were never present singly, but always combined. The author, however, is not certain whether gastric or duodenal ulcer forms part of a disease of the central nervous system or of a metabolic disease.

298 Causes of Death in Diabetics

B. V. BONDORFF (*Finska Läksällsk. Handl.*, January 1937, p. 33) has investigated the causes of the deaths of the 308 diabetics over the age of 15 treated in a hospital in Helsingfors from the beginning of 1930 to October 1, 1936. As many as 120 died within this period. Of the thirty-two deaths under the age of 50 twelve were from diabetic coma, seven from tuberculosis, and four from other infections. The average age at death was 56.5 years, and the average age of the survivors when they were last in hospital was 49.4 years. As great a proportion as 50.8 per cent of all the deaths could be traced to arteriosclerotic changes, heart disease, disease of the cerebral blood vessels and gangrene of the lower limbs. Infectious diseases such as pneumonia, etc., were responsible for 15.8 per cent of all the deaths, and tuberculosis for 10 per cent, while malignant disease disposed of 5.8 per cent. One of the main points in the author's study is that diabetes is very often responsible for sudden 'cardiac' deaths, which are not uncommon even at such a comparatively early age as 30. The author traces many of these deaths to defective circulation in the coronary vessels.

Surgery

299 Complications following Gastro-enterostomy

N. HORTOLOMEI (*Rei Chir*, Paris, January, 1937, p. 19) points out that the operation of gastro-enterostomy is not always successful and that further operation is sometimes necessary on account of persistence of symptoms. The following complications may be seen: a peptic ulcer may develop at the stoma of the gastro-enterostomy or in the jejunum, or there may be stenosis of the stoma. On the other hand, the gastro-enterostomy may be satisfactory without any visible lesion of the pylorus or duodenum or trace of scar. In other cases there may be a scar at the pylorus or duodenum, either of which may be partially or completely stenosed, or again, the stoma may be badly placed towards the left, so that emptying of the stomach is incomplete. In some patients the stoma may be satisfactory but the ulcer still active. In rare instances adhesions may be found round the duodenum and stomach but without any trace of ulcer. In many of these cases the patient suffers either because the gastro-enterostomy was unnecessary or because the stomach contents empty by means of the stoma and also by the pylorus. In many cases the original operation has not cured the condition for which it was undertaken—namely hyperacidity—and symptoms quickly recur. The treatment in these cases is as follows: when there is no demonstrable lesion present the gastro-enterostomy should be undone and this is also satisfactory in cases where

there is the scar of a small healed ulcer causing no stenosis or deformity. In the other conditions a partial gastrectomy should be performed with removal of the pyloric end of the stomach as near the gastro-enterostomy as possible. This operation is much less severe than a gastro-duodenectomy and gives excellent results in suitable cases.

300

Phimosis in Old Men

K. A. LOVEN (*Acta chir scand* January 13 1937, p. 191) has observed in the past two years in a hospital in Upsala as many as five cases of phimosis in men whose ages ranged from 62 to 88 years. This would suggest that such a condition is not very rare but a study of the literature proved almost completely negative. Even bulky urological works ignore this subject completely. The pathology of such phimosis is still obscure and its clinical importance depends mainly on the obstruction it may cause to the passage of urine. Patients with enlarged prostates are particularly liable to be embarrassed by this additional check on micturition which may tip the scales in favour of uraemia. The author finds that phimosis interfering with the micturition of old men is a clear indication for operative treatment. The foreskin should be resected as far back as the coronary sulcus. A less radical operation is liable to be followed by a recurrence of the phimosis and there is an added risk of malignant disease. The detailed notes of the author's cases indicate among other things how varied may be the aetiology of this condition.

301

Pneumococcal Peritonitis

R. PAOLUCCI (*Athena* January 1937, p. 27) who records four illustrative cases in girls aged 4, 5, 6, and 9 years respectively, one of which was fatal, states that 75 to 80 per cent of cases of pneumococcal peritonitis occur in females and almost always between the ages of 3 and 7 years. The thirty cases of pneumococcal peritonitis admitted to the surgical clinic at Bologna in the last twenty years were all in females. This high incidence has been attributed to penetration of infection by the vagina. The principal symptoms are abdominal pain, vomiting, diarrhoea, high fever, herpes, and an early leucocytosis. Operation should be delayed until the appearance of a localized abscess, the mortality being 90 per cent after early operations and only 30 per cent when the operation is delayed.

302

Tibia Vara

W. P. BLOUNT (*J Bone Jt Surg* January 1937, p. 1) gives a review of osteochondrosis similar to coxa plana and Madelung's deformity but occurring at the medial side of the proximal tibial epiphysis. His paper is based on thirteen personal cases and fifteen from the literature on the subject. The condition which may be mistaken for rickets is not limited to the epiphysis but is an abnormality of growth of the metaphysis, epiphyseal cartilage and osseous centre of the epiphysis. In the whole series there were twenty cases of the infantile type of which seventeen were in females. In each case there was a history of normal development with some obesity until the age of 1 or 2 years when an exaggerated physiological bow leg developed. In the adolescent group the onset was between the ages of 6 and 12 years in previously normal children. In no case was there anything in the clinical or x-ray findings to suggest rickets. A congenital factor seems to operate when the deformity appears in the first years of life while in the later groups trauma seems to be the most potent factor with chronic infection as a possible additional cause. In the infantile form the changes consist in faulty growth of the epiphyseal cartilage and delayed ossification of the medial portion of the proximal tibial epiphysis. The adolescent type is due to an arrest of epiphyseal growth rather than a dysplasia and in this group the angulation usually appears only on one side. When the deformity occurs

in infancy a bulbous enlargement of the medial condyle is palpable whilst internal rotation of the tibia on the femur is a constant finding. Recurvatum and relative flat-foot are usually present with shortening of from 1 to 2 cm and abnormal mobility of the knee on medial strain. Spontaneous healing may occur, as in coxa plana and in mild cases symptomatic mechanical relief of the flat-foot and knee strain may be all that is necessary. When the deformity remains stationary osteotomy should be performed after the epiphysis is closed in the late cases. Lasting correction may follow early osteotomy in infantile cases although repeated recurrence may be seen. A guarded prognosis should be given.

Therapeutics

303 Formol Toxoid in Staphylococcal Infections

P. MERCIER (*These Paris* 1937 No. 43) states that selected strains of staphylococci grown on a suitable medium produce a true exotoxin which haemolyses the red cells and causes necrotic lesions in the skin, while intravenous injections of small doses are fatal to rabbits. This toxin however, may be transformed into a harmless "anatoxin" possessing antigenic properties. It has been in use for the last two years at the Hôpital Pasteur, Paris, where it has proved of great value in the treatment of boils, pyoderma, syphilis, ecchyma and whitlows. Its action on acne is usually less definite although some cures have been recorded. It is also of some value in staphylococcal osteomyelitis and septicaemia but further evidence is required before a definite conclusion can be reached on this point. The reactions due to its use are rare and slight. The injections give rise to the appearance of an antitoxin in the serum, which rapidly cures the patient when the antitoxin content of the serum is high. Antitoxic immunity develops very rapidly, often as soon as the second day after injection of formol toxoid. It is only in a very small number of cases such as diabetes and endocrine disorders that antitoxic immunization is contra-indicated.

304

Chronic Tetany

C. FRUGONI and B. DE VECCHI (*Policlinico Sez. Prat.* March 1 1937, p. 413) report a case of chronic tetany in an epileptic man aged 21 who had suffered from typical attacks of tetany since the age of 16. As his condition became worse in spite of treatment and diet a parathyroid gland taken from a girl aged 18 during an operation for goitre was grafted into the right tunica vaginalis according to Voronoff's technique. An immediate cure of the tetany was obtained and lasted eight months when without apparent cause a relapse took place. During the next three months various forms of treatment were applied without success, and then a second parathyroid graft was made in exactly the same way but on the opposite side. As no improvement resulted on this occasion the tissue used was probably not parathyroid as was supposed but only a lobule of fat. A third graft was then made the tissue on this occasion consisting of parathyroid taken from a cynocephalus monkey, and the cure lasted for eight years after which the patient who in the meantime had become tuberculous had a relapse of the tetany and died. The principal finding at the necropsy was the presence in the tunica vaginalis of healthy parathyroid tissue with typical columnar cells. This is the first case on record in which a graft was made by Voronoff's technique for the treatment of chronic tetany.

305

Strophanthin in Angina Pectoris

H. PLÜGGE and E. BIRK (*Dtschr. med. Wschr.* March 12 1937, p. 427) date the modern treatment of angina pectoris with strophanthin from 1931 when Edens published his work on this subject. Since then he and his school have

published 260 cases, and have put the treatment of angina pectoris and cardiac infarcts with intravenous injections of strophanthin on a scientific and rational basis. After giving an account of the rationale of this treatment and emphasizing the need for beginning it before serious hypertrophic changes in the heart have set in, the authors analyse their own experiences with more than eighty cases treated since the beginning of 1935. In most of them compensation was not yet at fault and there was no demonstrable hypertrophy or dilatation of the heart. While Edens as a rule injects 0.4 mg of strophanthin every day for three days and withholds it on the fourth day, the authors usually give smaller doses and individualize very carefully, sometimes giving in the first twenty-four hours as much as 1 mg distributed over four to six injections. Such a high dosage is particularly desirable in cases of recent infarct of the myocardium. The average daily dose in most cases was 0.25 mg and 0.2 mg was often sufficient. A satisfactory procedure is to give 0.1 to 0.15 mg on the first day, 0.2 mg on the second day and 0.3 mg on the third day and to continue a course of injections for four to six weeks. A follow-up study of thirty-two patients showed that twenty-six had been completely or almost completely relieved by this treatment and that some had continued to remain fit in spite of heavy physical work, the relapses were almost entirely among patients who had to do such work. This suggests that treatment in these cases is largely a social problem to be solved by readjustment and easing of working conditions.

Dermatology

306

Lupus and Carcinoma

J MAYR (*Derm Wschr* January 9 1937, p 51) has reviewed 2,725 cases of lupus. Of these roughly 3 per cent developed carcinoma. The mortality among these carcinomatous patients amounted to 1.2 per cent of all cases of lupus. The mean age of the 2,725 patients was 56 years. In some cases the carcinoma appeared thirty years after the appearance of the lupus. Age probably constitutes a contributory factor to the cancerous degeneration of lupus. Facial lupus is particularly prone to degenerate into carcinoma and the x-ray treatment of lupus seems to favour this development.

307

Hysterical Skin Affections

H HAXTHAUSEN (*Brit J Derm Syph* November 1936 p 563) examined the reaction of the skin to mechanical irritants in a group of cases with obvious hysterical lesions or artefacts and in a group of apparently normal individuals. The irritants used were mechanical rubbing, Rumpel-Leede's test radiation with ultra-violet light, freezing with carbon dioxide snow, pricking 1 per cent morphine solution into the skin and pricking 30 per cent silver nitrate solution into the skin. The results proved that using a standard technique there was no appreciable difference in the reactions evolved in either group of cases. Therefore it is reasonable to suppose that the lesions in hysterical cases are the result of pure traumatization of the skin the skin itself being no more reactive in these cases than in normal persons. The degree of traumatization however may be dependent to some extent upon the analgesia so often present in hysterical subjects.

308

Alopecia Areata

In addition to local therapy with ultra-violet light and stimulating lotions H H BAUCKS, C F SIEGMANN and A V KWA (*NY St J Med* November 1 1936 p 1629) recommend the use of small doses of thyroid in the treatment of alopecia areata. They admit that most patients with alopecia areata are not hypothyroid in type but suggest that thyroid administration acts as a slight

stimulant to hair growth. They give once a day a dose of 1 grain of desiccated thyroid equivalent to 5 grains of fresh gland substance. This is continued for two weeks and then doubled for a further two weeks, at the end of which time the dose is reduced again or stopped altogether. As a result of this treatment they noted that new lesions were not so prone to develop in early cases and that hair grew more quickly than when thyroid was not given. Recurrences after cessation of treatment were equally common with or without thyroid medication.

309

Pediculosis of the Eyelashes

A TOURAINE and P RENAULT (*Bull Soc franç Derm Syph* November, 1936, p 1702) report that an infant aged 8½ months was brought to them with intense itching of the free margin of the eyelids of fifteen days duration which had begun one week after its return from a holiday crèche at the seaside. Closer examination showed about a dozen lice adhering to the eyelashes on both lids. Examination with a lens showed them to be of the pubic variety. Only two nits were discovered. The parasites were localized to the eyelashes. There were no parasites or eggs on any other part of the body, the axillae and pubic regions being of course hairless. There were no scratch marks, and there was no glandular enlargement.

310

Ichthyosis and Cryptorchism

O HELLER (*Med Klinik* February 19, 1937, p 271) points out that the differential diagnosis between ichthyosis congenita and vulgaris depends on the time of first occurrence of the condition, the intensity, localization and hereditary tendency. He has found also that ichthyosis vulgaris is not uncommonly associated with cryptorchism, and describes five such cases four of which occurred in children and one in an adult. It is known that the administration of anterior pituitary extract has a beneficial effect on cryptorchism and in these cases Heller found that except in the adult, the skin condition improved remarkably when anterior pituitary extract was given over a period of one to four months. Heller submits two theories to explain this success. (1) Ichthyosis vulgaris may be due to a hypofunction of anterior pituitary which disappears with treatment. (2) An indirect action through the pineal gland is possible. It is known that the pineal gland exerts an influence on cornification in goats and that they grow no horns in the absence of the gland. Hyperfunction of the gland in humans might account for the cornification of the skin. The administration of anterior pituitary extract is thought to balance the pineal hyperfunction.

311

Diathermy in Hypertrichosis

E L LANARI and J CATEULA (*Sem méd B Aires*, December 31 1936, p 1845) state that as hypertrichosis in women is an obvious manifestation of an endocrine disturbance local treatment must always be accompanied by appropriate general measures. Radium and x-rays are definitely contraindicated for depilation of the face, neck, and thorax owing to the dangers resulting from a dose sufficient to cause the permanent death of the hair follicle. Depilatory doses of x-rays are only justifiable in severe cases of cervico-facial hypertrichosis in women in whom the psychical state necessitates a rapid and complete removal of the abnormal hairy growth. The use of x-rays should not be repeated but subsequent hypertrichosis should be treated by diathermy. The writers maintain that diathermic coagulation is the most rapid, efficacious and harmless method of depilation, and is superior to electrolysis in the greater success and rapidity of its action, painlessness of the operation, and usual absence of scarring.

Obstetrics and Gynaecology

312 Polymastia and Polythelia

S DI FRANCESCO (*Ann Ostet Ginec.*, January 31 1937 p 51) states that the occurrence of multiple breasts has been known for many centuries Poppaea Nero's wife, having had three breasts and Anne Boleyn an accessory breast on the thigh The number of accessory breasts is generally one or two rarely three and exceptionally four or five In Gardner's case of a mulatto woman there were six active well-developed breasts situated in the nipple line The inner or outer side of the thigh face lumbar region and labia majora are occasional sites The writer found eleven examples among 3,200 women (3.4 per cent) in the Milan obstetrical clinic but none among 1,010 patients in the gynaecological section of the Ospedale Maggiore Like Testut and Neumann and Ong and in contrast with Schmidt and Kallius and Hirasawa the writer found that the favourite site for both accessory breasts and accessory nipples was below the nipple No special significance can be attributed either to accessory breasts or accessory nipples They bear no relation to the individual development or constitution nor are they associated with maldevelopment of the genitals They may however, be the starting-point of benign or malignant tumours

313 Sarcomatous Degeneration of Irradiated Fibroids

C DANIEL (*Gynec et Obstet* October-December 1936 p 205) reports the case of a woman who had had a uterine fibroid about the size of an adult head for some thirty years for which she underwent x-ray treatment at the age of 50 with the result that the tumour almost completely disappeared Twelve years later however she developed metrorrhagia and the uterus became as large as the head of a full-term foetus Exploratory curetting showed the presence of sarcomatous tissue and on complete hysterectomy a sarcoma of the uterine mucosa of the size of an egg was found in the fibromatous uterus

314 Gonorrhoeal Bartolinitis

E ZOELTSCH-LASS (*Münch med Wschr* February 5 1937 p 210) found gonorrhoeal bartolinitis in 22.2 per cent of all cases of gonorrhoea in women Of the thirty-four cases observed twenty-two showed affection of one gland only, in the remaining twelve cases the disease was bilateral The patients were treated by one of the following methods (1) Electrocoagulation of the duct with a blunt platinum needle connected to the negative pole giving a current of 1 or 2 milliamperes for a few seconds this treatment may have to be repeated a number of times (2) Electrocoagulation combined with cauterization by 10 per cent silver nitrate in particularly stubborn cases (3) Injections into the gland of a 2 per cent solution of silver nitrate in unilateral and bilateral affections A cure was achieved in every case

315 Myoma and Pregnancy

According to E G ABRAHAM (*Zbl Gynäk.* February 13 1937 p 399) pregnancy in the "giant uterus" with multiple myomata is rare is not uncommonly first diagnosed after hysterectomy and is not a suitable condition for myomectomy A case is recorded of hysterectomy for myomata in a single woman aged 42 the womb reached the ribs and contained as well as seven myomata from the size of an apple to that of the fist, a foetus 12 cm long After operation the possibility of conception was denied but in view of the anatomical conditions exact diagnosis was impossible and the treatment must be regarded as correct P JANSON (*Zbl Gynäk.* February 20 1937 p 463)

describes the case of a primipara, aged 30 thought to have twins A child weighing 4 kilogrammes was born spontaneously after twelve hours labour Four hours later an attempt to turn for delivery of a second child showed the uterus empty save for an adherent placenta inserted between two large spherical myomata of the fundal region The infected puerperium was complicated by expulsion on the twentieth day of a necrotic myoma weighing 2 kilogrammes L GERIN-LAJOIE (*Union Méd Can* February 1937 p 160) also found difficulty in removing the placental remnants behind a submucous myoma. Four attempts had previously been made to get them out but little or no haemorrhage occurred recovery followed In a second case diagnosis lay between twin pregnancy and pregnancy with myoma only after spontaneous delivery was the so-called second head recognized as a myoma Bleeding was insignificant In both cases the largest myoma was the size of a grape-fruit

Pathology

316 Haematuria after Tonsillectomy

H RASMUSSEN (*Hospitalstudende* February 16 1937 p 191) has examined the urine of 117 persons whose tonsils or adenoids or both had just been removed There were only twenty-one children under the age of 16 whereas there were thirty-one men and sixty-five women in this series In 101 cases the anaesthesia induced was only local In the remaining sixteen cases ethyl chloride was used Only in four cases did the urine show some abnormality before the operation After it pathological changes were found in the urine in six cases These changes consisted in five cases of the appearance of erythrocytes in the urine a few days after the operation in one specimen casts and albumin were also found In none of these cases was there anything remarkable about the temperature after operation Discussing the cause of these post-operative changes in the urine the author suggests that an operation whether it be on an appendix or on a tonsil may set free toxins or small emboli which circulate in the blood stream and are deposited in the glomeruli, setting up a transitory focal glomerulo-nephritis or otherwise slightly injuring the kidneys so that erythrocytes escape through them It should be noted that in none of these six cases had the kidneys shown signs of disease before the operation Nor did any of the six patients with a history of nephritis some time before operation develop haematuria after it

317 Antigenic Types of *Cl tetani*

J B GUNNISON (*J Immunol.* 1937 32 63) has studied sixty-seven strains of *Cl tetani* of which fifty-six were toxigenic Previous work by various authors has shown that this organism can be divided into nine serological types on the basis of the H or flagellar antigens In the present paper attention is devoted mainly to the O or somatic antigens Working with washed cells that had been steamed for one hour and with rabbit antisera prepared from them the author found that all nine types contained a common O antigen and that a serum prepared against any one type would agglutinate organisms belonging to all the types Absorption experiments however showed that whereas Types I III VI VII and VIII possessed only one somatic antigen Types II IV, V and IX possessed an additional somatic antigen Some relation was observed between *Cl tetani* and *Cl tetanomorphum* O suspensions of the latter organism agglutinated to between quarter and full titre with antisera prepared against all types of *Cl tetani* but were unable to absorb the O antibodies from such sera This cross agglutination is of importance showing that great caution should be observed in the identification of tetanus-like organisms by O agglutination

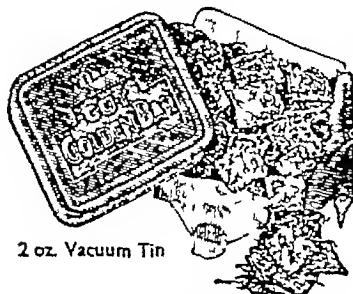
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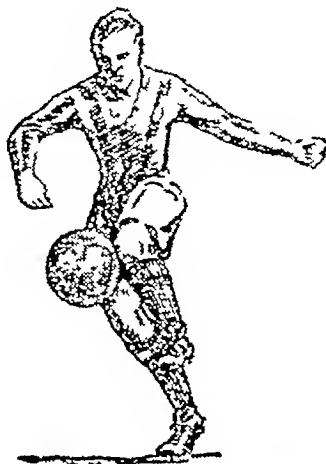
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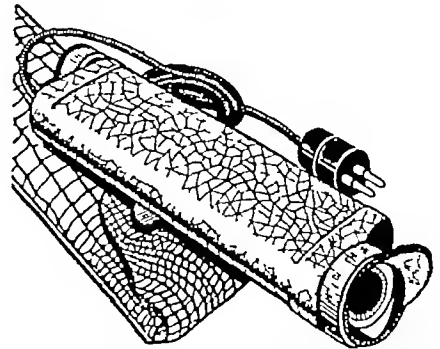
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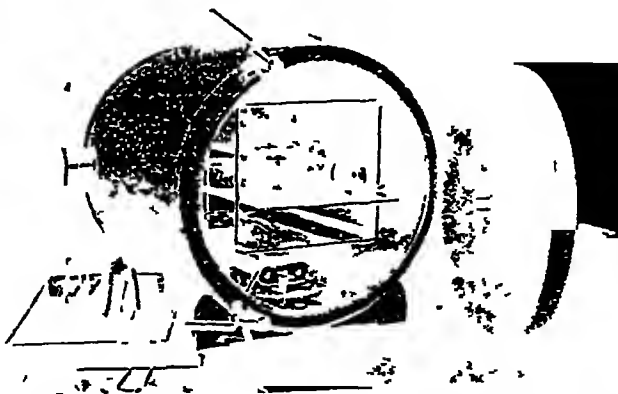
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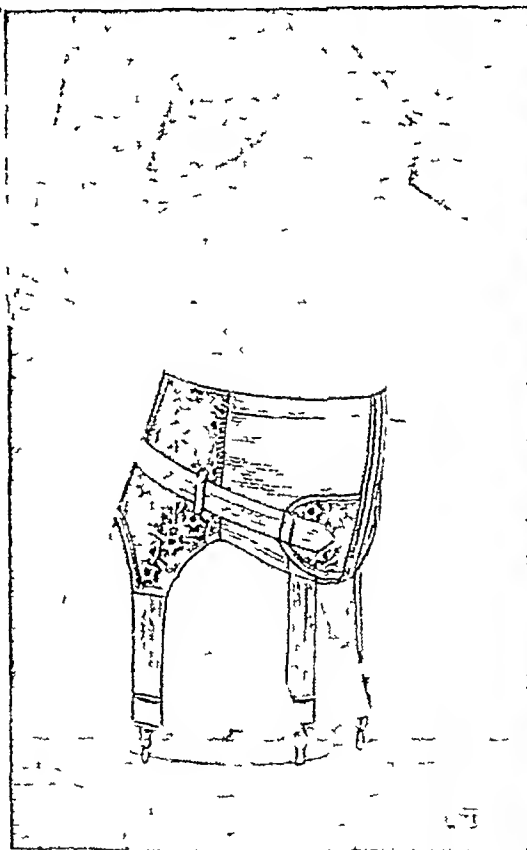
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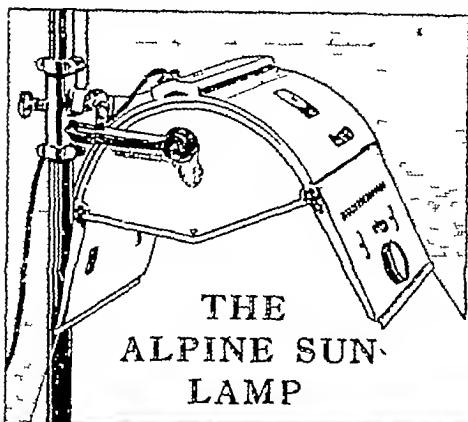
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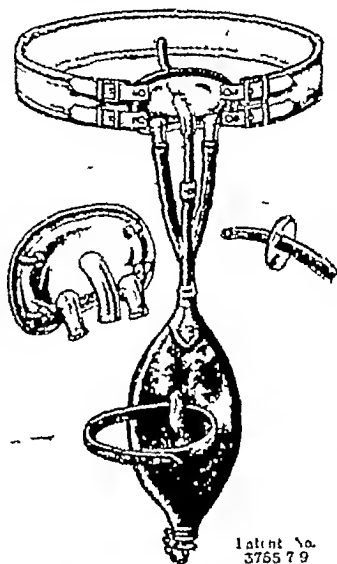
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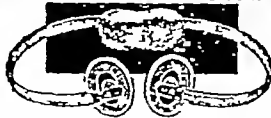
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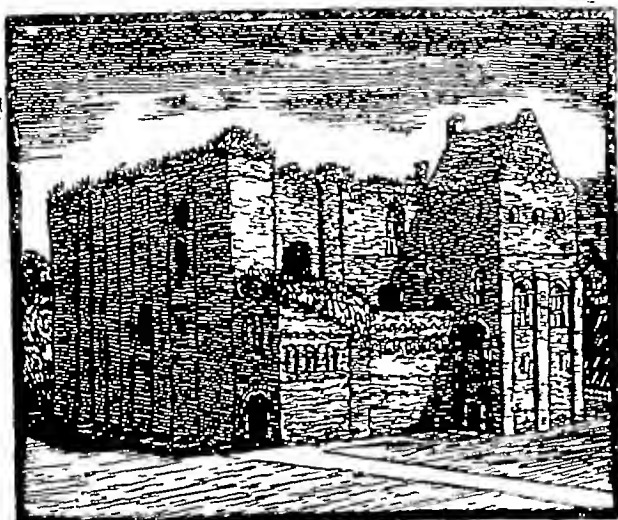
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For terms and further particulars apply to the Medical Superintendent (Telephone No 2346 and 357 Northampton) who can be seen in London by appointment.

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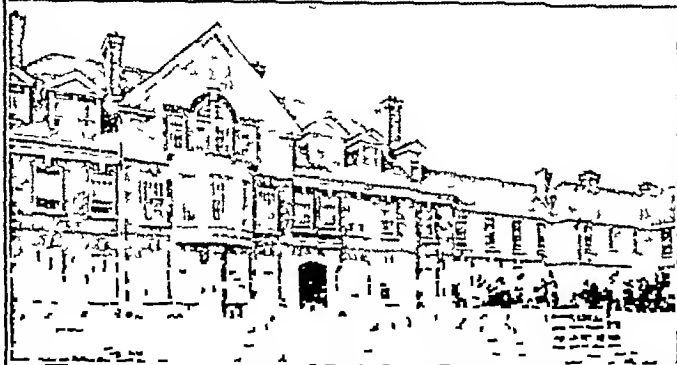
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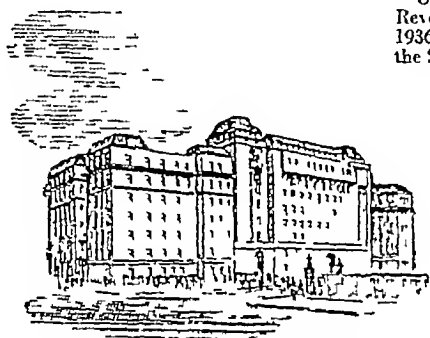
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JUNE 1st
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JUNE 8th
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March 1937
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MEDICAL PROSPECTUS (48 pp.)

CONTENTS The method and the cost of entering the Medical Profession. Particulars of all Medical Examinations, Postal Courses, and Oral Classes. Suggestions for the Higher Medical Examinations. Suggestions for the Special Diploma Examinations. Refresher Courses. Openings for Women. Hints for writing theses.

Medical Prospectus gratis along with list of Tutors etc. on application to the Principal, 17, Red Lion Sq., London, W.C1. (Telephone Holborn 6313)

CHILD GUIDANCE COUNCIL

FELLOWSHIPS IN PSYCHIATRY

The Child Guidance Council offers three Fellowships each of £300 tenable for a year for full-time work at the London Child Guidance Clinic. Candidates should hold the Diploma in Psychological Medicine or have evidence of psychiatric knowledge up to a similar standard. Experience in Paediatrics or School Medical Service will be regarded as an asset.

The Fellowships will be expected to commence work in October 1937.

Further particulars and forms of application may be obtained from the Secretary, Child Guidance Council, Warburg House, Upper Woburn Place, London, W.C1.

Applications should reach the Secretary not later than May 10th 1937, and should be accompanied by copies of three recent testimonials.

STUDENTSHIP

THE EUGENICS SOCIETY offers a LEONARD DARMON STUDENTSHIP of £50 for the year from October 1st 1937 renewable for a second year, available in an approved Institution in the United Kingdom. It is research on subjects bearing on Eugenics such as the quantitative study of genes and evolution, human heredity, vital statistics, fertility, the eugenic effects of economic conditions, etc. Application should be made by the May 1st 1937 to the General Secretary, The Eugenics Society, 77, Tottenham Square, London, W.C1, from whom further particulars may be obtained.

ANNIE McALL MATERNITY HOSPITAL
LONDON. Postgraduate received 1st Prize for Obstetrics, Midwifery Class, April 1936.
Lecturer in Midwifery & Obstetrics.
17, Tottenham Square, W.C1.

BRITISH POSTGRADUATE MEDICAL SCHOOL

(UNIVERSITY OF LONDON)

DEPARTMENT OF MEDICINE

A Course of Six Lectures
on

OCCUPATIONAL DISEASES

will be given by

Dr DONALD HUNTER,
MD FRCP

on

May 25th June 1st 8th 15th,
22nd and 29th at 4 30 p m

DEPARTMENT OF SURGERY

A Course of Six Lectures
on

DISEASES OF THE BREAST

will be given by

Mr RUSSELL HOWARD,
CBE MS, FRCS

on

May 14th, 21st, 28th June 4th
11th and 18th at 2 30 p m

DEPARTMENT OF PATHOLOGY

A Course of Three Lectures
on

EXPERIMENTAL EPIDEMIOLOGY

will be given by

Professor Major GREENWOOD,
D Sc., FRCP, FRS

on

June 2nd at 2 30 p m, 9th 16th
at 4 30 p m

The lectures are for regular students of the School but a limited number of tickets are available without fee, to medical practitioners

Applications for tickets should be addressed to the Dean British Postgraduate Medical School Ducane Road W 12

REFRESHER COURSES FOR GENERAL PRACTITIONERS lasting a fortnight, will commence on the following dates

May 31st June 28th September 20th October 18th November 15th (Fee 5 guineas)

Stations Wood Lane (Central London Rly) Ladbroke Grove (Metropolitan Rly) and No 7 (Acton Vale) Bus Buses No 7 (Acton Vale) No 93 to Bentworth Road Westway Trams Nos 28 and 30

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MALET PLACE, W.C.1

Twenty Lectures on PSYCHO PHYSICAL ADAPTATION

An Introductory Course in Psychological Medicine for the General Practitioner BEGINS ON APRIL 22nd

Two Lectures will be given on THURSDAYS

3 0—4 0 p m—H CRICHTON MILLER, MD MRCP 4 30—5 30 p m—CEDRIC SHAW, MB MRCP

Fee for either series £1 11s 6d for both series £2 2s

Detailed syllabus and tickets IN ADVANCE from EDUCATIONAL SECRETARY at the Institute

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MARYLEBONE ROAD, N.W.1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 100 patients are admitted to the Wards annually and in the Ante-natal Department there are over 1000 attendances per annum. Clinical demonstrations are given by the Staff daily.

For rules fees etc apply H. B. STOKES Secretary Superintendent.

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(Incorporated by Royal Charter)
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Midwifery Training School

PRACTITIONERS and MEDICAL STUDENTS admitted to Hospital Practice with operative Midwifery and Obstetrical complications—nearly 1,000 patients annually. Fees £16 10s per month or £8 5s per fortnight (inclusive of board residence).

PCFELS trained as Midwives in accordance with C.M.B. regulations. Reduced fees under Ministry of Health Scheme. Senior Tutor on Staff Post-graduate Courses in Anaesthesia. Phone Clerkenwell 41 1

ROYAL EYE HOSPITAL MEDICAL SCHOOL

St George's Circus Southwark S.E.1.

DOMS COURSE

An Intensive Six Weeks Course for Parts I and II of the DOMS Examination will commence on May 1st. Fees Part I £5 5s Part II £10 10s. Applications to be received by April 15th. For further particulars apply to the Dean at 11 a.m.

STAMMERING SPEECH DEFECTS

BEHNE METHOD. Established 1880. Cases non-resident treated at 19 Earls Court Square S.W.5 and in residence in the Summer 10 days at Mrs. BURKE'S house on the Chilterns.

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CHELTEMHAM COLLEGE

TEN SCHOLARSHIPS AND EXHIBITIONS (not open to members of College or Junior School). These include five of £100 James of Hereford Scholarship of £35 for boys born or brought up in Herefordshire R.A.M.C. Scholarship of £50 (preference to sons of regular Officers). Awards made for all-round excellence or special proficiency in any main subject including Music. Candidates must be over 13 and under 18 years of age on September 1st and 1937. Preliminary Examination (at Candidates' own choice) Monday and Tuesday, May 31st and June 1st 1937. Final Examination (at Cheltenham) Tuesday and Wednesday June 8th and 9th 1937.

Apply BURSAR The College Cheltenham

DIPLOMA IN ANAESTHETICS—D.A. DIPLOMA IN CHILD HEALTH—D.C.H.

Courses of Postal and Oral preparation for these examinations may now be commenced.

For full details write to the SECRETARY Medical Centre residence College, 19 Welbeck Street, London W.1.

NORTH EAST LONDON POST-GRADUATE COLLEGE PRINCE OF ALEXANDER GENERAL HOSPITAL

The Prince of the Hospital is limited to Medical Practitioners. Particulars Leaflet J. Brooking Allen, 111 D. Dept.

THE CHARTERED SOCIETY OF MASSAGE AND MEDICAL GYMNASTICS

CHARTERED MASSEUSES and MASSEURS receive Hospital Training They are qualified to administer MASSAGE, REMEDIAL EXERCISES, ELECTRICAL and LIGHT TREATMENTS

The Society was granted a Royal Charter in 1920 in recognition of the high standard of work it maintains CSMMG members do not advertise individually and pledge themselves to treat patients only under medical direction

Names and addresses of members practising in any district can be obtained from —
The Secretary CSMMG, Tavistock House (N) Tavistock Square London WC1
Telephone Euston 1676-8

HIGHER MEDICAL QUALIFICATIONS

Are you desirous of obtaining one of the special higher qualifications?

Diploma in Anaesthetics
Diploma in Psychological Medicine
Diploma in Ophthalmology
Diploma in Radiology
Diploma in Laryngology, Otology, and Rhinology
Diploma in Child Health
Diploma in Tropical Medicine
Mastery of Midwifery
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Name

Address

Examination in which interested

BRITISH COLLEGE OF OBSTETRICIANS AND GYNAECOLOGISTS

58, Queen Anne Street, London, W 1
EXAMINATION FOR MEMBERSHIP—July 1st and 14th 1937

Applications on the prescribed form must reach the College not later than Monday May 3rd. Candidates whose applications are accepted must submit case records etc. as required by the Regulations not later than Monday June 14th

WM FLETCHER SHAW Hon Sec.

BOROUGH OF BARKING

ASSISTANT MEDICAL OFFICER

Applications are invited before May 3rd 1937 from qualified medical practitioners with experience in public health work and a registrable qualification in public health for the designated appointment of Assistant Medical Officer of Health and Assistant School Medical Officer

Salary scale £500-£5700
Particulars of duties and application form may be obtained from the undersigned
S A JEWERS Town Clerk

Town Hall
Barking, Essex

ROYAL COLLEGE OF MEDICINE BAGHDAD

Applications are invited for the following posts —

(1) PROFESSOR OF PATHOLOGY To teach Pathology theoretical and practical and Morbid Anatomy in the Royal College of Medicine Baghdad and to be in charge of the Government Pathological Laboratory

(2) PROFESSOR OF BACTERIOLOGY To teach Bacteriology theoretical and practical in the Royal College of Medicine Baghdad and to be in charge of the Government Vaccine Vaccine Lymph and Pasteur Institutes and to prepare the vaccines required by the Iraq Health Service

Contract in each case for five years at rate of pay of £150 per month Applications for these posts, preferably from young men not over 35 with full particulars of academic career special training and research experience and names of two referees familiar with the candidate's work to be sent before April 30th 1937 to Sir JOHN C O LEONIAN, Lister Institute, Chelsea Gardens London SW1

LANCASHIRE MENTAL BOARD HOSPITALS

CALDERSTONES CERTIFIED INSTITUTION FOR MENTAL DEFECTIVES WHALLEY Nr BLACKBURN

APPOINTMENT OF DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the whole time appointment of Deputy Medical Superintendent at the above Certified Institution The salary is £750 per annum rising by annual increments of £25 to a maximum of £850 per annum (A sum of £50 per annum in addition to the salary will be paid if in possession of the DPM or a degree in Psychological Medicine of the London University)

The appointment will be subject to the provisions of the Asylum and Certified Institutions (Officers' Pensions) Act, 1918

Applicants are required to send in their applications on a form to be obtained from the undersigned and applications endorsed Deputy Medical Superintendent should be sent to a delivered at my office not later than 12 noon on Friday May 7th 1937

Canvassing, either directly or indirectly will be a disqualification

GEORGE ETHERTON
Clerk of the Board
County Offices Preston

April 1937

STAFFORDSHIRE COUNTY COUNCIL

WORDSLEY HOSPITAL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners (male) for the post of Assistant Medical Officer (Resident) at Wordsley Public Assistance Institution Nr Stourbridge Salary £250 per annum with board residence and laundry Candidates should be unmarried The appointment will be in the first instance for a period of six months, but the successful candidate will be eligible for reappointment for a further period of six months

Facilities will be available for gaining experience in medicine, surgery, midwifery and diseases of children

Applications with copies of testimonials should be sent to the undersigned not later than Thursday April 29th, 1937

H L UNDERWOOD
Clerk of the County Council

County Buildings
Stafford
April 14th 1937

BOROUGH OF SWINTON AND FENDLEBURY

PART TIME APPOINTMENT

LADY ASSISTANT MEDICAL OFFICER

The Corporation of Swinton and Fendlebury invite applications from Lady Medical Practitioners, preferably holding a Diploma in Public Health to act as PART TIME ASSISTANT MEDICAL OFFICER under the direction of the Council's Medical Officer of Health at an inclusive salary of £250 per annum

The appointment in the first instance will be made for one year only and the duties of the Officer appointed will be for five afternoon sessions per week and will be mainly connected with the School Medical and Child Welfare Service of the Council Experience in midwifery and the diseases of children is required

Applications to be made on a form to be obtained from the Medical Officer of Health Health Offices, Town Hall Swinton Lancs and to be returned addressed to the Town Clerk, and endorsed "Assistant Medical Officer" not later than Saturday April 24th 1937

Canvassing directly or indirectly is prohibited and will disqualify

WILLIAM CARTER
Town Clerk

Town Hall
Swinton Lancs
April 10th 1937

COUNTY BOROUGH OF ST HELENS

ASSISTANT MEDICAL OFFICER OF HEALTH (FEMALE)

Applications are invited to the post of Assistant Medical Officer of Health (female)

The duties will be mainly in connection with Maternity and Child Welfare and the School Medical Service together with such other duties as the Medical Officer of Health may require Candidates must have special experience in Midwifery and in the diseases of children and the possession of a diploma in Public Health will be regarded as an additional qualification

The salary will be at the rate of £500 per annum plus travelling expenses rising by annual increments of £25 to a maximum of £700 per annum

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1927 and to the successful candidate passing the necessary medical examination

Forms of application may be obtained from the Medical Officer of Health Town Hall St Helens and completed applications accompanied by copies of not more than three recent testimonials should reach him not later than May 1st 1937

FRANK HAUXWELL
Medical Officer of Health

CITY OF MANCHESTER

BOOTH HALL HOSPITAL FOR CHILDREN (70 Beds)

The Public Health Committee invites applications from registered medical practitioners for the post of DEPUTY MEDICAL SUPERINTENDENT at the above-named hospital Are 1st 45 years

Salary £450 per annum with board residence and laundry in addition subject to the Manchester Corporation conditions of service

Full information and forms of application may be obtained from the Medical Officer of Health Sunlight House Quay Street Manchester 3 and applications for the post must be received by him not later than May 1st 1937

T E WARBRICK HOWELL
Town Hall Manchester 2
April 14th 1937

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post-Graduate Study

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director-General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than May 31st, 1937

LANCASHIRE COUNTY COUNCIL COUNTY BOROUGH OF BLACKBURN BOROUGH OF DARWEN BLACKBURN AND EAST LANCASHIRE ROYAL INFIRMARY

APPOINTMENT OF CONSULTANT OBSTETRICIAN

Applications are invited from registered medical practitioners with medical experience in obstetrics for the appointment of CONSULTANT OBSTETRICIAN at a salary of £1000 per annum. The Gentlemen appointed will be allowed to engage in private and consultant practice subject to certain conditions.

The successful candidate will be appointed to the Honorary Staff of the Blackburn and East Lancashire Royal Infirmary and will be required to reside within the County Borough of Blackburn.

Conditions of appointment and forms of application may be obtained from the Medical Officer of Health, Victoria Street, Blackburn, to whom completed applications should be returned not later than April 1st 1937.

CHAS S ROBINSON
Town Clerk, County Borough of
Blackburn.

Town Hall, Blackburn.

COUNTY BOROUGH OF OLDHAM BOUNDARY PARK MUNICIPAL HOSPITAL.

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £700 per annum with board, residence and laundry.

Candidates should be unmarried.

The appointment will be in the first instance be for a period of six months. The successful applicant however will be eligible for reappointment for a further period of six months.

The Hospital comprises 24 beds with facilities for training experience in medical surgery, midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health, Town Hall, Oldham, and should be returned enclosed. Resident Assistant Medical Officer not later than April 1st 1937.

JOSEPH J WILLIAMS, LL.D.
Town Clerk

Town Hall, Oldham.
April 1st 1937

CORPORATION OF DUNDEE PUBLIC HEALTH DEPARTMENT DUNDEE MENTAL HOSPITAL, LIFF MEDICAL SUPERINTENDENT

Applications are invited for the post of MEDICAL SUPERINTENDENT, DUNDEE MENTAL HOSPITAL, LIFF, Dundee. Age must not exceed 45 years on the date of appointment. Salary will be at the rate of £8.0 per annum rising subject to satisfactory service by annual increments of £.5 to £1000 per annum. A house (free of rate) is provided in the grounds of the hospital.

The Appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909 and the successful candidate will be required to pass a medical examination.

Further particulars may be obtained from the Medical Officer of Health, 9 West Beil Street, Dundee. Candidates directly or indirectly will be a disqualification.

Applications stating age, experience etc with copies of three recent testimonials must reach the undersigned on or before Wednesday April 22nd 1937.

City Chambers
Dundee
April 1st 1937

DAVID LATTO
Town Clerk.

NORTHUMBERLAND COUNTY COUNCIL.

WOOLEY SANATORIUM near Hexham for the treatment of Adults suffering from Tuberculosis (180 beds).

Applications are invited for the appointment of an ASSISTANT MEDICAL OFFICER at the above Sanatorium. Salary £350 per annum rising by annual increments of £25 to a maximum of £450 with board, lodgings and laundry.

The salary will be subject to a percentage deduction in accordance with the provisions of the Local Government and other Officers Superannuation Act 1920, for which purpose the selected candidate must undergo a medical examination.

Applicants should be unmarried.

The appointment may be terminated by three months notice on either side. Annual salary is payable in arrears. Candidates should be recommended by the undersigned together with copies of three recent testimonials as soon as possible.

WILLIAM J WHITLEY
County Medical Officer

County Hall, Newcastle-upon-Tyne.

MINISTRY OF HEALTH

The Minister of Health invites applications for a vacant appointment as TEMPORARY SEROLOGIST on the staff of the Ministry. Both men and women are eligible for appointment.

The salary will be at the rate of £8.0 per annum. Candidates must have experience in biochemical research and must present evidence of capacity for original work. A medical qualification is desirable but is not essential; otherwise candidates should possess a University degree in science.

The officer to be appointed will be employed in the first instance in the Pathological Laboratory of the Ministry of Health in London but must be prepared to work in any part of England (or Wales) if required to do so.

The duties will include investigation into the chemistry and physics of serological reactions generally, the routine performance of Wassermann and precipitation tests with the utmost obtainable accuracy and research into the chemical constituents of bacteria as reflected by antigenic activity.

Candidates must conform to the Civil Service nationality rule.

The successful candidate will be required to devote his whole time to the Public Service and will be required to take up duty without undue delay.

Candidates through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application may be obtained from The Director of Establishments, Ministry of Health, Whitehall, SW 1.

No application can be considered unless received on the prescribed form not later than April 24th 1937.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from day registered Women Medical Practitioners for the post of HOUSE PHYSICIAN at the Adams Park Hospital, Charswood, Swansea, Glamorgan, for the treatment of adults and children (pulmonary and non-pulmonary cases).

Salary at the rate of £10 per annum for a main man. The appointment is for a period of six months.

Applicants should be day registered and present testimonials should reach the undersigned not later than Tuesday April 20th 1937.

For full particulars apply to D A POWELL, Welsh Society, 10, Princes Street, Cardiff.

COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL EDMONTON

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £250 per annum together with board lodging and laundry. Candidates must be registered Medical Practitioners who have held resident appointments in a general hospital.

The officer appointed will be required to work under the control of the Medical Superintendent and to devote his whole time to his official duties.

The appointment, which will be subject to medical examination for a period of six months in the first instance, may be extended for an additional six months and is subject to one month's notice on either side. At the expiration of one year's service the successful candidate if considered satisfactory in all respects will be eligible, upon recommendation of the Medical Superintendent and subject to confirmation by the Council for promotion to the post of Assistant Medical Officer. If not so appointed he will leave the Council's service.

Application stating age, qualifications, and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 1st. Application forms are not provided. Envelopes must be endorsed "Junior Assistant Medical Officer".

Conveying directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.

Clerk of the County Council

Middlesex Guildhall

Westminster S.W. 1

April 6th 1937

COUNTY COUNCIL OF MIDDLESEX

ASSISTANT PATHOLOGIST

Applications are invited for the pensionable appointment of Assistant Pathologist to Redhill County Hospital, Edgware. Candidates must be registered Medical Practitioners with special knowledge and experience of pathology who are engaged wholly or chiefly in the practice of this branch of medicine.

The officer appointed must devote his whole time to the duties of his office. He will not be allowed to engage in private practice and any fees received by him must be paid over to the Council.

The appointment, which will be subject to medical examination, will be held during the pleasure of the Council and is terminable by three months' notice on either side.

Salary £650 per annum rising by annual increments of £25 to £800 per annum.

Applications stating age, qualifications, and experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than April 24th. Application forms are not provided. Envelopes must be endorsed "Assistant Pathologist Redhill County Hospital—Z".

Conveying directly or indirectly will be a disqualification.

C. W. RADCLIFFE,

Clerk of the County Council

Middlesex Guildhall

Westminster S.W. 1

April 1st 1937

COUNTY BOROUGH OF CROYDON

PUBLIC HEALTH DEPARTMENT MAYDAY HOSPITAL.

TWO JUNIOR RESIDENT ASSISTANT MEDICAL OFFICERS

Applications are invited from registered Medical Practitioners for the posts of Junior Resident Assistant Medical Officers at the above-named hospital. The hospital is a general hospital of 476 beds. The gentlemen appointed will have charge in one appointment of medical beds and in the other appointment of surgical beds, and will be required to act as Anaesthetists when necessary. They will be under the immediate supervision of the Medical Superintendent of the hospital as regards any of their duties carried out in connection therewith. The Medical Officers would also be required if emergency arose to act as Assistant Medical Officers of Health at the discretion of the Medical Officer of Health. The appointments are for a period of twelve months.

The salary will be £500 per annum with furnished quarters and board at the hospital. Any fees received in the course of their duties must be handed over to the Council.

Applications to be made on forms to be obtained from the Medical Officer of Health Town Hall, Croydon, and returned to him together with copies (not originals) of three testimonials of recent date not later than 11 a.m. on Monday, April 26th 1937, endorsed "Assistant Medical Officer".

Conveying in any form is prohibited.

JOHN M. NEWMAN, Town Clerk.

Town Hall Croydon

April 6th 1937

LONDON COUNTY COUNCIL

Applications invited from Medical Practitioners of at least one year's standing to under mentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade I)
—Salary £350—£425 with board lodging and washing.

(a) ST JAMES' HOSPITAL, Ouseley Road, Balham S.W. 12—Surgical experience essential.

(b) ST STEPHEN'S HOSPITAL, 369 Fulham Road S.W. 10—Duties medical. Experience in anaesthetics desirable.

ASSISTANT MEDICAL OFFICERS (Grade II)
—Salary £250 a year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(c) BETHNAL GREEN HOSPITAL, Cambridge Road E. 2—Duties of a general nature surgical experience desirable.

(d) DULWICH HOSPITAL, East Dulwich Grove S.E. 2—Medical duties experience in anaesthetics desirable.

(e) ST ALFEGES HOSPITAL, 48 Vanbrugh Hill Greenwich S.E. 10—Duties, those of a casualty officer and charge of one T.B. ward.

(f) ST FRANCIS HOSPITAL (previously Constance Road Institution) East Dulwich S.E. 22—Medical duties.

(g) ST GILES' HOSPITAL, Brunswick Square S.E. 1—Medical duties experience in anaesthetics desirable.

(h) ST NICHOLAS' HOSPITAL, Plumstead S.E. 18—Duties mainly medical experience in anaesthetics essential.

No accommodation for a woman.
Application forms obtainable (stamped address for envelope necessary) from Medical Officer of Health Staff Division 2A County Hall S.E. 1 returnable by May 3rd.

Conveying disqualifies.

LONDON COUNTY COUNCIL

Applications invited from registered medical practitioners for appointment as ASSISTANT PATHOLOGIST at The Whitechapel Clinic for the Treatment of Venereal Diseases, Turner Street Whitechapel E. 1. Salary £500 a year (fixed). Minimum hours of duty thirty-six a week. Appointment subject to annual review and is non-pensionable. Private practice not precluded.

Application forms containing full particulars obtainable (stamped addressed for envelope necessary) from Medical Officer of Health (Staff Division 2A) County Hall S.E. 1 returnable by April 7th.

Conveying disqualifies.

COUNTY BOROUGH OF HALIFAX

THE HALIFAX GENERAL HOSPITAL (405 Beds)

JUNIOR RESIDENT MEDICAL OFFICER (Male)

Applications are invited from duly qualified registered Medical Practitioners for the above appointment.

Salary £250 per annum together with board lodging and laundry. The appointment is for a term not exceeding one year and is not renewable.

Forms of application and conditions of appointment can be obtained from the Medical Officer of Health, Fowell Street, Halifax.

Completed applications together with copies of not more than three recent testimonials endorsed "Junior Resident Medical Officer" must be forwarded to us by the undersigned not later than Saturday, April 24th 1937.

Conveying either directly or indirectly will be a disqualification.

The Council has not adopted a superannuation scheme.

PERCY SAUNDERS

Town Clerk

Town Hall Halifax

April 9th 1937

CITY OF SHEFFIELD

NETHER EDGE HOSPITAL.

Applications are invited from duly qualified medical women for the appointment of ASSISTANT MEDICAL OFFICER at the above hospital. The Medical Officer appointed will be required to assist in the general work of the hospital but her principal duties will be in the Maternity Section. She will also be required to assist at the Maternity and Child Welfare Clinics as directed.

Candidates should have previous hospital experience and post-graduate experience in Midwifery and Ante Natal work is essential.

The salary offered is £300 per annum plus £25 to £40 with the usual residential allowances.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1928 and deductions will be made under this Act.

Applications stating age, qualifications and experience, accompanied by three recent testimonials should be sent as soon as possible to the Medical Superintendent, City General Hospital S.E. 2.

RUNCORN URBAN DISTRICT COUNCIL

TEMPORARY PART-TIME MEDICAL OFFICER OF HEALTH

MEDICAL SUPERINTENDENT OF INFECTIOUS DISEASES HOSPITAL.

Applications are invited for the above appointments from duly qualified and registered Medical Practitioners who are also registered in the Medical Register as holders of a Diploma in Sanitary Science, Public Health or State Medicine.

The salary as temporary part-time Medical Officer of Health will be £200 per annum and as Medical Superintendent of the Infectious Diseases Hospital £100 per annum. Total £300 per annum. The position will not be designated as an Established Post in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1928.

The appointment will be subject to the provisions of the Sanitary Officer (Outside London) Regulations 1935.

In consequence of the approved scheme of the Cheshire County Council for the appointment of whole-time Medical Officers of Health under the provisions of Section 111 of the Local Government Act 1933 the appointment in the first instance will be for the period ending March 31st 1938 and thereafter renewable for such further period as may be necessary (subject to the approval of the Minister of Health) and pending the appointment of a whole-time Medical Officer of Health under the Scheme as mentioned above.

Conveying either directly or indirectly will be a disqualification.

Applications to be in the candidate's own hand, writing accompanied by two recent testimonials and endorsed "Appointment of Temporary Part-time Medical Officer of Health" must reach me on or before the first post April 23rd 1937.

JOHN HOWARD, Clerk to the Council.

Town Hall, Runcorn April 8th 1937

COUNTY OF LINCOLN—PARTS OF LINDSAY

APPOINTMENT OF LADY ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Assistant County Medical Officer from duly qualified Women Medical Practitioners who have a Diploma in Public Health who must be under 40 years of age unmarried and have had at least three years experience in the practice of their profession since obtaining a regular qualification.

Applicants must also have had special experience in Maternity and Child Welfare work. Experience in the diagnosis and treatment of errors of refraction in school children is also essential.

The successful candidate will work under the control and direction of the County Medical Officer of Health and will not be allowed to engage in private practice.

The salary will be £500 per annum rising by annual increments of £25 to £700. Travelling allowance according to the Council's scale. The officer appointed providing her own car.

The post is designated under the Local Government and Other Officers Superannuation Act 1928, and the officer appointed will be required to pass a medical examination. The appointment will be terminable by three months' notice on either side.

Forms of application may be obtained from the undersigned and when completed should be accompanied by copies of not more than three recent testimonials and returned to me not later than May 3rd 1937.

W. S. H. CAMPBELL,

County Medical Officer of Health.

County Offices Lincoln

April 12th 1937

CITY AND COUNTY OF THE CITY OF EXETER

TEMPORARY ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited from registered medical practitioners (male) having experience in the inspection and treatment of school children, dental anaesthetics and the conduct of maternity and child welfare centres as well as the general work of a public health department.

The appointment will be for a period of approximately three months terminable by one month's written notice on either side. The salary will be at the rate of £600 per annum and the pensioner appointed must give his whole time to the service of the Council.

Applications stating name, age, qualifications and experience, also the earliest date on which the service can be commenced to take, with copies of not more than three recent testimonials should be forwarded to me not later than Tuesday April 20th next.

C. J. NEWMAN, Town Clerk.

Town Clerk's Office

Exeter

April 1st 1937

BOROUGH OF LUTON**Appointment of RESIDENT MEDICAL OFFICER to the New Maternity Hospital and ASSISTANT MEDICAL OFFICER OF HEALTH**

Applications from single women are invited for the appointment of Resident Medical Officer to the New Maternity Hospital and Assistant Medical Officer of Health at a commencing salary of £50 per annum rising by annual increments of £25 to a maximum of £500 per annum together with emoluments (board residence laundry etc.) valued at £150 per annum.

The duties will consist of Maternity and Child Welfare work and the successful applicant will be required to live in the new Borough Maternity Hospital. Applicants must have had considerable resident post-graduate experience in obstetrics. The post will offer facilities for experience to general public health work.

The appointment will be subject to the Local Government and Other Officers Superannuation Act 1922 and the successful applicant will be required to pass a medical examination.

Copies of the application form and terms of appointment may be obtained from the undersigned at the Town Hall, Luton to whom applications accompanied by copies of three recent testimonials must be delivered not later than Saturday May 1st 1937.

W. H. ROBINSON
Town Clerk

Town Hall Luton
April 17th 1937

COUNTY BOROUGH OF OLVERHAMPTON

New Cross Hospital
(350 Beds)

ASSISTANT MEDICAL OFFICER (RESIDENT)

Applications are invited from single gentlemen duly qualified for appointment as Assistant Medical Officer at the above Hospital which contains Maternity Surgical Maternity Children's and Isolation Departments and is modern equipped. Experience in obstetrics a knowledge of Clinical Pathology and previous Hospital experience will be deemed additional assets.

Salary will be at the rate of £700 per annum with apartments board attendance, etc.

The appointment will be limited to a term not exceeding one year.

Further information as to the duties etc. may be obtained from the Medical Officer of the Hospital.

Applications stating age qualifications and nationality together with copies of recent testimonials should be addressed to
A. G. ALDRIDGE
Public Assistance Officer
Stafford Street Wolverhampton

CITY OF MANCHESTER**WOMAN MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE**

The Public Health Committee invite applications for the position of WOMAN MEDICAL OFFICER from qualified medical practitioners who are experienced in midwifery and children's diseases.

The salary is £600 per annum rising by annual increments of £5 to a maximum of £700.

Application forms with full information may be obtained on application to the Medical Officer of Health, Suffolk House, Quay Street, Manchester 1 and must be returned to reach him not later than Saturday May 1st 1937.

F. E. WARBRECK HOWELL
Town Clerk

Town Hall Manchester

KENT AND CANTERBURY HOSPITAL

The Board of Management invite application from duly qualified Medical Practitioners for the post of HONORARY ANAESTHETIST to the Ear, Nose and Throat Department.

Particulars of the appointment may be obtained from the undersigned to whom application accompanied by testimonials should be forwarded not later than May 10th 1937.

J. F. KENT Superintendent and Secretary

WYMOUTH AND DISTRICT HOSPITAL, WYMOUTH (9 Beds and Cots)

Wanted middle of May HOUSE SURGEON (male) (European) Salary £180 per annum with board residence and laundry. Applications stating age qualifications and copies of testimonials to be sent to the undersigned not later than April 17th 1937.

MORRIS LODGE
Hospital Secretary

DONCASTER ROYAL INFIRMARY AND DISPENSARY (185 Beds)

CASUALTY HOUSE SURGEON (male) required immediately. Salary at the rate of £150 per annum with board residence and laundry. Applications accompanied by not more than three testimonials to be sent to the Secretary Superintendent.

BRITISH POSTGRADUATE MEDICAL SCHOOL (University of London)

THREE PART-TIME DEMONSTRATORS in Clinical Medicine are required for the British Postgraduate Medical School. Candidates will be required to attend on two mornings and one afternoon each week and carry out such duties as may be allotted to them by the Professor or of Medicine. Applicants must hold the degree of M.D. or the Membership of the Royal College of Physicians. The appointment will be for one year and demonstrators will be eligible for re-appointment. They will receive an honorarium of £100 per annum.

Applications accompanied by copies of three testimonials must be received not later than the first post on Monday May 3rd 1937.

Further particulars can be obtained from the Dean British Postgraduate Medical School, Ducane Road W.12.

COUNTY BOROUGH OF CROYDON PUBLIC HEALTH DEPARTMENT MAYDAY HOSPITAL**APPOINTMENT OF ASSISTANT PATHOLOGIST AND BACTERIOLOGIST**

Applications are invited for the appointment of RESIDENT ASSISTANT PATHOLOGIST AND BACTERIOLOGIST at the Mayday Hospital.

Salary will be £350 per annum plus board residence and laundry and the appointment will be in the first instance for one year but subject to renewal if the appointment is renewed remuneration on the Askwith Scale will be paid.

Conveying in any form will be a disqualification.

A list of duties together with application forms may be obtained from the Medical Officer of Health, Town Hall, Croydon and applications should be returned to him not later than 11 a.m. in the forenoon on Monday April 16th 1937 accompanied by copies (not originals) of not more than three testimonials of recent date.

JOHN M. NEWNHAM
Town Clerk

Town Hall Croydon
April 6th 1937

NORTH RIDING INFIRMARY, NIDDERBROUGH (General Hospital—143 Beds—3 Residents)

CASUALTY OFFICER required at once for a period of six months (Third HS and H.P. is an applicant). The appointment will be for not less than 18 months and renewable. Salary £150 per annum with board residence and laundry.

Candidates who must be male unmarried and of British nationality are asked to state whether they are prepared to apply for the combined post of Third House Surgeon and House Physician (£140 per annum) in the event of the present Resident being appointed.

Applications stating age qualifications and experience together with copies of three recent testimonials should be sent to the undersigned forthwith.

GERALD A. KENYON Secretary-Supt.

LINCOLN COUNTY HOSPITAL

Wanted at the beginning of May JUNIOR HOUSE SURGEON. Male unmarried. Salary at the rate of £150 per annum rising to £200 per annum at the conclusion of 6 months approved service. Board residence and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Acts.

Applications stating age and other particulars with copies of not more than 3 testimonials, are to be sent to the undersigned from whom further particulars may be obtained.

ARTHUR MOORE
Secretary Superintendent

County Hospital Lincoln
April 1 1937

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN (Usually known as the Children's Hospital) ST MICHAEL'S HILL

Applications are invited for the position of HOUSE PHYSICIAN. Salary £125 per annum with board room attendance and laundry.

Applicants should state age qualifications experience and send testimonials to the undersigned on or before April 14th.

REGINALD C. THOMAS
Secretary

HOVE GENERAL HOSPITAL, HOVE (160 Beds)

A JUNIOR RESIDENT MEDICAL OFFICER (male) is required. Salary £100 per annum with board apartment and laundry. The appointment will be for one year and will be renewable. Applications must be received by the undersigned not later than April 17th 1937.

H. ALBREY PROBERT
Secretary

CHELSEA, HAM GENERAL AND EYE HOSPITALS**HOUSE SURGEON WANTED (Male)**

The Board of Management invite applications for the post of House Surgeon to the Eye, Ear, Nose and Throat Department.

Candidates must be of British nationality and fully qualified.

Salary £150 per annum with board and laundry.

The hospitals are recognized by the F.R.C.S. D.L.O. and D.O.M.S. examinations.

Applications with copies of testimonials to be sent in a sealed envelope marked "House Surgeon" to the undersigned not later than April 24th 1937.

J. CLUNNING SMITH F.R.C.S.
The General Hospital Cheltenham
April 1th 1937 Secretary

WALSALL GENERAL HOSPITAL

The Committee invite applications from men or women for the post of HOUSE PHYSICIAN and RESIDENT ASSISTANT PATHOLOGIST. Candidates who must be registered under the Medical Act, must produce three recent testimonials.

The appointment will be for six months salary in the first instance £150 per annum with consideration of increment if reappointed. The Hospital contains 170 beds and is equipped in all Special Departments.

Applications stating age qualifications and nationality to be sent to the undersigned immediately.

WALTER FRANCOISE
House Governor

April 13th 1937

THE PRINCE OF WALES'S HOSPITAL, DEVONPORT, PLYMOUTH (Formerly Royal Albert Hospital Devonport) (64 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £100 per annum with board residence and laundry.

Duties to commence May 1st 1937.

Appointment is tenable for 18 months and is subject to renewal or promotion in the senior position when this post becomes vacant.

Applications must be registered under the Medical Act.

Applications stating age and qualifications with copies of three recent testimonials must reach the undersigned forthwith.

FRANK ROWE
April 14th 1937 Secretary

GENERAL HOSPITAL, NOTTINGHAM (150 Beds)

A HOUSE SURGEON is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out-patient Department. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry.

Candidates are desired to send applications stating age qualifications and experience together with copies of testimonials to the undersigned as soon as possible. Duties to commence on Friday May 7th.

PETER M. MACCOLL
House Governor and Secretary

YORK COUNTY HOSPITAL (204 Beds)

Applications are invited for the post of HOUSE SURGEON to the Ear, Nose and Throat Department. Duties include part-time Casualty and General Hospital work. Salary £100 per annum with board residence and laundry.

Applications stating age and previous experience together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Friday April 23rd 1937.

J. R. JACKRILL
Secretary

WORCESTER ROYAL INFIRMARY (165 Beds)

Applications are invited for the post of HOUSE SURGEON to the Gynaecological Department with special experience in gynaecology and with some general duties.

Salary at the rate of £150 per annum with board residence and laundry.

Applications must be received by the undersigned by not later than April 14th.

A. P. WISE
Superintendent Secretary

WORCESTER ROYAL INFIRMARY

Applications are invited for the post of JUNIOR HOUSE SURGEON to the Ear, Nose and Throat Department.

Salary £100 per annum with board residence and laundry. Applications must be received by the undersigned not later than April 14th.

A. R. WISE
Superintendent Secretary

RESIDENT HOUSE SURGEON
required Salary £100 per annum. Appointment
with ten months should be sent to the Secretary
of the House of Commons by 1 April 1952.

HULL ROYAL INFIRMARY

Applications are invited from Registered Medical Practitioners for the posts of—
(a) **HOUSE PHYSICIAN (male)** to the Sutton Branch vacant April 30th Salary £160
The Branch Hospital is not a recovery annexe but a general hospital of 100 beds 45 of which are reserved for medical cases.

(a) **SECOND HOUSE PHYSICIAN (male)**
Main Hospital vacant now Salary £150
Salary is plus residence board and laundry
The posts are recognized by the University of London for the M.D. Branch I (Medicine) Examination

The appointments will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications, giving particulars of age, experience, and nationality together with copies of recent testimonials, should be addressed to the undersigned

April 17th 1937 R J CARLESS
House Governor

NEW CROSS HOSPITAL, WOLVERHAMPTON**LABORATORY TECHNICIAN**

Applications are invited for the above post which is designated under the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass a medical examination.

Applicants should have had a thorough training and wide experience in all branches of clinical laboratory work.

The minimum commencing salary will be £170 per annum rising by annual increments of £10 to £240 per annum but the commencing salary may be fixed above the minimum according to the qualifications and experience of the successful candidate.

Applications stating age, qualifications and experience and accompanied by copies of not more than three recent testimonials should be sent to the Public Assistance Officer, Stafford Street, Wolverhampton as soon as possible.

FERNANACH COUNTY HOSPITAL, ENNISKENNEN, NORTHERN IRELAND**SURGEON/SUPERINTENDENT Required**

Whole-time Appointment with Consultation Practice confined to Co. Fermanagh.

Salary £750 per annum plus £100 per annum in lieu of a residence.

Qualifications—
(1) F.R.C.S. or M.Ch. and at least three years' experience in Surgical work in a recognized Clinical Hospital or
(2) Have had five years' recent experience as an Operating Surgeon in a recognized Clinical Hospital.

Preference will be given to applicants who are also highly qualified and experienced physicians.

Twenty copies of application and testimonials addressed to The Secretary to be received on or before Monday May 17th.

NOTTINGHAM GENERAL DISPENSARY, Hyson Green Branch Nottingham

Wanted **RESIDENT SURGEON** (male or female) unmarried. Must have Medical and Surgical qualifications. Salary £100 with £45 in crease per year up to £190. House with attend-
ance, bath and fuel (not board).

Ultra-soft Ray Clinic. This Institution is a non-profitable one. No beds. No midwifery. Applications, stating age and accompanied by copies of recent testimonials to be sent by May 1st 1937 to—

5 Thurland Street, Nottingham. R H WILLATT
Secretary

SWANSEA GENERAL AND EYE HOSPITAL, (136 Beds)

CASUALTY OFFICER REQUIRED Gentleman, single. Must have had previous hospital experience. Appointment for six months. Duties to commence immediately.

Salary £10 to £175 per annum according to experience with board residence and laundry.

Applications stating age, nationality, qualifications and experience together with copies of three recent testimonials, to be forwarded to the undersigned.

O C HOWELLS,
Secretary Superintendent

MACCLESFIELD GENERAL INFIRMARY, GENERAL HOSPITAL, (100 Beds)

Applications are invited for the post of **SECOND HOUSE SURGEON**. Salary at the rate of £150 per annum with board and residence. Six months' appointment.

Applications stating age, nationality, qualifications etc. to be addressed to the undersigned as soon as possible.

State also whether a member of a Medical Defence Society.

J N A BRISCOE
Secretary

KENT AND SUSSEX HOSPITAL, TUNBRIDGE WELLS (204 Beds)**EAR NOSE AND THROAT AND OPHTHALMIC DEPARTMENTS.**

Applications are invited for the appointment of **HOUSE SURGEON (male)** to the above departments. Previous experience desirable but not essential. Duties to include those of Resident Anaesthetist. Salary £150 per annum board residence and laundry in the hospital. The Hospital is approved by the University of London for the purpose of the M.D. and M.S. Examinations.

Applications, stating qualifications together with certificate of registration and copies of not more than three recent testimonials should be sent to the undersigned as soon as possible. Duties to commence May 1st, 1937.

TOM B HARRISON
Superintendent Secretary

ROYAL DEVON AND EXETER HOSPITAL, EXETER (275 Beds)**HOUSE PHYSICIAN HOUSE SURGEON TO EAR NOSE, AND THROAT DEPARTMENT**

The above resident posts (male only) are shortly becoming vacant.

The appointments are for six months at a salary at the rate of £150 per annum with eligibility for re-election.

Candidates must possess registered qualifications. Applications stating age, qualifications and copies of three recent testimonials should be sent to the undersigned as soon as possible.

April 12th 1937 S S COLE,
Secretary and Manager

THE CORBETT HOSPITAL STOURBRIDGE (94 Beds and Special Departments)

Applications are invited for the post of **HOUSE SURGEON** which will be vacant on May 1st next.

The appointment will be for a period of six months terminable by six weeks' notice carries a salary at the rate of £100 per annum with board laundry etc.

The Hospital has a specialist Visiting Staff and Resident Surgical Officer.

Applications giving full details of qualifications age and experience accompanied by three copies of testimonials should be addressed to the undersigned forthwith.

W G H WESTON Secretary
The Corbett Hospital Stourbridge

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL, (140 Surgical and Medical Beds)**HOUSE SURGEON TO OPHTHALMIC AND EAR NOSE, AND THROAT DEPARTMENTS**

Applications are invited from fully qualified men for the above post.

The appointment is for six months.

Salary at the rate of £150 per annum.

Applications, stating age together with copies of three recent testimonials should be sent to the undersigned.

G SUNNUCK
Supt. and Secretary

April 6th 1937

MANFIELD ORTHOPAEDIC HOSPITAL, NORTHAMPTON (159 Beds)

Applications are invited for the post of **JUNIOR RESIDENT MEDICAL OFFICER (male)**. Salary £150 per annum with board residence etc. Preference will be given to candidates who have previously held Medical and Surgical appointments in a general hospital.

Applications stating age, qualifications etc., and copies of testimonials should be sent not later than April 25th to

H G LEWIS
Secretary Superintendent

PROVIDENCE FREE HOSPITAL, ST HELENS (110 Beds)

HOUSE SURGEON (male) required experience in anaesthetics essential. Appointment offers opportunity to gain good surgical experience. Appointment is for six months and successful candidate is eligible for reappointment. Vacancy June 1st. Salary £40 with board residence and laundry.

Applications stating age, experience and full particulars together with copies of three testimonials to be in by April 25th.
Reply Secretary M.O.

EAST SURREY HOSPITAL, REDHILL, SURREY

JUNIOR HOUSE SURGEON (male or female) required immediately. Salary at the rate of £100 per annum with board residence and laundry. Candidates must be fully qualified and registered. Appointment for six months. Applications, stating full particulars and copies of three recent testimonials to be forwarded to the undersigned.

Secretary

BETHLEM ROYAL HOSPITAL, MONKS ORCHARD BECKENHAM KENT

RADIOLOGIST Applicants are invited for this post. Candidates must be graduates of a British University and have had other hospital experience as a Radiologist.

The officer appointed will be expected to be at the hospital weekly or as may be required on notification by the Physician Superintendent.

The appointment will carry an honorarium of £150 guineas per annum and will be held for one year subject to annual re-election at the April Court.

For further particulars apply to the Physician Superintendent at the hospital.

Applications for the appointment must be forwarded to the Clerk to the Governors at his office as under on or before April 10th.

JOHN L WORSFOLD Clerk etc.
Bethlem Royal Hospital Office
144 New Bridge Street EC4

BETHLEM ROYAL HOSPITAL, MONKS ORCHARD BECKENHAM KENT

CONSULTING SURGEON Applications are invited for this post. Candidates must be fellows of the Royal College of Surgeons of England, Scotland or Ireland. The appointments will be held for one year subject to annual re-election at the April Court.

Recognition by way of honorarium is made.

For further particulars apply to the Physician Superintendent at the hospital.

Applications for the appointment must be forwarded to the Clerk to the Governors at his office as under on or before April 10th.

JOHN L WORSFOLD Clerk etc.
Bethlem Royal Hospital Office
144 New Bridge Street EC4

ROYAL MANCHESTER CHILDREN'S HOSPITAL, PENDLEBURY near MANCHESTER (230 Beds)**RESIDENT SURGICAL OFFICER**

Applications are invited for the post of **RESIDENT SURGICAL OFFICER**. Salary £150 per annum. The appointment is for a period of six months commencing June 1st. Candidates must be unmarried and duly registered. Previous Hospital experience essential.

Applications stating age and accompanied by copies of not more than three recent testimonials to be sent to the undersigned not later than Friday April 10th. Interviewing directly or indirectly may disqualify.

By Order
H HEARDMAN
Secretary

YORK DISPENSARY

TWO RESIDENT MEDICAL OFFICERS (female) are required to commence duties as soon as possible.

The resident staff consists of two medical officers whose duties are to visit and attend the sick poor in their own homes and to act as the honorary staff. Candidates must be duly qualified, registered and unmarried. Some experience of the administration of anaesthetics is essential. Salary £175 per annum with board lodging and attendance and allowance for laundry.

Applications with testimonials to be sent on or before April 17th to—

JOHN C PETERS
Secretary

4 New Street York

GENERAL HOSPITAL, NOTTINGHAM (136 Beds)

A RESIDENT CASUALTY OFFICER (male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry. Candidates are invited to send applications, stating age, qualifications and experience together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible.

PETER M MACCULL
House Governor and Secretary

KING GEORGE HOSPITAL, LEEDS (18 miles from London) (200 Beds)

HOUSE SURGEON (male) required for six months from May 1st. Salary £100 per annum with board residence and laundry. The appointment is for six months and successful candidate is eligible for reappointment. Vacancy June 1st. Salary £40 with board residence and laundry.

Applications stating age, experience and full particulars together with copies of three testimonials to be in by April 25th.
Reply Secretary M.O.

ROYAL SURREY COUNTY HOSPITAL, CULFORD (110 Beds)

Wanted ASSISTANT PATHOLOGIST Salary £100 per annum.

Applications stating age and essential qualifications together with copies of not more than three recent testimonials to be sent to the Secretary Superintendent by April 25th.

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL
Shooters Hill London SE18**GENERAL HOSPITAL (112 Beds)**
(Recognized by the Royal College of Surgeons of England for its surgical practice)

The Board of Management invites application from suitably qualified male candidates for the following appointments:

- (a) HOUSE PHYSICIAN commencing June 1st 1937
(b) HOUSE SURGEON commencing May 1st 1937

Each appointment will be for six months and the rate of remuneration will be £103 per annum plus board residence, etc.

The closing date for the receipt of applications, which should be made on the prescribed form (obtainable from the undersigned) is Monday April 19th 1937 and short-listed candidates will be required to meet the Appointments Committee on Friday April 23rd 1937.

R S O HUTCHINGS
Secretary**THE HOSPITAL FOR SICK CHILDREN**
Great Ormond Street London WC1**A half time OUTPATIENT MEDICAL REGISTRAR (male)** will be required Salary £175 per annum

Candidates must be legally qualified to practise and must have held a responsible resident appointment at a General Hospital.

The appointment is tenable in the first instance for one year but is renewable for two further years. Applications must be received by noon on Monday April 20th 1937 and Candidates must be prepared to attend for interview by the Joint Committee at 4.45 p.m. on Wednesday May 5th 1937.

Further particulars and forms of application are obtainable from the undersigned.

HERBERT I. RUTHERFORD
April 1937 Secretary**ROYAL FREE HOSPITAL GRAY'S INN ROAD WC1**Applications are invited for the part time post (non-resident) of **FIRST ASSISTANT** in the CHILDREN'S DEPARTMENT £100 per annum honorarium.

Candidates should submit applications stating age, and accompanied by copies of three testimonials to the undersigned on or before May 1st from whom further information may be obtained. Preference will be given to former Students of the London (R.F.H.) School of Medicine for Women.

RICHARD T. BARTLEY
Secretary**ROYAL FREE HOSPITAL, GRAY'S INN ROAD LONDON WC1**Applications are invited for the appointment of **ASSISTANT PHYSICIAN** to the Department of Physical Medicine. Intending candidates who must either be Members of the Royal College of Physicians or undertake to take the membership within one year of appointment should submit applications stating age and accompanied by copies of three recent testimonials to the undersigned on or before the 30th June 1937.**RICHARD T. BARTLEY** Secretary**PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN ST QUENTIN AVENUE NORTH KENSINGTON W10**
(181 Beds)The Board of Management invite applications for the post of **HONORARY RADIOLOGIST**. The holding of a diploma in Medical Radiology and experience in superficial X-Ray therapy are essential. Two attendances a week will be required. A proportion of certain fees is payable to the Radiologist. Applications accompanied by copies of three testimonials should be sent to the undersigned from whom any further information can be obtained not later than Saturday May 1st.**H J ELEY** Secretary**LONDON HOSPITAL WHITECHAPEL, E1**There is a vacancy for the post of **FIRST ASSISTANT** to the GYNAECOLOGICAL and OBSTETRIC DEPARTMENT.

Candidates must be Fellows of the Royal College of Surgeons (Ed. List).

Applications should arrive not later than by first post on Monday May 1st.

The salary of the appointment is £50 p.a. with board and residence.

Further particulars may be obtained from the House Governor.

ARTHUR G. ELLIOTT
House Governor**SOUTHERN CLINIC KING'S COLLEGE HOSPITAL**Applications with qualifications for the post of **MEICAL OFFICER** to take charge of weekly clinic ORTHOPTIC EXERCISES. Remuneration at rate of £50 a year may be addressed before April 2nd to the House Governor, King's College Hospital, SE5.**ELIZABETH GARRETT ANDERSON HOSPITAL EUSTON ROAD NW1**

The Managing Committee invite applications from qualified medical women for the appointment of —

HONORARY ASSISTANT SURGEON to the Throat Nose and Ear Department. Applicants must be Fellows of the Royal College of Surgeons. Fifteen copies of applications giving full particulars with copies of three recent testimonials to be sent to the undersigned by Friday May 14th 1937.**JEAN R. MURRAY**
Secretary**ELIZABETH GARRETT ANDERSON HOSPITAL EUSTON ROAD NW1**

The Managing Committee invite applications from qualified medical women for the appointment of —

HONORARY PHYSICIAN to the Children's Department. Applicants must hold the MD degree and be Members of the Royal College of Physicians. Fifteen copies of applications giving full particulars with copies of three recent testimonials should be sent to the undersigned by Friday May 14th 1937.**JEAN R. MURRAY**
Secretary**ELIZABETH GARRETT ANDERSON HOSPITAL, EUSTON ROAD NW1**The Managing Committee invite applications from qualified medical women for the Staff appointment of part time **RADIOLOGIST** in charge of the diagnostic work. Duty to begin on appointment early in May. Honorarium £200 per annum. Fifteen copies of applications giving full particulars with copies of three recent testimonials to be sent to the undersigned by Friday April 30th 1937.**JEAN R. MURRAY**
Secretary**ELIZABETH GARRETT ANDERSON HOSPITAL EUSTON ROAD NW1**The Managing Committee invite applications from qualified medical women for the Staff appointment of part time **PATHOLOGIST** in charge of the Department of Morbid Anatomy and Bacteriology. Facilities will be given for private work and for research. Duty to begin September 1st 1937 remuneration £150 per annum. Fifteen copies of applications giving full particulars with copies of three recent testimonials to be sent to the undersigned by Friday May 14th 1937.**JEAN R. MURRAY**
Secretary**THE RADIUM INSTITUTE RIDING HOUSE STREET LONDON W1**Applications are invited for the post of **RESIDENT MEDICAL OFFICER (male)**. Candidates must be unmarried.

The salary will be at the rate of £250 per annum board residence and laundry being provided and the appointment is for six months commencing May 17th next.

Applications, stating age, nationality, qualifications and experience, with copies of three recent testimonials must be received at the Institute on or before May 5th next.

Canvassing either directly or indirectly is not permitted.

ITHOS A. GARNER
Secretary**WESTMINSTER HOSPITAL, BROAD SANCTUARY SW1**Applications are invited for the office of **ASSISTANT MEDICAL OFFICER** to the X-Ray and Electrical Department. Duties will be confined to physiotherapy.

Candidates must be registered medical practitioners and must have specialised in this subject.

Thirty-five copies of applications and each of three testimonials should be submitted not later than Monday April 26th to the undersigned from whom particulars of the duties may be obtained.

By Order of the House Committee.
CHARLES M. POWER
Secretary**VICTORIA HOSPITAL FOR CHILDREN**
The Street Chelsea SW3
(135 Beds)The Committee of Management invite applications for the post of **CASUALTY OFFICER** for a period of three months.

Duties to commence on May 1 1937. Hours 9 a.m. to 1.10 p.m. daily (including Saturdays). Salary at the rate of £200 p.a. with luncheon. Candidates are expected to attend a Sub-Committee for an interview and should send their applications and copies of three testimonials to the Secretary not later than first post on Tuesday 10th instant.

D. ST. JOHN BAILEY Secretary**ROYAL CHEST HOSPITAL**
City Road EC1
(Royal Northern Group of Hospitals)Applications are invited for the post of **RESIDENT MEDICAL OFFICER** vacant June 1st for a period of 6 months (subject to re-election). Salary at the rate of £150 p.a., with board residence and laundry.

Applications, with copies of testimonials, should be sent by April 30th to the undersigned, from whom forms of application and rules can be obtained.

OILBERT G. PANTER
SecretaryRoyal Northern Hospital
Holloway London, N7**ROYAL CHEST HOSPITAL**
City Road EC1
(Royal Northern Group of Hospitals)Applications are invited for the post of **HOUSE PHYSICIAN** vacant June 1st for a period of 6 months. Salary at the rate of £100 p.a., with board residence and laundry.

Applications, with copies of testimonials, should be sent by April 30th to the undersigned, from whom forms of application and rules can be obtained.

GILBERT G. PANTER
SecretaryRoyal Northern Hospital
Holloway London N7**THE NELSON HOSPITAL, MERTON SW9**
(66 Beds)**RESIDENT HOUSE SURGEON** (Male or married) required early in May for duties in connection with Men's and Children's Ward—general casualty work. Appointment for six months in first instance. Salary at rate of £100 per annum, plus usual allowances and fees earned.

Candidates must be British by nationality and birth.

Applications with copies of recent testimonials, should be sent to the Secretary forthwith.

THE QUEEN'S HOSPITAL FOR CHILDREN
Hackney Road London E2.**HOUSE SURGEON** required May 1st. Six months appointment. Salary at the rate of £100 per year with board lodging and laundry.

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials, on or before April 20th.

CHARLES H. BESSELL
Secretary**WEST END HOSPITAL FOR NERVOUS DISEASES**
Out Patient Department, 73 Welbeck Street, W1

Patient Department.

Candidates are requested to obtain further particulars as to clinic times etc. from the undersigned to whom applications, with copies of not more than three recent testimonials, should be posted not later than Monday April 26th.

P. WETENHALL
Secretary and House Governor**THE PRINCE OF WALES'S GENERAL HOSPITAL LONDON N16**Applications are invited for the appointment of **HONORARY CLINICAL ASSISTANT** with special Psychiatric experience.

Applications should be sent to the undersigned on or before Friday April 30th 1937.

J. C. BURDITT
Director and House Governor**ANCONA'S HOSPITAL CONVALESCENT HOME, GREAT WARFORD ALDERLEY EGG**Applications are invited for the post of **HONORARY VISITING MEDICAL OFFICER** to the above. Honorarium £50 per annum. Applications stating age, qualifications, experience etc., together with copies of three testimonials, to be forwarded to the undersigned on or before April 30th.By Order of the Board
HERBERT J. DAFFORE
General Superintendent and Secretary**THE CHESTER ROYAL INFIRMARY**
(225 Beds)Applications are invited for the post of **HOUSE SURGEON (male)** to take up duty immediately. Salary £150 per annum with board lodging and laundry.

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The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1905 and to certain conditions a copy of which may be obtained from the Medical Superintendent to whom applications giving full particulars with copies of testimonials should be sent not later than April 28th 1937.

H. L. LANO-COATH

Clerk to the Visiting Committee

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Applications are invited for the above post which is designated under the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass a medical examination.

Applicants should have had a thorough training and wide experience in all branches of clinical laboratory work.

The minimum commencing salary will be £170 per annum rising by annual increments of £10 to £240 but the commencing salary may be fixed above the minimum according to the qualifications and experience of the successful candidate.

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials should be sent to the Public Assistance Officer Stafford Street Wolverhampton as soon as possible.

KETERING AND DISTRICT GENERAL HOSPITALApplications are invited for the following posts: **RESIDENT MEDICAL OFFICER** and **SECOND RESIDENT MEDICAL OFFICER (male)**.

Salaries £175 and £125 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months.

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G. W. JACKSON

Secretary-Supt.

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Applications should be sent to the Secretary at 2, Pitt Street, London, W.1. (H. H. Booth, Secretary)

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Copies of regulations can be obtained on application.

Applications with testimonials stating age and qualifications together with photograph must be received by the undersigned not later than May 8th 1937.

A. J. M. TARRANT

Secretary

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CASUALTY OFFICER (male) required at once. Salary £100 per annum with residence board and laundry. Appointment for about six months. Applications stating age nationality qualifications and experience accompanied by copies of not more than three recent testimonials should be received on or before Wednesday April 14th.**KENELM S. ELLISON**

General Secretary

BRIDGWATER GENERAL HOSPITAL
Salmon Parade Bridgewater Somerset**HOUSE SURGEON** required. Salary £150 per annum with board and residence. Applications with copies of three recent testimonials, stating age, nationality qualifications to be sent to the Secretary by April 2nd.**A. N. WILLIS** Secretary**TAUNTON AND SOMERSET HOSPITAL (101 Beds) TAUNTON****HOUSE SURGEON** required at once for a six months appointment. Senior R.M.O. and a House Physician also on staff. Salary at rate of £100 p.a. and the retention of certain fees.

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(FOUNDED 1880)

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1 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village. Cash Receipts last 12 months £1 240. Panel over 500. Small expenses. Detached house (5 bedrooms) with electric light main water etc., garage and garden for sale. Premium £2 100.

2 EAST ANGLIA—PARTNERSHIP in old-established country practice about £3 700 p.a. Easy distance of the coast. Panel over 2 000. House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale freehold. Premium two-fifths share two years purchase. Partner must be married aged 35-40. Preliminary Assistantship.

3 LONDON N.W.—Increasing PRACTICE of £725 p.a. in growing district 30 minutes from Piccadilly. Panel about 530. No midwifery or night work. Semi-detached double fronted corner residence (4 bedrooms) garage and garden for sale. Scope. Premium £1 450.

4 SCOTLAND—PRACTICE averaging over £1 300 p.a. in important city. Panel over 900. Good house for sale.

5 LANCS—Rapidly increasing mixed-class PRACTICE of £3 800 p.a. in manufacturing town. Panel about 2 770. Two houses to be purchased or rented. Alternatively a one half share would be sold at two years purchase.

6 S. COAST—Good middle-class non-dispensing PRACTICE about £1 100/£1 200 in popular watering place. Panel about 200. Fees 3/6 to 10/6. Very attractive detached residence (3 bedrooms etc.) with garage and garden. Price £3 000. Freehold. Scope. Premium £2 250.

7 EASTERN COUNTY—PARTNERSHIP (after short preliminary Assistantship) in very old-established Practice in market town in hands of Medical Woman. Receipts £2 000. House available. Applicant must be Medical Man aged 30-35 and graduate of Cambridge or London preferred.

8 W. OF ENGLAND—PARTNERSHIP (after short preliminary Assistantship) in old-established non-dispensing Practice of £1 800 in residential town. Panel 2 000. Fees 3/6 to 10/6. Four-tenths share would be sold to suitable man at two years purchase.

9 E. ANGLIA—Partnership in Country PRACTICE in agricultural district with good appointments and substantial panel. Visits 3/6 to 10/6. Charming old country house (6 bedrooms and dressing room) garage and 3½ acres of ground for sale. Premium for share of about £1 700 p.a., two years purchase.

10 LONDON S.W.—Well-established mixed PRACTICE of £1 725 including about £140 from appointments and a panel between 1 600/1 650. Rent of flat £105 p.a. and surgery £91 p.a. inclusive. Premium £4 500 to include drugs etc., etc.

11 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2 200 p.a. Panel 1 790. House with 4 bedrooms and

separate surgery accommodation garage and garden to rent at £55 p.a. Scope. Premium one third share two years purchase.

12 LONDON (W. 2)—Old established PRACTICE in good middle-class district. Receipts past twelve months £935 including P.M.S. £54 and panel 1 143. House with surgery accommodation to rent at £130 p.a. on lease. Premium two years purchase.

13 S. OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2 500 in Market Town about 100 miles from London. Panel 900. Well built house (5 bedrooms etc.) available for sale. One third or two-fifths share at two years purchase.

14 OXFORD—Small non-dispensing PRACTICE. Receipts 1936 £300 including Appointment worth about £10 p.a. and a panel of 100. Fee 5/ to £1 1s. Good detached house (4 bedrooms etc.) to rent on lease. Premium £300.

15 HOME COUNTIES—Old-established good-class easily run PRACTICE in a beautifully situated country district. Cash receipts average over £1 570 p.a. Panel just over 500. Visits 3/6 to £1 1s. medicine extra. Nice house (6 bedrooms) with main electric light gas and water 2 garages and ½ acre of garden for sale. Premium 2 years purchase. Good Hospital in district.

16 MIDLANDS—Partnership in old-established Practice averaging over £3 850 p.a. in manufacturing town. Panel 3 600. Visits 5/ to £1 1s. A suitable house could be obtained. A one third share would be sold at first at 2 years purchase. Incoming partner must be experienced in general practice and surgery—one preferably holding the F.R.C.S.

17 S. OF ENGLAND—Well-established Practice averaging nearly £1 200 p.a. in a seaside resort. Panel over 700. Visits 3/6 to 10/6 mostly 5/. Very little midwifery. Good corner house (5 bedrooms) with central heating garage and small garden for sale. Well-equipped Cottage Hospital. Good scope. Premium 2 years purchase.

18 N. WALES WATERING PLACE—Partnership in middle and upper-class Practice averaging nearly £3 800 p.a. including selected panel 245. Fees 5/ to 10/6 without medicine—some £1 1s. Detached house (4 bedrooms etc.) with good garage and small garden to rent on lease. Scope. Premium one half share £3 900 to include surgery fittings drugs and book debts. Hospital.

19 LONDON W. 2—Practice averaging over £800 p.a. including panel 165. Consultations 5/ upwards. Private residence to rent at £120 p.a. and surgery premises at £60 p.a. Scope for increase. Premium two years purchase.

20 LONDON S.W.—Partnership in well-established working-class Practice nearly £3 150 p.a. in Favourite Suburban District. Panel 3 000. One fourth share would be sold at first at two years purchase.

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Practices and Partnerships for Disposal (continued)

21 SW OF ENGLAND—Partnership in well-established mixed Town Practice about £4,200 p.a. Panel 1,950 Visits 2/6 to £2 2s medicine extra Detached house (5 bed rooms) with large garden garage etc. for sale. One fourth or one third share at first at two and a quarter years purchase. Applicant who must be experienced in General Practice and major surgery—F.R.C.S. preferred—would be appointed to Staff of Hospital

22 LONDON, W—Practice of about £700 p.a. in residential district. Panel 500 Large corner house (7 bedrooms) with separate surgery entrance and good garden. Price of lease £1,350 Scope Premium £1,250

23 MIDLANDS—Partnership in old-established increasing Practice in pleasantly situated Country Town Good appointments and panel Visits 3/6 to £1 11s 6d medicine extra Suitable house obtainable Incoming partner must be good Surgeon—English or Scottish—aged 30-35 Small well-equipped Hospital Share worth £1,250 p.a. at first at two years purchase

24 S OF ENGLAND—Partnership in old-established Practice over £4,800 p.a. in beautifully situated Market Town Panel over 2,850 Visits 3/6 to £1 1s medicine extra Large attractive well built house with electric light central heating garage and walled in garden for sale Premium 9/30 share two years purchase

25 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town Receipts average £750 p.a. including P.M.S. worth £125 p.a. and panel about 750 Pleasantly situated house (5 bedrooms attics etc.) on main road Price (freehold) £3,200 Ample scope Premium one and three-quarter years purchase

26 E. ANGLIA—Partnership in old-established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town Panel 1,850 House to rent at £60 p.a. Good society and sport Scope One third share at first Premium two years purchase

27 N DEVON—Old-established Practice averaging over £1,050 p.a. in small Watling Place Panel about 400 Well built semi-detached house (5 bedrooms etc.) garden for sale Beautiful surrounding country All kinds of sport. Scope Premium two years purchase

28 SW OF ENGLAND—Partnership in very old-established mixed Practice in flourishing Industrial District. Cash receipts average over £3,200 p.a. including appointments and panel about 2,100 House, with 4½ bedrooms garage and small garden for sale Good Hospital One third share at first with option of further shares later Premium two years purchase Short preliminary Assistantship

29 TASMANIA—Practice doing £1,500 a year, including good appointments Fees range from 10/6 to £1 1s House with 2 bedrooms etc., and garden for sale Par chaser should be able to do major surgery Premium £900

30 ESSEX—Old-established Practice in outlying Suburban District Receipts average £2,125 p.a., including appointments worth about £260 p.a. and a panel of 1,784 Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance Garage and fair-size garden Rent £120 on lease Premium two and a quarter years purchase Purchaser must be English Scottish or Irish

31 LONDON, N—Well-established Practice averaging £450 p.a. in pleasant growing District Panel about 600 Well-situated house on main road to rent at about £65 p.a. Good scope—building going on Premium £600 or offer to include surgery fittings and drugs

32 SURREY—Increasing middle and working-class PRACTICE in thickly populated Suburban District Receipts 1936 £1,720 Panel 660 Small house Rent £78 p.a. (branch £55 p.a.) Ample scope Premium £2,600

33 ITALIAN RIVIERA—Small well established good-class non-dispensing Season PRACTICE Further particulars on application

34 SOUTH SUFFOLK—Partnership in sound old established Practice over £6,000 p.a. in most desirable Country Town Good appointments and panel over 3,000 Not much midwifery Choice of suitable houses One sixth share at first at two years purchase

35 LONDON, N—Medical Woman's Practice in populous district Receipts average £560 p.a., including panel 470 House (4 bedrooms) to rent at £100 p.a. Premium £850

36 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3,300 p.a. in Market Town No panel Fees 5/- to £1 1s Suitable house obtainable Premium one half share two years purchase

37 CO. DURHAM—Well established Practice about £1,100 p.a. in Residential Colliery District within easy distance of Newcastle Appointments worth £85 p.a. and panel 840 Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent Premium one and a half years purchase

38 N WALES WATERING PLACE—Good class non panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden Scope for panel work if desired Prem one year's purchase

39 HOME COUNTIES—Old established Practice of £500 p.a. in first rate town 20 miles from London Panel over 400 Visits 5s No midwifery Modern nine roomed house with garage and attractive garden—about quarter of an acre Premium freehold house and Practice £2,000

40 ESSEX—Old established Practice in outlying suburban district run by two medical men averaging nearly £2,900 p.a. Panel 2,849 House (4 bedrooms etc.) for sale or rent. Premium two and a quarter years purchase

41 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3,500 p.a. in an important town Appointments £250 Suitable house available to rent A one third share would be sold at two years purchase to a suitable man preferably one holding the M.D. or M.R.C.P.

42 LONDON, SE—Old-established Practice of about £1,000 p.a. in outlying residential district Panel 100 Detached house (4 bedrooms etc.), for sale Premium two years purchase

43 MIDLANDS—Old-established Practice of about £930 p.a. in country district Panel 530 House (7 bedrooms etc.) for sale Premium two years purchase

44 LONDON, N—Old-established Practice in suburban district Cash receipts 1936 (10 months) £1,450 Panel 1,240 increasing Fees 2/6 upwards Suitable house (9 rooms) to rent at £160 p.a. Premium £3,400

45 HOME COUNTIES—A small Practice about £400 p.a. in first rate town about 30 miles from London Panel 1-2 Visits mostly from 5/- House with small garden to rent 25s weekly Excellent scope Premium one and a half years purchase

Purchasers for cash are available for Practices with Incomes of £1,250 to £2,000 p.a.
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Accountancy and legal services furnished by the Agency where desired at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 LONDON WESTERN AREA—Mixed class PRACTICE in populous district. Gross cash receipts for last 12 months about £700 but capable of increase. Panel of 500. Well situated house with ample accommodation, will be put into thorough repair. Good garden. Price for Practice and house £2,500. £500 down.
- 2 WELSH BORDERS—Unopposed chiefly agricultural PRACTICE in beautiful district. Average gross cash receipts £913 p.a. (last year 1936). Panel produces about £370 p.a. and appointments worth about £132 p.a. Very low expenses. Suitable house in own grounds with tennis court, etc., containing 2 reception 6 bedrooms, etc. Freehold for sale £1,200. £700 on mortgage. Premium £1,500.
- 3 WEST COAST OF SCOTLAND—Old-established mixed-class non-dispensing PRACTICE held by vendor many years. Gross cash receipts average about £1,000 p.a. Panel of 1,213. Appointments worth about £30 p.a. Fees 2/6 to 15. Purchaser can choose his own house. Good food and other sports. Premium 1½ years purchase.
- 4 CUMBERLAND—Old-established unopposed PRACTICE held by vendor who is retiring for 30 years. Gross cash receipts average about £800 p.a., including panel worth over £250 p.a. and appointments worth nearly £80 p.a. Suitable 8 roomed house with bathroom surgery dispensary etc., garden garage. Rent £30 p.a. Shooting fishing, golf etc. Premium 1½ years purchase.
- 5 LONDON SOUTH WEST—Good mixed-class PRACTICE producing for last 12 months about £800. Panel of 1,200 to 1,300. Fees 2/6 to 21/. Suitable house in excellent repair. Price £1,400. Premium 2 years purchase or near offer.
- 6 SOUTHERN RHODESIA—Hospital Town on Railway. Beautiful climate and country. Good-class prescribing PRACTICE easily run. Visits 7/6 to 10/6. Midwifery £10 10s. 0d. Average income for past 5 years £1,900 p.a. Well appointed house with tennis court garage surgery etc. can be rented or bought. Good operating surgeon will greatly increase practice. Excellent schools. Sport of all kinds, big game shooting, fishing etc. Income tax 6d in the £. Premium £2,000 to include drugs, surgery fittings and furniture.
- 7 LONDON SOUTH EAST—Old-established middle and working-class PRACTICE producing for the last 12 months £1,320. Panel of approximately 500 and P.M.S. worth £25. House contains 2 reception 4 bedrooms etc. Small garden. Leasehold for sale. Premium for practice and house £3,500 or near offer.
- 8 LONDON NORTH—Old-established chiefly working-class PRACTICE. Receipts for last 12 months approximately £1,600 with panel of about 2,700. Suitable accommodation can be rented at £92 p.a.
- 9 LONDON WEST 2—Old-established mixed-class PRACTICE producing 1936 for the last 12 months. Panel 1,143. Visits 3/6 to 10/6. Roomy house with small garden can be rented at £130 p.a. Premium 2 years purchase.
- 10 LONDON SOUTH WEST—Well-established mixed PRACTICE averaging £3100 p.a. Panel of 1,200. Appointments worth about £300 p.a. Fees from 3/6. Good house with large garden can be rented at £100 p.a. Premium £6,000.
- 11 SOMERSET—MARKET TOWN—Established over 50 years, and averaging about £1,000 p.a. Panel of nearly 900 and appointments worth over £100. Non-dispensing with fees from 5s to 21s. Midwifery not encouraged. Good house available freehold containing 3 reception 6 bedrooms, with separate surgery. 1½ acre of productive garden and garage for two cars. Electric light and water. Price £1,500. Premium 2 years purchase.
- 12 EASTERN COUNTIES—COUNTRY PARTNERSHIP—ONE THIRD SHARE available in mixed-class Practice over £2,500 p.a. Including panel of nearly 1,800. House contains 2 reception 4 bedrooms large and attractive garden and good garage. Rent £55 p.a. Sport of all kinds. Premium 2 years purchase or near offer.
- 13 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to Vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 14 BORDERS OF DUMFRIES AND GALLOWAY—PARTNERSHIP with succession in 12 months. One half share available now. Gross cash receipts between £800 and £900 with very good scope for increase. Purchaser can choose his own house. Premium 2 years purchase.
- 15 DEATH VACANCY—YORKSHIRE—Better class PRACTICE in good residential district. Gross cash receipts average about £650. Panel of about 400. Suitable house can be rented at £100 p.a. Offers invited.
- 16 EASTERN COUNTIES—COUNTRY TOWN—Well established PRACTICE averaging about £1,100 p.a., including panel of 1,061 and clubs, producing about £3,000 and £400 p.a. There is stated to be exceptional scope for increase as vendor is retiring through age and ill health.
- 17 SOUTH WALES—SEASIDE RESORT—Good middle and better working class PRACTICE established over 20 years. Gross cash receipts for past 7 years stated to average £1,670 p.a., of which approximately £650 is from panel and P.M.S. Fees 3/6 to 1 guinea. Well built house with 2 reception 6 bedrooms, etc. Good garden tennis lawn. Garage can be rented on lease. Sports of all kinds. Premium £3,600.
- 18 WESTERN DISTRICT OF LONDON—Old-established good mixed class PRACTICE producing between £1,600 and £1,700 p.a., including panel of 1,500. Roomy corner house in excellent position with garage. Freehold for sale or rented on lease.
- 19 NORTH LONDON—Old-established mixed class PRACTICE held by vendor many years. Gross cash receipts approximately £2,800 p.a. Panel of over 2,800. Suitable house and branch surgery can be rented on lease.
- 20 LONDON SOUTH EAST—Old-established PRACTICE producing about £1,830 p.a., including select panel of 500. Fees from 3/6. Suitable house, available with 2 reception 5 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 21 LONDON WEST—PARTNERSHIP—ONE THIRD SHARE with increase later is offered in well-established practice producing £2,400 p.a., with scope. Suitable house can be obtained. Premium 2 years purchase.
- 22 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1,100 p.a. Including selected panel of about 350. Fees from 5/. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.
- 23 SOUTH COAST SEAPORT TOWN—Old-established PRACTICE producing over £900 p.a., including panel of 1,070. Double rental house with ample accommodation can be rented or bought. Separate surgery also on rental. Premium £1,500.
- 24 NORTH WALES—FAVOURITE SEASIDE RESORT—A ONE THIRD SHARE (with increase later) is offered after short preliminary assistantship in old-established better-class practice producing about £3,400 p.a. Panel of 1,100. Suitable flat available for ingoing partner who should be experienced. Premium 2 years purchase.
- 25 LONDON NORTH WEST—PARTNERSHIP—A ONE THIRD SHARE is for disposal in steadily increasing middle-class practice producing last year £2,400. Small panel. Fees 7/6 to 21/. Choice of houses. Premium £2,000.
- 26 DEATH VACANCY—FAVOURITE SOUTH WEST COAST TOWN—PARTNERSHIP WITH SURGICAL SCOPE—A one third or one-half share is for disposal (owing to recent death of senior of two partners) in good-class non-panel Practice stated to average £3,600 p.a. for past 5 years. Fees 7/6 upwards. Suitable house with ample accommodation can be rented or purchased. Premium for share 2 years purchase. Ingoing partner must be experienced over 35 and able to undertake major surgery.
- 27 LONDON—WESTERN DISTRICT—Well-established very sound mixed class PRACTICE. Panel of 1,630. P.M.S. 200. Receipts approximately £1,700 p.a., including large proportion ready cash. Excellent professional accommodation. Suitable bachelor or family of not more than three.
- 28 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing for last 12 months approximately £940. Selected panel of 400 to 450 patients. Visits from 5/. Very nice house in good repair with ample accommodation.
- 29 MIDLANDS PARTNERSHIP—ONE HALF SHARE in mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1,369 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 2 years purchase.
- 30 LONDON—SOUTH EAST—Well established middle class increasing PRACTICE producing for last 12 months £1,270. Panel of 909. Fees 7/6 to 7/6. Scope for development as building is in progress. Good house in excellent condition containing 2 reception consulting, 4 to 6 bedroom dressing room etc. Price £500. Premium £2,400.
- 31 MIDLANDS—PARTNERSHIP—A SHARE representing approximately £1,300 p.a., with increase later is offered in exceptionally sound good mixed-class practice averaging about £9,000 p.a. with substantial panel and very good appointments. Excellent scope for major surgery. Suitable house available. Premium 2 years purchase.
- 32 YORKSHIRE—GOOD TOWN WITHIN EASY REACH OF COAST—A ONE FOURTH SHARE, with increase later is offered in very old-established middle-class practice producing for last 12 months nearly £4,000. Substantial panel. Fees from 3/6. Suitable house with 2 reception 4 bedrooms, etc. Garage. Stabling and garden. Electric light Gas. Can be rented at £65 p.a. or freehold purchased. Premium 2 years purchase.
- 33 MIDLANDS—COUNTRY TOWN PARTNERSHIP—A ONE-QUARTER SHARE (with increase later) is for disposal in mixed-class practice averaging over £2,500 p.a., including panel of 2,800. Fees from 3/6. Suitable house can be obtained.
- 34 SOUTH COAST—A ONE THIRD SHARE is offered in town producing last year £3,461. 1/ Suitable freehold house for sale. Ingoing partner must be well qualified and accustomed to better-class work. There are two hospitals and one partner is on the staff.
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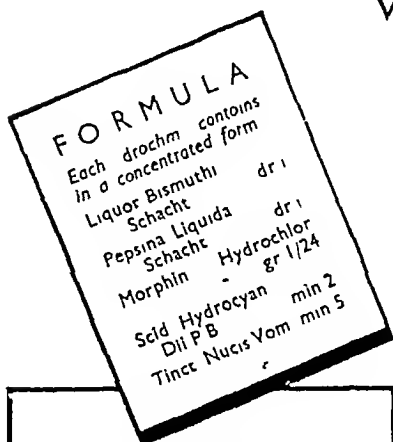
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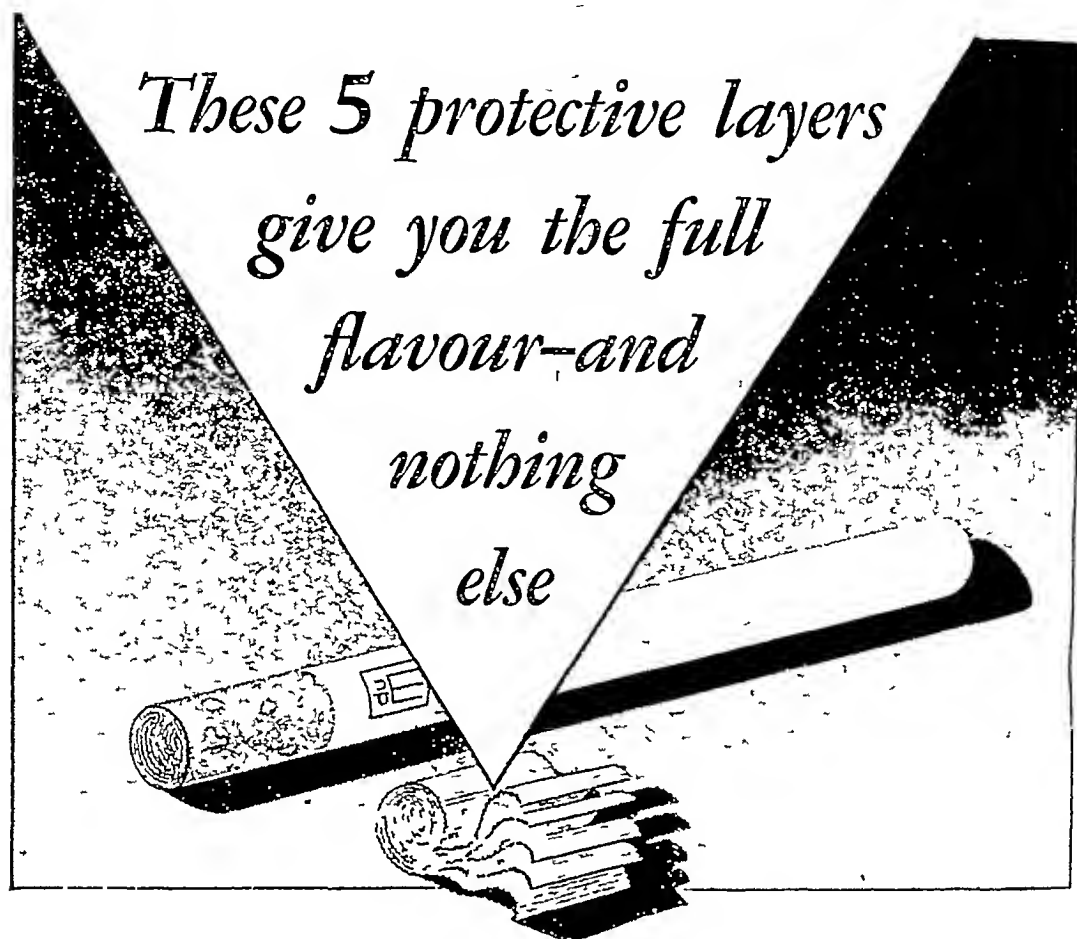
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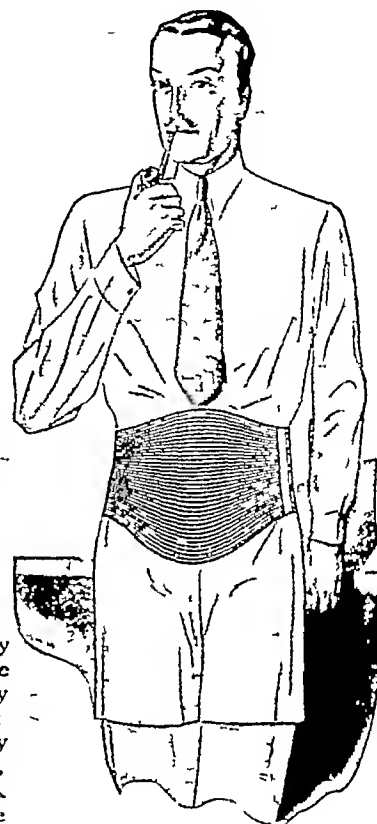
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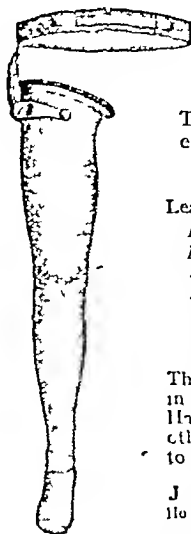
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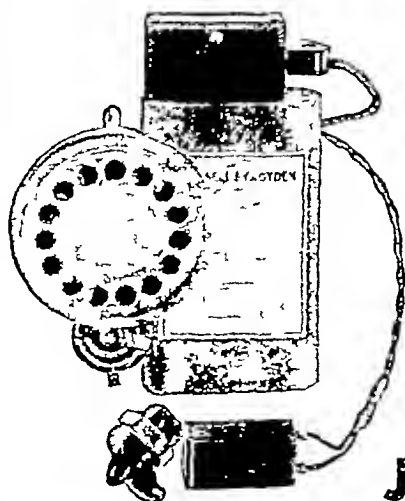
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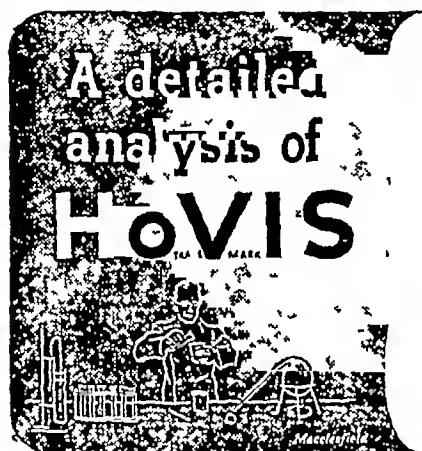
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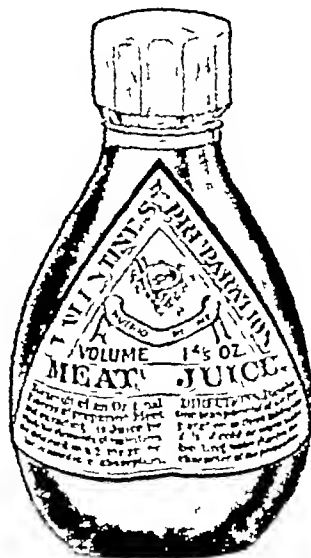
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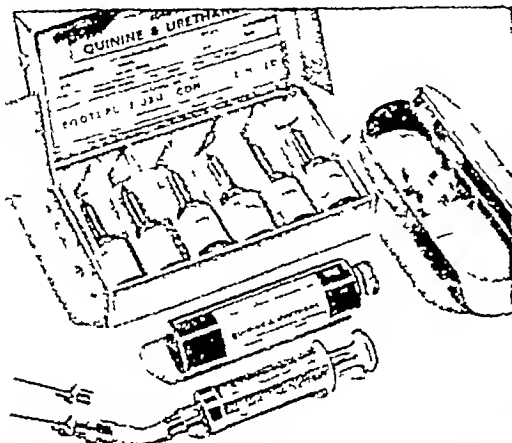
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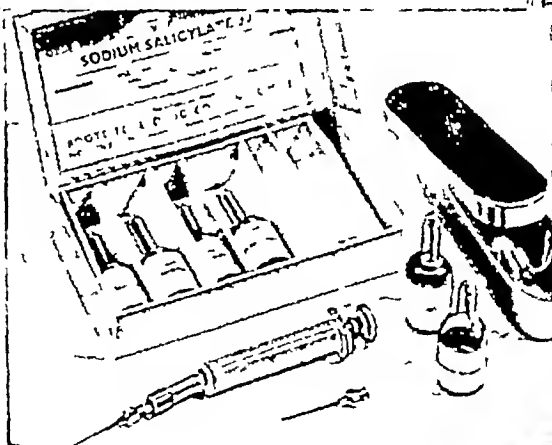
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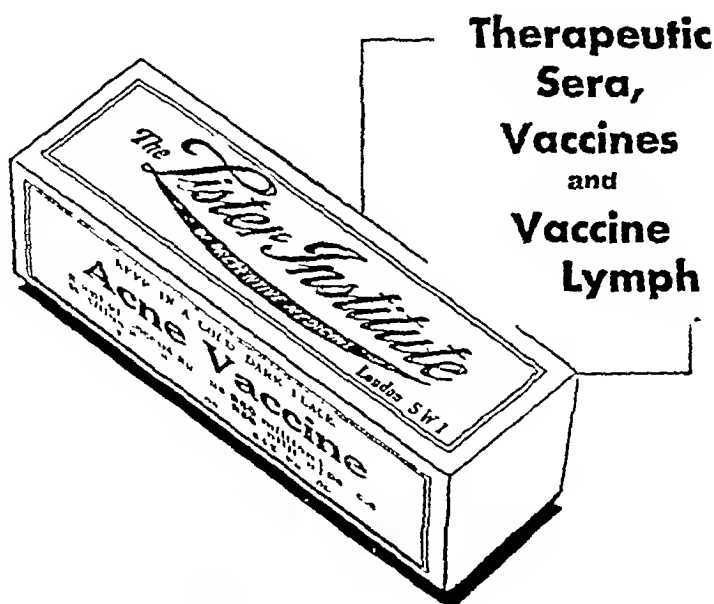
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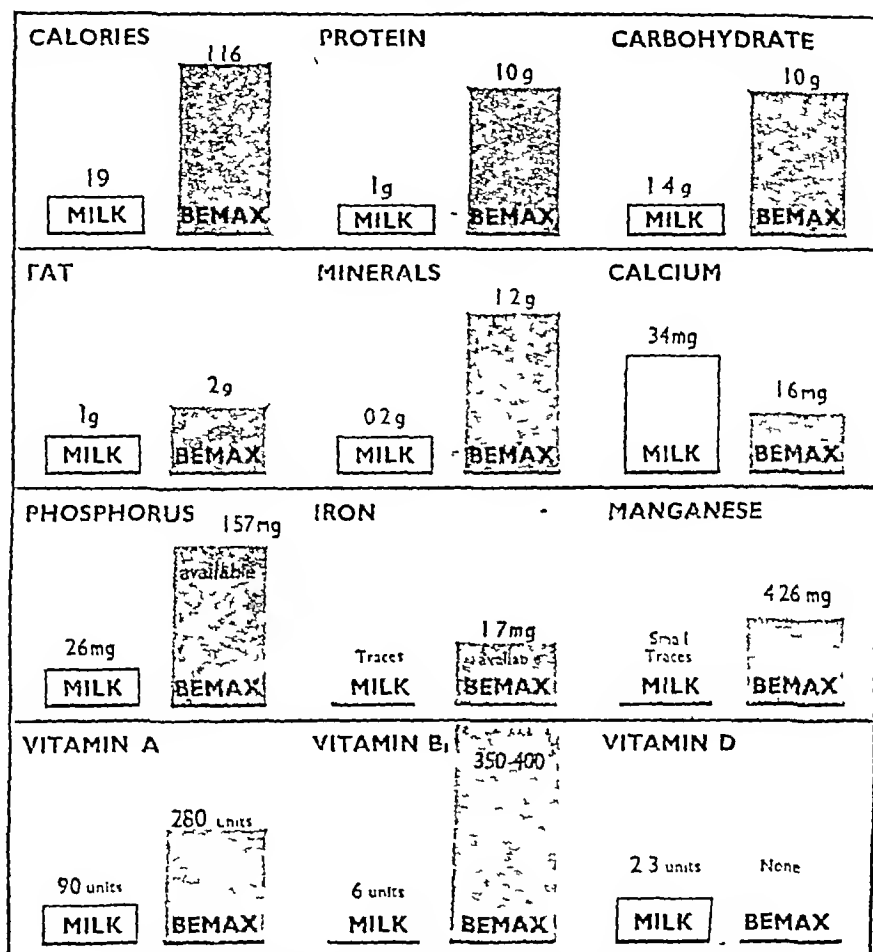
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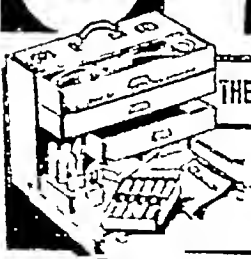
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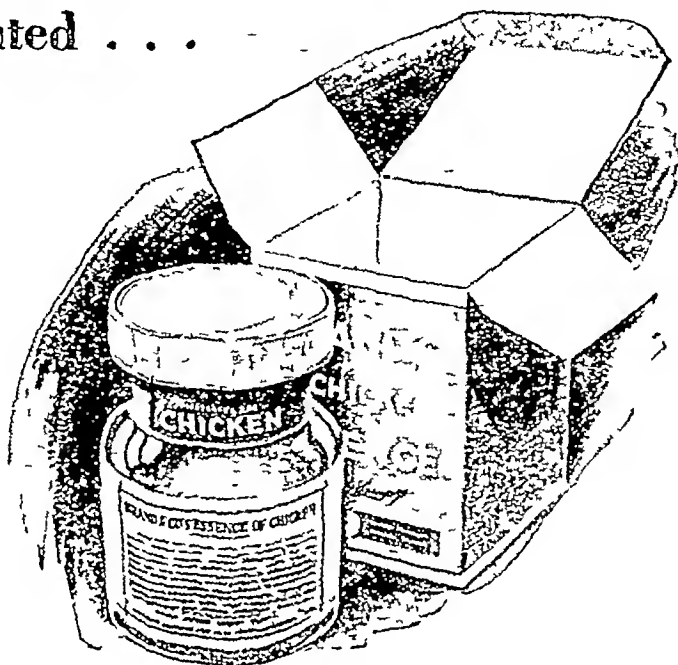
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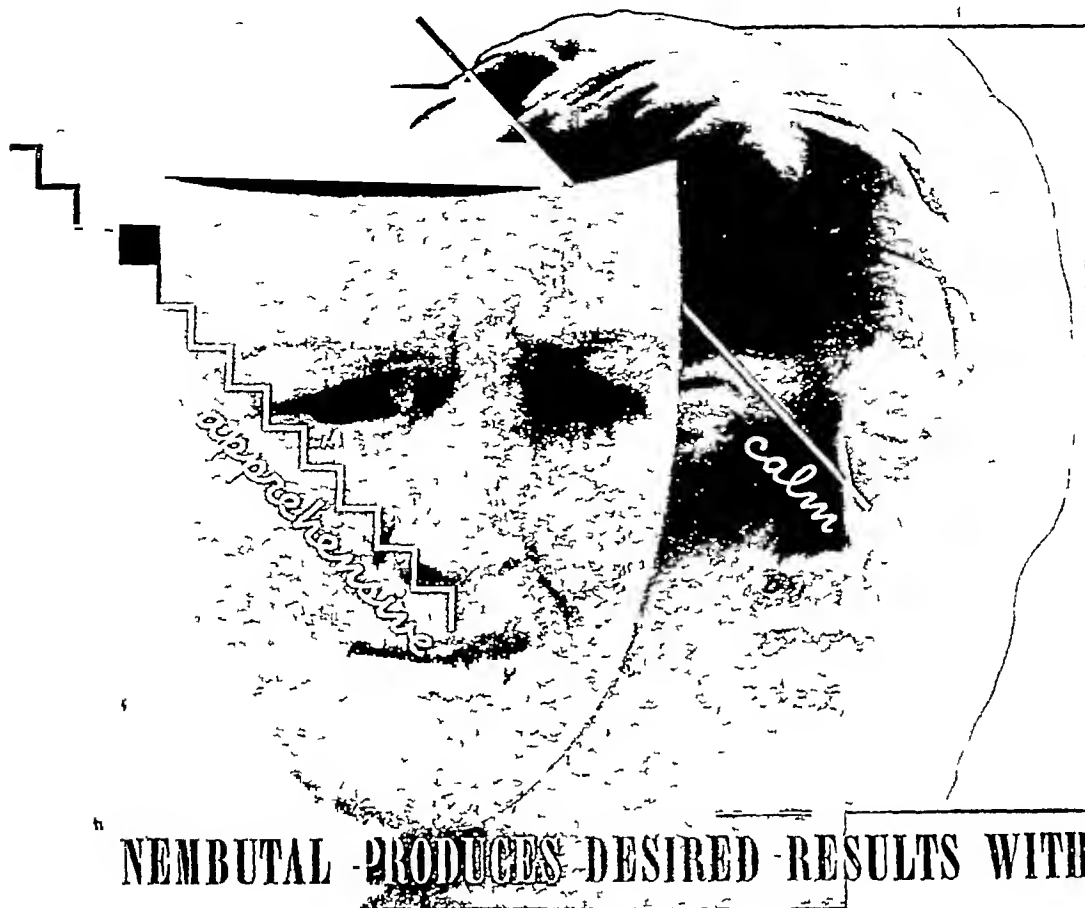
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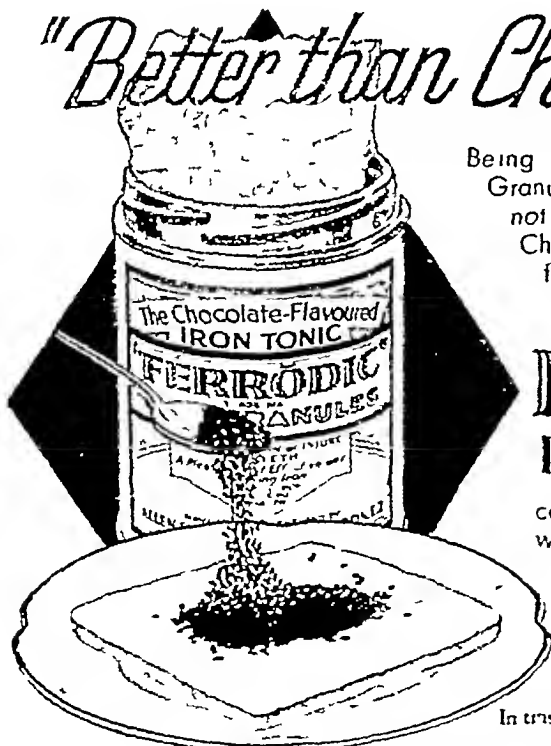
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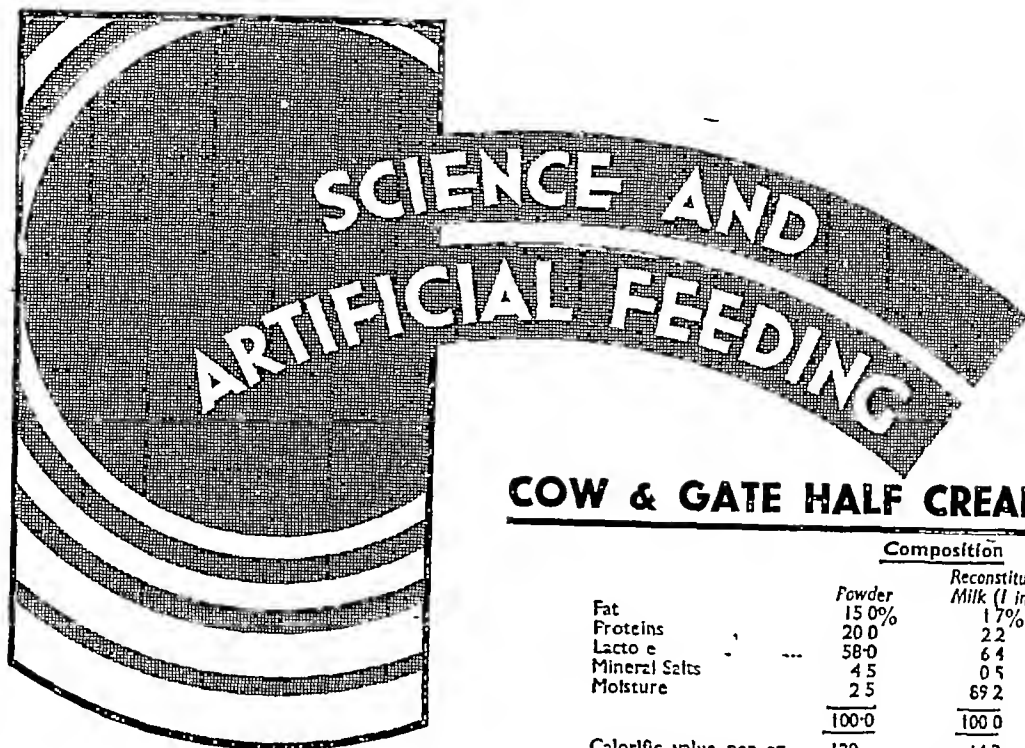
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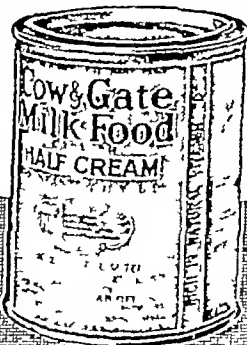
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BRITISH MEDICAL JOURNAL

LONDON SATURDAY APRIL 24 1937

HAEMATEMESIS AND MELAENA*

BY

L. J. WITTS, M.D., F.R.C.P.

Professor of Medicine University of London and Physician in Charge of the Medical Unit St Bartholomew's Hospital

During the last few years there has been much controversy over the treatment of bleeding from the stomach and duodenum. Should we operate and if so what operation should we do? Should we transfuse? Is morphine harmful? Should we feed or starve the patient? Should we give alkalis? Does any treatment at all favourably influence the mortality? What is the mortality? On none of these points is there general agreement, and the mass statistics which have been quoted have done little to clarify the issue.

One is reminded of those barbarian hosts numerous but inchoate which again and again throughout history have been routed by the discipline of a few. Though small in number the results of a single physician, surgeon, or team who is actively interested in the disease and gives the patients individual attention and supervision are more valuable than a large assortment of cases collected from different wards or indeed different hospitals and treated with very variable degrees of thoroughness.

No well informed person would try to assess the prognosis and treatment of diabetes mellitus or pernicious anaemia from mass hospital statistics. He knows that they inadequately reflect the benefits conferred by insulin and liver extract. For accurate information about these diseases he goes to the records of individual physicians such as Joslin or Wilkinson, so that he can be sure that the patients have received the appropriate treatment for their disease. In the same way when discussing haematemesis and melaena we should quote the best individual results of treatment such as those of Finster (1936) and Meulengracht (1936) though we must at the same time decide whether these results are capable of general attainment. There is still need then for data about the prognosis of gastro-duodenal haemorrhage which bear the stamp of individual interest and treatment.

A Fatal Case

My own observations are based on a series of twenty-seven cases which includes every patient with the presenting symptom of haematemesis, melaena or consequent acute anaemia whatever the cause of the gastro-duodenal bleeding who has been admitted to the Medical Unit at St Bartholomew's Hospital in the two years during which I have been in charge. For the intensive investigation of these patients I am indebted to my colleague Dr F. Avery Jones. I shall have many occasions to refer to the analysis by Culpin and Price (1922) of the 105 cases of severe haemorrhage from peptic ulcer which were admitted to the medical wards of St Bartholomew's Hospital between the years 1925 and 1929, an important paper which has not received the attention

* A British Medical Association Lecture given at Exeter on February 17.

it deserves. I have been interested in gastro intestinal diseases for a number of years but my attention was focused on the problem of alimentary bleeding by the death of one of the first patients with haematemesis whom I treated in my new wards.

A railway porter who had been treated for syphilis of the liver in 1923 at the age of 44 came under treatment for a chronic duodenal ulcer in 1933, when he was 54. He remained at work with occasional spells off duty because of pain until January 22 1935 when he had three melaena stools felt faint and went to bed. On January 23 1935 he vomited a pint of blood and had another melaena stool. He was admitted to my ward on this day. He was well preserved for his age which was now 56 but was cold and sweating. Only sips of water were given in the first twenty-four hours the intention being to follow the Lenhartz ladder diet.

On January 26 he had melaena again his pulse rose from 80 to 130 and he was given a transfusion of 300 c.cm. of blood and a saline drip per rectum. He returned to the bottom rung of the Lenhartz ladder but on February 7 after an enema his haemoglobin count fell sharply from 50 to 38 per cent and a transfusion of 400 c.cm. of blood was given. He remained on the eighth rung of the Lenhartz diet and on February 11 since his stools were still dark and sticky and his haemoglobin only 44 per cent a third transfusion of 400 c.cm. was given. He kept well and his pulse stayed about 70 till February 18 when he again had haematemesis and melaena. Two litres of blood were transfused during the next thirty hours. On February 20 he had melaena once more and his blood pressure fell to 70/30. He received 600 c.cm. of blood on February 21 and on February 22 laparotomy was performed a further 800 c.cm. of blood being given at the same time. An ulcer was found in the second part of the duodenum which penetrated deep into the pancreas and which could not have been removed without great difficulty. The duodenum was divided through its first portion and a partial gastrectomy was performed. A blood transfusion of 500 c.cm. was given on February 23 but the patient died from pneumonia on February 24.

Necropsy showed that there was a large diverticulum just below the junction of the first and second parts of the duodenum on the medial wall. The mouth was about 1½ inches in diameter the diverticulum passed into the head of the pancreas. Nearly the whole of the interior of the diverticulum was ulcerated but no large vessel had been eroded. The stump of the duodenum showed no evidence of covering of the sutures and all the tissues in this region and around the head of the pancreas were sodden and oedematous. The stomach was grossly distended with offensive dark faeculent fluid and the whole caecum and the proximal loop of the anastomosis were similarly distended. The distal loop and the jejunum for about two feet below were collapsed but the whole of the gut below was greatly distended. The obstruction at the site of the anastomosis appeared to be due to the distended colon lying forwards the stomach and the region of the anastomosis.

This tragedy caused me a good deal of heart searching. The duodenal lesion was of such a nature as to demand

an extensive operation which a patient in a weak state could not be expected to stand. The patient received large amounts of blood before and during his operation, and I did not think the failure could be attributed to inadequate transfusion. We have learnt to associate failure of reaction at the peritoneal suture line and post-operative distension of the stomach and bowel with inanition and avitaminosis (Archer and Graham, 1936). I felt dissatisfied with the orthodox treatment of alimentary haemorrhage by starvation, with operation on patients who seemed unlikely to benefit from medical treatment. Had I known the task I was setting the surgeon I should not have asked him to operate, and my first question was to decide in what circumstances I should advise operation in the future.

Difficulty of Diagnosis of Source of Bleeding

The *Lancet* in an annotation on December 12, 1936, stated that in view of the improved results obtained by the combination of operation with massive transfusion it had become more urgent than ever for the physician to learn to recognize the patients who, if they are medically treated, are likely to die. Denys Jennings (1936) suggests that there are two types of gastro-duodenal haemorrhage: erosive haemorrhagic gastritis, in which the mortality is negligible, and chronic ulcer, in which

the mortality is high. Much as I should like to examine by gastroscopy patients who are bleeding from the stomach and duodenum, I do not think it would be good medicine, and I know no other way in which the differential diagnosis between erosion and chronic ulcer can be made.

The previous history is of little value. Schindler (1937) the pioneer of gastroscopy, writes:

"The average duration of symptoms in our cases of gastritis was five and one-half years. The distress was usually epigastric in the superficial and hypertrophic form it was usually delayed. Periodicity seems to be present in some cases of hypertrophic gastritis. Alkali gave relief in about half the cases. Gross sometimes fatal haemorrhages from gastritis have occurred."

Seven of my twenty-seven patients had a long history of dyspepsia suggestive of chronic ulcer, but when they were radiographed, as soon as possible after bleeding, no ulcer was seen, in two of them healing acute ulcers were seen through the gastroscope. Nor can acute and chronic ulcers be distinguished by the amount of blood lost for the haemorrhage from acute ulcers may be severe, repeated, and fatal. It is impossible by clinical methods to decide whether the patient is bleeding from an acute or chronic ulcer.

In Table I I have noted the duration of dyspepsia before the haematemesis, the provisional diagnosis made

TABLE I—*Consecutive Series of Twenty-seven Cases of Haematemesis and Melaena*

No	Sex	Age	Duration of Dyspepsia	Diagnosis		Minimum Hb	Maximum Urea (mg. per cent.)	Recurrences	Transfusion (c.c.m.)	Severity	Treatment
				Provisional	Final						
Cases Recovering											
1	Male	58	3 weeks	Acute ulcer	Hepatic cirrhosis	51	54	0	0	Mild	M
2	"	56	9 months	Chronic ulcer	Chronic gastritis with acute ulcer	35	32	0	0	Moderate	M
3	"	47	0	Acute ulcer	Acute ulcer	86	52	0	0	Mild	M
4	"	40	6 years	Chronic ulcer	Acute ulcer	50	31	1	0	Moderate	M
5	"	29	15	Gastro-jejunal ulcer	Gastro-jejunal ulcer	61	26	1	0	Mild	M
6	"	59	14 "	Chronic duodenal ulcer	Chronic duodenal ulcer	67	64	0	0	"	M
7	"	64	5 "	Chronic ulcer	Acute ulcer	97	30	0	0	"	M
8	"	58	30	Chronic duodenal ulcer	Chronic duodenal ulcer	60	60	0	0	Moderate	M
9	"	48	2 "	Chronic ulcer	Chronic gastritis with acute ulcer	33	78	4	600	Severe	M
10	"	51	1½ "	Chronic ulcer	Chronic duodenal ulcer	33	96	3	600	"	M
11	"	39	5 "	Chronic ulcer	Acute ulcer	41	86	0	600	Moderate	M
12	"	48	0	Acute ulcer	Acute ulcer	50	116	2	2,810	Severe	M
13	"	36	0	Acute ulcer	Chronic gastritis	59	76	0	0	Moderate	M
14	"	44	15 years	Chronic duodenal ulcer	Chronic gastric ulcer	113	38	0	0	Mild	M
15	"	44	4½	Chronic gastric ulcer	Chronic gastric ulcer	123	70	0	0	"	M
16	"	49	1½ "	Chronic duodenal ulcer	Chronic duodenal ulcer	33	142	2	0	Severe	M
17	"	61	10 "	Chronic gastritis	Chronic gastritis	26	132	3	2,200	"	M
18	"	51	4	Chronic gastritis	Chronic gastritis	48	72	0	0	Moderate	M
19	"	44	13 "	Gastro-jejunal ulcer	Gastro-jejunal ulcer	51	60	0	0	"	M
20	Female	48	6 months	Chronic ulcer	Chronic duodenal ulcer	84	—	0	0	"	L
21	"	61	5 weeks	Gastric ulcer	Acute ulcer	54	78	2	0	"	M
22	"	69	0	Acute ulcer	Cirrhosis hepatis	75	60	2	0	"	M
23	"	62	~ years	Chronic gastric ulcer	Chronic gastritis	78	45	0	0	Mild	M
24	"	47	14 days	Acute ulcer	Acute ulcer	39	78	0	0	Moderate	M
25	Male	37	4 years	Chronic duodenal ulcer	Acute ulcer	63	—	0	0	Mild	M
Fatal Cases											
26	Female	56	0	Cirrhosis hepatis	Cirrhosis and carcinoma of liver	Died 6 hours after admission					
27	Male	56	2 years	Chronic duodenal ulcer	Chronic duodenal ulcer	36	40	3	4,700	Died	L + O

M = Meukowitch treatment by feeding. L = Lenz treatment by initial starvation and ladder diet. O = Operation.

when the patient entered hospital and the final diagnosis, which was based on radiography and test meals in all cases, with the addition of gastroscopy and laevulose tolerance tests of hepatic efficiency when no ulcer was demonstrated by the x rays. All the cases with negative x ray reports were not gastroscopied, and I have not attempted to distinguish accurately between gastritis, duodenitis, and acute ulcer.

Of the twenty seven cases eight were chronic peptic ulcers, two were gastro jejunal ulcers, fourteen were gastritis, duodenitis, or acute ulcer and three were cirrhosis. I have already referred to the fact that seven of the cases of gastro duodenitis gave long histories suggestive of chronic ulcer. The severity of the cases was assessed at approximately 30 per cent mild, 40 per cent moderate, and 30 per cent severe. There was no difference in severity between the chronic ulcers and the cases of gastro-duodenitis and acute ulcer. It is noteworthy that ten of the patients had recurrences of bleeding after admission to hospital, four of them were severe and repeated, but only the patient submitted to operation died. I am also surprised to find the percentage of chronic peptic and gastro-jejunal ulceration so low, only 37 per cent, because it is generally assumed that it is a much commoner cause of gastro duodenal bleeding in this country than acute ulcer or gastritis. The following cases show how hard it is to diagnose correctly the nature and situation of the lesion responsible for a gastro duodenal haemorrhage.

CASE 1

A man aged 56 had had a weak stomach since acute appendicitis at the age of 26. For nine months he had had remittent dyspepsia characterized by dull aching pain situated in the epigastrium coming on one to two hours after meals and relieved by alkalis. His attack of melaena was preceded by a sudden severe epigastric pain half an hour after breakfast. The provisional diagnosis was chronic gastric ulcer. An x ray examination four weeks later showed no ulcer. Through the gastroscope a healing ulcer a few millimetres in diameter was seen and the mucous membrane showed chronic gastritis. It was concluded that the ulcer with its attendant haemorrhage was an episode in the course of a persistent gastritis. Dyspepsia of the same type was still present a year later.

CASE 7

A man aged 64 had had attacks of indigestion for a number of years lasting for a few weeks and not returning for some months. They hardly amounted to pain, an empty feeling in the epigastrium being relieved by food. He had nevertheless consulted his doctor and taken diet and medicine. An attack of this kind had been in progress for three weeks before the haematemesis and melaena which brought him into hospital and a chronic duodenal ulcer was suspected. An x ray examination eleven days later while the stools still contained occult blood revealed a high stomach but no ulcer in the stomach or duodenum. Gastroscopy three weeks after the haemorrhage showed a normal gastric mucosa. He had hyperchlorhydria and a normal laevulose tolerance. A year later he was very well. I cannot believe that it would have helped these two patients in particular or my statistics in general to have submitted them to operation in the first forty-eight hours.

CASE 14

This patient who had bled from a duodenal ulcer at the age of 42 bled from a gastric ulcer at 44. There was no change in symptoms to indicate the changed location of ulceration.

Operative Mortality

Acute ulcers are so difficult to find that one presumes that the surgeon would perform a gastrectomy if he could not easily palpate an ulcer. If he discovers a chronic

ulcer he must likewise perform an extensive operation of the nature of a partial gastrectomy or a gastro duodenectomy, since lesser procedures such as gastro-enterostomy and ligation of arteries have proved of no value. The mortality of gastrectomy depends on the type of case submitted to operation and at St Bartholomew's Hospital where the surgery of peptic ulcer has been wisely conservative gastrectomy has been performed for severe and intractable lesions only, the primary mortality of partial gastrectomy for peptic ulcer in the years 1919 to 1935 was 16.9 per cent (Payne 1936). I have given reasons elsewhere (Witts, 1936) for my belief that this figure could be reduced by better and longer pre-operative preparation but I am certain that it would be raised if it became our practice to recommend operation on all patients believed to be bleeding from a chronic ulcer.

Cullinan and Price (1932) showed that a solitary haemorrhage was rarely fatal (mortality 4 per cent) but that the mortality rose sharply with recurrence (40 per cent) and reached 60 per cent in patients with more than one recurrence. The prevention and treatment of recurrence is therefore the key to the reduction of the mortality from gastro-duodenal haemorrhage. I do not believe that it is possible to prevent deaths by immediate operation on all cases of gastro duodenal haemorrhage, or on all severe cases or on all cases believed to be bleeding from a chronic ulcer and I think any of these practices would lead to an appalling rise in the general mortality from haematemesis and melaena. Finally I do not myself believe that it is wise to treat recurrent bleeding by operation though I realize that the available data are hardly sufficient for reliable judgement on this.

Cullinan and Price collected statistics of twenty five patients with haematemesis submitted to operation of whom eighteen died, this is a mortality of 72 per cent—higher than the mortality of recurrent bleeding treated medically—though not all these twenty-five had bled more than once. All the patients in our two series submitted to operation for gastro-duodenal haemorrhage at St Bartholomew's Hospital appear to have died. Finsterer (1926) records a mortality of only 5 per cent for immediate operation and 30 per cent for late operation for bleeding peptic ulcer but Finsterer is an exceptional man and we may no more expect as low a mortality at the hands of the average surgeon than we may expect to find Kreislers in every local orchestra. Moreover Finsterer's results are much inferior to those of Meulengracht (1936). Meulengracht has a mortality of only 1 per cent for medical treatment, and while every surgeon cannot be a Finsterer every physician can duplicate Meulengracht's simple treatment. Massive continuous drip blood transfusions should not be an incentive to surgery, as they are just as likely to improve medical results as surgical results.

I am indebted to my colleague Dr George Graham for an account of the following patient, a tailor aged 63 who was admitted to hospital with a haemoglobin count of 35 per cent four days after the onset of haematemesis and melaena. He was immediately given 1800 ccm of blood by intravenous drip and his haemoglobin figure rose above 65 per cent. Bleeding apparently continued for at the end of ten days his haemoglobin count had fallen below 30 per cent and he had a small haematemesis. He was given over 4 litres of blood in the next week but owing to recurrent bleeding the haemoglobin content was only 45 per cent at the end of that time. A week later a further small transfusion was given and altogether the patient received 61 litres or more than his whole total volume of blood. He did well and x ray examination ten weeks after the onset showed spasm of the pylorus but no ulcer.

Patients with recurrent bleeding are the only ones of whom we can feel certain that they are likely to die if treated medically. Up to date we have had even more reason to feel certain that they are likely to die if treated surgically. The treatment of recurrent bleeding from the stomach and duodenum is a legitimate field for clinical experiment, and it is the only field in which it is safe to test the new technique of massive transfusion plus operation for haematemesis and melaena. The condition is obvious and introduces none of those difficulties in definition which occur when we attempt to divide cases into mild and severe. The mortality has been so high that desperate remedies are permissible. I have decided not to permit operation on any patient under my care for bleeding from the stomach or duodenum, even though the bleeding is severe or recurrent. I hope that some physicians and surgeons will decide to operate on all cases of recurrent bleeding from the stomach and duodenum which come under their care. If errors of sampling are avoided we shall then obtain reliable figures on which to base our judgements.

Haemorrhagic Shock

Blalock (1936) has made important observations on the effects of haemorrhage in animals. There is transient primary shock after a haemorrhage, but it is quickly overcome and the blood pressure returns to normal unless the bleeding is severe and prolonged, when secondary haemorrhagic shock may appear. The appropriate treatment is to restore the blood volume to normal by transfusion. Fall in blood pressure is a late sign and if the pressure is allowed to remain at a low level for several hours it is difficult, if not impossible, to restore the animal and transfusion is no longer beneficial. Deprivation of food and water exposure to cold and anaesthesia aggravate the shock. In human beings, though death may occur from anoxaemia soon after a severe haemorrhage not infrequently the patient lingers for a few days in a condition of shock or cachexia before succumbing.

Many observers have noted a rise in the blood urea of patients with haematemesis and melaena, but though there is general agreement that the height of the rise is closely correlated with the severity of the haemorrhage the actual mechanism is still obscure. The rise is too rapid to be attributed to starvation or to absorption of protein or toxic substances from the blood effused into the alimentary tract. There is a little clinical evidence that dehydration such as may accompany loss of blood may produce breakdown of body tissues and set up a negative nitrogen balance, but it is at best rather unsatisfactory (McCance, 1936) and in experimental animals there is no increase in urinary nitrogen after a haemorrhage equal to 2 to 3.5 per cent of body weight (Stewart and Rourke 1936). There is therefore no reason to believe that the rise in blood urea after a haemorrhage is due to excessive production of urea or to tissue breakdown, and the negative nitrogen balance is easily explained by the large amount of nitrogen lost with the blood poured into the bowel. There is also no doubt that the blood urea rises after external haemorrhage in which the blood protein is entirely lost to the organism (Meyler 1935).

Dr F. Avery Jones working in my Unit has collected data which clearly demonstrates the rapid rise of the blood urea after alimentary haemorrhage whether initial or recurrent: the slow fall as the blood volume is restored by spontaneous dilution and the more rapid fall when the patient is transfused. The rise is not correlated with

any change in the alkali reserve or in the blood chlorides which are usually normal in these patients. The blood pressure may be normal, the concentration of urea in the urine is high, and the total output of nitrogen may even be increased. I believe that the increase in the blood urea is due to the fall in the blood volume and in the blood flow through the kidneys at a time when the kidneys have the extra work of excreting a large amount of nitrogen derived from the blood in the intestine. But whether it is due to depression of renal function or to extrarenal causes—and this can only be settled by further work—the extent of the rise is a good index of the severity of the haemorrhage. The assessment of severity is by no means easy. The amount of blood vomited or passed through the bowel can rarely be measured. It may be several days after a haemorrhage before the blood volume is restored to normal, and not until then can the loss be calculated from the haemoglobin percentage. The blood pressure and pulse rate may be maintained at a normal level in spite of a copious haemorrhage. It is just in these early stages when judgement is difficult that an estimation of the blood urea is most helpful, and any case in which the blood urea rises above 75 mg per cent must be regarded as severe. This condition of secondary haemorrhagic shock, with its associated rise in blood urea is sometimes described as uraemia, but the blood urea seldom reaches the high levels characteristic of nephritic uraemia.

Transfusion

We must base our attitude to the use of transfusion, morphine the administration of fluid and diet, and other details of treatment on data of this type. Cullinan and Price showed clearly that transfusion does not act as a haemostatic in haematemesis and melaena in fact it may even provoke further haemorrhage when given to a bleeding patient, though it does not provoke a recurrence in a patient who has stopped bleeding. Transfusion should not be used as a routine but should be regarded as the remedy for haemorrhagic shock. It should be employed whenever the pulse rises above 140 the systolic pressure falls below 90 mm, the blood urea rises above 100 mg per 100 c.c. or the haemoglobin falls below 40 per cent. Following these rules I have needed to transfuse only six of my twenty seven patients, but three of these six needed repeated or massive transfusion. I. J. Wood (1936) has shown that glucose saline is much less effective than blood in controlling post haemorrhagic shock and uraemia and I have not used intravenous injections of this nature. I regard morphine as a symptomatic remedy for the alarm induced by the haemorrhage and I do not administer it unless the patient is nervous and restless.

Administration of Fluid

The next question which arises is the administration of fluid. Goldman (1936) gives no fluid at all either by mouth or parenterally during the first twenty four to forty-eight hours on the grounds that fluid will stimulate further bleeding by diminishing the viscosity of the blood and raising the blood pressure. His mortality hardly encourages imitation and I quote this extreme view because it enshrines fallacies which are present in a good deal of medical treatment. It is a mistake to concentrate entirely on treatment of the bleeding and to forget the general treatment of the patient. It is unphysiological to deprive an exsanguinated patient of fluid. There is no evidence that the administration of fluid or pultaceous food by mouth stimulates further bleeding. I tell my students that it is just as bad to let a patient with a

peptic ulcer suffer hunger and thirst as it is to let a patient with a fever be thirsty or a patient with pneumonia be cyanosed

A sick patient requires $3\frac{1}{2}$ litres of fluid a day (Coller, 1936). A patient with haematemesis or melaena has probably lost 2 to 3 litres of body fluid in blood and vomit. He should theoretically receive 6 litres of fluid on the first day and $3\frac{1}{2}$ litres on subsequent days. Nothing like these quantities is given in the usual medical treatment of gastro-duodenal haemorrhage. Half-hearted attempts to give saline per rectum are discouraged by failure of retention or by recurrence of melaena and patients remain for several days dehydrated, dirty-tongued, collapsed, and semi-uraemic. Every surgeon knows that it is possible to give large volumes of fluid intravenously or per rectum so long as the fluids are not irritating and are administered by continuous drip. If large volumes of fluid are given parenterally careful watch must be kept on the blood and urine chemistry to avoid overtaxing the body with chlorides or glucose. The main need after a haemorrhage is for water, and this can be given as tap-water per rectum.

Feeding by the Mouth

If the orthodox medical treatment of haematemesis is employed and food and drink are entirely withheld it is essential to give adequate amounts of fluid parenterally. Both rectal and parenteral fluid necessitates some disturbance of the patient. It is difficult to believe that we rest the stomach by withholding food and drink by the mouth for the strongest waves of peristalsis occur when the stomach is empty: we are all familiar with the hunger-pain and the food-crave of peptic ulceration. I therefore decided to feed patients by mouth as soon as they were admitted to hospital. In making this decision I was naturally influenced by the work of Meulengracht (1934, 1935, 1936) who has now treated an unselected series of 273 patients with haematemesis and melaena due to peptic ulcer by the immediate administration of a bland diet and has had a mortality of only 1 per cent. In one third of his patients haemorrhage from the ulcer had lowered the haemoglobin below 50 per cent. Cullinan and Price had made the same point in 1932 showing that patients who were starved for twenty-four or forty-eight hours were much more likely to bleed again than patients who were fed at once.

TABLE II—Relation of Recurrences to Starvation
(Cullinan and Price, 1932)

Treatment	Cases which Bled for the First Time on the Day of Admission	Recurrence during the First 48 Hours
Starved 24 hours	36	9
Starved 48 hours	11	5
Fed at once	10	1

Meulengracht suggests several reasons for the beneficent action of early feeding. Patients are liable to die from exhaustion and need a diet sufficient in calories and vitamins. He doubts the wisdom of keeping the stomach empty of food and exposed to free gastric juice. Food in the stomach seems to act as a haemostatic: ambulant cases of alimentary bleeding often do well without changing their diet and patients admitted to hospital stop bleeding when they are fed. J. B. Hunter (1935) believes that the free flow of saliva which is produced by feeding further assists clotting. I have referred above

to Blalock's experiments, which show the harmful effects of deprivation of food and water in haemorrhagic shock.

My own diet which is given in Table III is more fluid than Meulengracht's as I was afraid to make too violent a break with tradition but it provides the patient with 2,500 to 3,500 calories a day. The milk is not citrated and is flavoured, if desired with ovaltine bournvita or

TABLE III—Dietetic Treatment of Gastro-duodenal Haemorrhage
Arranged for Two hourly Feeding

Feeds by Day	Food		Day		
			1	2	3 and subsequent
1	Whole milk (fresh or dried)	oz.	5	5	5
	Patent barley or strained porridge	Portion	Portion	Portion	Portion
2	1 egg beaten up in milk	oz.	5	5	5
	Buttered rusks or cream crackers	—	1	1	2
3	Whole milk (fresh or dried)	oz.	5	5	5
	Marmite to taste	oz.	1	1	1
	Barley sugar	oz.	1	1	1
	Thin crustless white bread and butter	oz. and slices	—	1	2
4	Strained orange or tomato juice	oz.	1	1	1
	Vegetable purée	Portion	Portion	Portion	Portion
	Pudding	oz.	1	1	1
	Cream	oz.	1	1	1
	Boiled or steamed fish	—	—	—	Portion
5	1 egg beaten up in milk	oz.	5	5	5
	Barley sugar	oz.	1	1	1
	Butter rusks or cream crackers	—	1	1	2
6	Whole milk (fresh or dried)	oz.	5	5	5
	Fruit purée	Portion	Portion	Portion	Portion
	Pudding	oz.	—	1	1
	Cream	oz.	—	1	1
	Thin crustless white bread and butter	oz. and slices	—	1	2
7	1 egg beaten up in milk	oz.	5	5	5
	Black treacle or barley sugar	oz.	1	1	1
	Buttered rusks or cream crackers	—	1	1	2
8	Whole milk (fresh or dried)	oz.	5	5	5
	Fruit purée	Portion	Portion	Portion	Portion
	Pudding	oz.	—	1	1
Feeds at night (when awake)	1. Whole milk (fresh or dried)	oz.	5	5	5
	2. 1 egg beaten up in milk	oz.	5	5	5
Between feeds	Strained orange or tomato juice	oz.	1	1	1
Approximate caloric value			2,545	3,118	3,624

Horlick's Salt is permitted in moderate quantities but other condiments are not allowed. Vitamin C is supplied in the orange and tomato juice. Marmite is given at least once a day for the vitamin B complex and I also like my patients to have cod liver oil and malt or one of the concentrates of vitamins A and D. Between feeds sips of water, glucose solution or half-strength isotonic saline are allowed in quantities up to 5 ounces an hour. If the patient is hungry he is allowed 5 ounces of milk at the intermediate hours. The total fluid intake averages about 2,750 ccm., and allowing for the water of oxidation the patient is probably provided with some $3\frac{1}{2}$ litres of fluid a day. No medication is given other than liquid paraffin or paraffin emulsion and I deliberately avoid alkalis unless there is epigastric pain—which is of course unusual after a haematemesis. For certain experimental reasons iron has not usually been given early in these cases though in the ordinary way it is both safe and wise to give treatment with iron from the start. To avoid disturbing the patient or provoking fresh bleeding no purgatives are allowed and enemata are postponed till between the fifth and the tenth days. I have described elsewhere how well this deliberate constipation

is borne (Witts, 1937) Unless the patient is collapsed when of course he should be transfused I allow the head to be moderately raised because the patient is more comfortable in this position than in the orthodox complete recumbency and he can take food without swallowing troublesome quantities of air When bleeding has ceased the ordinary indications are followed in raising the diet to the post-Lenhartz level

Results of Diet

I will not pretend that all the patients have been able to take all the diet from the start since some have had nausea and then they have not been pressed to eat I do claim that they look feel, and do much better than any previous series of cases of gastro-duodenal haemorrhage I have seen When haemorrhage has recurred we have encouraged the patient to go on with the diet and have tried to develop the impression that recurrence made the diet all the more vital and necessary What have been the results? I have already described my early case where the patient died after operation One other patient died within six hours of admission, she was known to have cirrhosis of the liver and at necropsy she proved to have in addition a primary hepatic carcinoma The remaining twenty five did well

The results have therefore been most satisfactory, for cases of alimentary haemorrhage which come to a general hospital include the more serious forms and their mortality is higher than the average The increase is not entirely explained by the disturbance of the journey, since there is a similar difference between private and public hospitals in the United States of America where few patients are nursed in their own homes (Ledbetter 1936) It must be attributed to the higher incidence of malnutrition and overwork among working-class patients with peptic ulcer so that they are less able to withstand the effects of bleeding It may be difficult to give adequate treatment such as transfusion in the home and the risks of moving do not outweigh the benefits of hospitalization

Seven of my patients gave a history of previous bleeding Four of them have bled again since I treated them one dying of cirrhosis A few were advised to undergo surgical treatment when they had recovered from their haemorrhage It is not my intention however to discuss the treatment of peptic ulcer in general nor do I need to emphasize what is already common knowledge that a patient who has bled once is likely to bleed again When the patient has recovered from the haemorrhage the case must be carefully reviewed in the light not only of the previous history and the physical examination but also of the information provided by gastric analysis rays and where possible gastroscopy and it must be decided whether further treatment should be medical or surgical The patient is now fit for surgery and the operative procedure can be suited to the pathological findings instead of being dictated by panic

Summary

1 No reliable judgement on the relative merits of operative and non operative treatment of gastro-duodenal haemorrhage can be based on mass hospital statistics

2 The best individual medical results (Meulengracht 1936) are much superior to the best individual surgical results (Finsterer 1936)

3 It is rarely possible to differentiate between an acute and a chronic ulcer in the first forty-eight hours which is the optimum period for surgical attack in haematemesis (Gordon-Taylor 1935)

4 Treatment has been too closely centred on the bleeding point, to the detriment of the patient as a whole Death is more often the result of haemorrhagic shock than exsanguination and orthodox medical treatment by starvation is calculated to increase haemorrhagic shock

5 The results of immediate feeding supplemented when necessary by transfusion are much superior to treatment by starvation or operation

6 A single gastro duodenal haemorrhage is seldom fatal The key to the reduction of the mortality of gastro-duodenal haemorrhage lies in the prevention and treatment of recurrent bleeding There is a legitimate field for clinical experiment in the comparison of operative and non operative treatment of recurrent bleeding

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SOME OBSERVATIONS ON THE DICK TEST

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In the course of routine work in a large fever hospital where Dick testing is carried out on a considerable number of patients one is constantly meeting with negative Dick tests early in scarlet fever with Dick positive tests during scarlet fever convalescence and occasionally with Dick-negative subjects developing scarlet fever The following investigations were commenced as a result of an unusual run of such anomalous Dick reactions

The Dick test which was introduced as a method of assessing the susceptibility of the individual to scarlet fever was never claimed to be as reliable as its counterpart the Schick test although its accuracy is generally regarded to be very high Experience in English hospitals shows that if a nurse gives a clear Dick negative reaction she is in almost every instance safe against scarlet fever even though working in scarlet fever wards

Factors for Consideration

There are many factors which have to be taken into consideration when testing or comparing different toxins, and the one which probably plays the greatest part in such an investigation is the accuracy with which the toxins are injected Accuracy, in performing intradermal tests is only acquired with constant practice carried out with extreme conscientiousness on the part of the operator to ensure that the whole of the 0.2 c cm used is injected intradermally in such a manner as to produce a good wheal Such a wheal should be about 1 cm in diameter

and be dead white with the pores of the skin shown as small dimples on the surface. Although wheals may vary slightly in different individuals for the purpose of comparing toxins all those in the same individual should be of the same size.

Another important factor due to the transient nature of the reaction in many cases is the conditions under which the results are read. Artificial light does not show up faint positives well and indeed some may be classed as negative unless special care is taken if artificial light is being employed. The best interval to allow between performing and reading the test is probably between twelve and eighteen hours. All the tests recorded below were read at three different intervals—namely, eight, twelve and twenty-four hours after injection. At least one of these readings and in some cases two, was done in artificial light.

The site chosen may be of importance. It is well for anyone who is contemplating doing work of this kind to test his own technique by injecting the same dose of the same toxin at two or three different sites on his own arm or on a dozen available patients, and get a colleague to make the readings without knowing that the same toxin has been used. He will find that the majority of the readings will make all three toxins equal but there will be a good deal of variation in some of the patients and this is not referable entirely to the site chosen—assuming that all injections are done on the smooth surface of the forearm between the elbow and well above the wrist. The best comparison of two different toxins should be made at exactly corresponding sites on the two arms.

Other factors which require consideration are the strength and stability of the toxin. The more dilute the toxin the less well will it keep and the temperature of storage has also to be taken into account as deterioration is more marked at some temperatures than at others. In an attempt to overcome these factors various substances have been tested with a view to using them as stabilizers.

Further questions presented themselves as regard the control fluids. Is there a pseudo Dick reaction? How long does toxin have to be heated in order to destroy the toxin?

With all these factors to be taken into consideration it is obvious that a large series of tests has to be made to be of any value in assessing the merits of one toxin as against another. In an attempt to limit the human error to a minimum all the tests carried out were performed and read by myself. All the readings were measured in millimetres and any difference in intensity of the reactions in the same individual was carefully recorded. Any reaction less than 10 mm in its largest diameter was classed as an unmeasurable reaction.

Two different toxins have been used in the investigations. Toxin A diluted 1 in 1000 was estimated to be of the same strength as Toxin B 1 in 5000. The first series of tests to be carried out were with Toxin A to ascertain its stability to heat and the effect of storage upon it.

Stability of Toxin A to Heat

For the purpose of estimating the heat stability only proven Dick positive reactors were used and each was tested with toxin which had been heated for one, two or four hours respectively. Two out of twenty-two children showed a small reaction at eight hours to toxin which had been heated for one hour while six others did at the same period very small re-

actions which could not have been mistaken for positive Dick reactions. The two that had small measurable reactions to toxin heated for one hour had small unmeasurable reactions to the toxin which had been heated for two hours. No reactions were recorded with the toxin which had been heated for four hours. The minimum time necessary to inactivate Toxin A appears therefore to be four hours.

Stability of Toxin A on Storage

To determine the effect of storage on Toxin A or what may be termed the life of Toxin A four samples prepared on different dates were compared. These were respectively fresh, two, four- and six-month-old toxin which had been kept in cold storage from the date of preparation. No evidence of deterioration was found in the six or four-month-old specimens but slightly smaller reactions were obtained with the two-month-old sample as compared with the other three.

The reason for the apparent weakness of the two-month-old sample was difficult to explain. Only later did we become alive to the bearing on the results of the composition of the stabilizing mixture used.

This series which was carried out using only twenty individuals in each investigation at once raised the question of the difficulties of comparing toxins as mentioned above and the later investigations were carried out as a result on a much larger number of individuals in an effort to reduce error so far as possible.

Comparison of Toxin A and Toxin B

The second series was a comparison of Toxin A diluted 1 in 1000 with Toxin B diluted 1 in 5000 and then with Toxin B diluted 1 in 3000. In the former comparison sixty-five children whose average age was 4.1 years were tested. Of these fourteen were negative to all tests, twenty-two were positive to all tests and the remaining twenty-nine showed a positive to one or other or both toxins at one or more of the readings as follows:

Toxin	At 8 hours		At 12 hours		At 24 hours	
	A	B	A	B	A	B
Number	20	14	22	13	17	4

Generally the reactions to Toxin A were a few millimetres larger than those of Toxin B in the same individual although in a few instances the reverse was true. Toxin A produced sixteen readings which were definitely brighter than those of Toxin B in the same individual while only four were brighter with B than A. The conclusions reached were that Toxin A was the better, that the maximum number of positives were noted at the 12-hour reading and that frequent readings were desirable before the result was read as negative.

When comparing Toxin A with Toxin B diluted 1 in 3000 fifty-three children whose average age was 6.1 years were tested. Of the twenty-six were negative to all readings, fifteen were positive at all readings and the remaining twelve showed a positive reaction at one or more readings to one or other toxin or both as follows:

Toxin	At 8 hours		At 12 hours		At 24 hours	
	A	B	A	B	A	B
Number	2	7	7	5	4	5

The results were practically the reverse of those in the previous series. Toxin B gave the slightly larger reading and in twenty-five instances the brighter reactions. Toxin A was brighter on only two occasions. In these cases measurable reactions occurred with both controls at the eight-hour reading compared closely with the corresponding toxin reactions. Only in one test did they part at the twelve-hour reading and here again they were both equal in size.

presumably this represented a true rare pseudo reaction. None was observed at the twenty four hour reading. The results can be tabulated as follows

TABLE I

Toxin A 1/1 000 >	Toxin B 1/5 000 in 32 instances
" "	" "
" "	" "
" "	" "
Toxin A 1/1 000 >	Toxin B 1/3 000 in 3 instances
" "	" "
" "	" "
" "	" "

The next investigation performed was to test the stability of Toxin B to heat and its life under varying conditions of storage

Stability of Toxin B to Heat

In twenty two cases nine positive reactions all unmeasurable were noted with the toxin heated for one hour and only two with the toxin heated for two hours which compares almost exactly with the figures obtained with Toxin A. The reactions however appeared to persist longer three being still visible at twenty four hours

Stability of Toxin B on Storage

The figures obtained when using Toxin B stored for three months under varying conditions—namely at 4°C at room temperature and at 37°C—showed that there was definite deterioration in all specimens as against the freshly prepared toxin with a slight advantage for toxin kept at 37°C. Twenty-eight children were tested whose average age was 3½ years. Of these five were negative to all tests, five showed slight unmeasurable reactions to one or more toxins at one or more readings, nine were positive to all toxins at all readings and the remaining nine showed a positive reaction to one toxin or more at one reading or more. At twenty seven readings the fresh gave definitely brighter reactions than the stored materials in the same individual while in nearly every case the measurements were slightly greater. The smallest and/or faintest reactions were noted as follows: fifteen were with the toxin stored at 4°C, fourteen with the toxin stored at room temperature and eight with the toxin stored at 37°C.

The results of different workers had suggested that Toxin B was somewhat less stable than A and further investigation was stopped in order to test the effect of adding a stabilizer. Toxin B was diluted 1 in 4 with stabilizer and for the purposes of clarity this toxin will be referred to as Toxin C.

Specimens of Toxin C diluted 1 in 1 000 with boric borate mixture stored at 40°C and at room temperature for six weeks were compared with a freshly prepared toxin of the same strength. Twenty five children average 3½ years were tested and of these three were negative to all tests. The readings showed a very slight superiority of the freshly prepared material over the other two but in several instances the reverse was true. It was difficult to draw any distinction between the 4°C and the room temperature samples because in the majority of cases the difference was less than two millimetres and therefore quite within the limits of personal error. It would appear that Toxin C remains stable for a period of at least six weeks.

Comparison of Toxins A, B, and C

Finally Toxins A, B and C were compared against each other on three different dates. The toxins were all prepared fresh five days before the first group of children were tested and they were kept at room temperature until the second and third groups were tested at intervals of a week. The summary of the results are best expressed in tabular form (see Tables II and III). The numbers in the last group are smaller than the other two on account of the fact that exactly half of the children tested were negative to all three toxins which is an unusually high figure.

In Table II the numbers in the first columns are those in which the toxins gave the largest and/or brightest reactions as compared with the other two in the same individual while the second columns give the percentage of those numbers. It

will be seen that the fresh toxins at 60 per cent of the readings Toxin C gave the best reactions and after they had been kept at room temperature for two weeks this figure had increased to 78 per cent. Toxin B had dropped from 10 per cent to 3 per cent during the same period.

The numbers classified as undecided refer to the readings at which at least two, and in a few cases all three reactions in the same individual were so close both in intensity and measurement that no one toxin could be singled out as superior.

TABLE II—Readings showing the Brightest and/or Largest Reactions

Toxin	Fresh		On Week		Two Weeks	
	No	Per cent	No	Per cent	No	Per cent
A	6	12.5	12	17.4	3	9.4
B	5	10.4	5	7.2	1	3.1
C	29	60.4	45	65.2	25	71.1
Undecided	8	16.7	7	10.2	3	9.4

In Table III the numbers in the first columns are those in which the toxins gave the faintest and/or smallest reactions as compared with the other toxins in the same individual and in the second column those numbers are expressed as percentages. In this table Toxin C falls from 10 per cent of the total when the toxins are used fresh to nil when compared after two weeks and Toxin B rises from 27 per cent. to 40 per cent. The numbers classified as undecided are those in which no toxin could be singled out as inferior to the others. Naturally this group is larger than the corresponding group in Table II as it is much harder to distinguish between two faint tests than two bright ones.

TABLE III—Readings showing the Faintest and/or Smallest Reactions

Toxin	Fresh		One Week		Two Weeks	
	No	Per cent	No	Per cent	No	Per cent
A	16	33.3	22	31.9	9	27.2
B	13	27.1	28	40.6	13	37.6
C	5	10.4	4	5.8	—	—
Undecided	14	29.2	15	21.7	10	31.2

The results show that over the short period there is a progressive superiority of Toxin C with a corresponding inferiority of Toxin B. Toxin A appears to be almost as stable as Toxin C but not quite so potent.

Discussion

The object of the investigation was to find

- (1) How accurately one could titrate one sample of Dick toxin against another
- (2) How stable was ordinary Dick toxin
- (3) If certain preparations of Dick toxin were unstable, could they be stabilized?
- (4) How long the toxin must be heated to destroy toxin and provide a satisfactory control fluid

(1) It is clear from Table I that it is not an easy matter to match two toxins. It is well known that if one is trying to compare two Schick toxins on guinea pigs one would find that if the toxins differed in strength it would about 10 per cent all the guinea pigs would give a reaction in favour of the stronger toxin. Table I shows that when the comparison was made between Dick toxin A 1 in 1 000 and the weak 1 in 5 000 dilution of Toxin B, A was stronger than B, since thirty two out of forty

eight patients said "greater than" and eleven said "equal", but even here five patients out of forty-eight indicated that A was weaker than B—that is 10 per cent gave what is obviously an inaccurate answer. Similarly when Toxin A was compared with Toxin B 1 in 3 000 it is clear that A was weaker than this dilution of B since nineteen patients said so but six out of twenty-five patients gave an inaccurate answer. It is fair to conclude that if one is trying to compare two Dick toxins one must use a larger number of patients probably about fifty before one can get a reasonably accurate answer. This difficulty in matching two toxins and the necessity of using a large number of patients appears clearly from the careful work of Okell and Parish on over 150 patients reported by O'Brien (1930).

(2) Tables II and III indicate that Toxin B was less stable than A or C. Toxin B was a dilution made with the ordinary boric borate solution originally described by Glenn, Pope, and Waddington (1928) and referred to in the *British Pharmacopoeia* (p. 463). This diluted toxin was less stable than the toxin called C in the tables, which consisted of the original toxin first diluted 1 in 4 with a stabilizing mixture and then diluted 1 in 1 000 with the boric borate mixture. Dr H. J. Parish of the Wellcome Physiological Research Laboratories has kindly given me this information and told me that various stabilizing solutions are under test at the laboratories.

(3) Apparently the stabilizer mixture used for Toxin C has given satisfactory results for Tables II and III indicate that the toxin has been potent up to two weeks after dilution and later tests which we made show that six weeks after dilution this "stabilized" Dick toxin gave almost as good results as the fresh material. I understand from Dr O'Brien that this result agrees with the laboratory investigations and some made by other clinicians and that his confident expectation is that this dilution is stable for much longer periods.

(4) The control Dick toxin must apparently be heated for four hours to make quite sure that the toxin is inactivated. With such a solution pseudo-reactions are extremely rare but apparently one does encounter a patient now and then with what must be accepted as a pseudo-reaction detectable only if frequent readings are made. Pseudo-reactors are so rare that one is almost safe in dispensing with the use of the control fluid when testing ordinary patients.

Summary

Different Dick toxins can be satisfactorily matched only if the technique is carefully standardized; frequent readings are made and a considerable number of patients—probably fifty—are available.

A properly stabilized Dick toxin dilution apparently gives when six weeks old virtually as good reactions as when freshly made up.

Dick control fluid should be heated for at least four hours.

Pseudo-reactors are very rare but are encountered from time to time.

I am indebted to Dr J. McGarrity, medical superintendent of the hospital for permission to carry out these tests and for his kindly advice and encouragement, and to Dr R. A. O'Brien of the Wellcome Physiological Research Laboratories for supplying the materials used and for his helpful suggestions.

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FURTHER OBSERVATIONS ON THE TREATMENT OF TETANUS

By

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A study of 229 cases of tetanus, with special reference to the antitoxin treatment was recorded in a previous publication (1932). The following further observations are offered on the results of the treatment of 438 consecutive cases admitted to the J.J. Hospital from 1931 to 1935 inclusive.

Numerous papers have been published since 1932 in which the value of intrathecal injection of the antitoxin by cisternal puncture has been seriously questioned. The majority of workers advocate large doses intravenously in the early stage. Cole (1934) in a recent paper mentions that the incubation periods of our previous series were not given and that serious cases were excluded. It may be pointed out that the incubation periods of all cases were tabulated in the paper and the total mortality rate, including all serious cases was given. The mortality rate, after deduction of cases resulting fatally within twenty-four hours of admission was only a part of the tabulated results. The period of onset which was not worked out in the previous series, has been included in the present one.

Recent work on the treatment of tetanus has proceeded mainly along two lines: the control of the exhausting spasms by the use of among other things curare and basal narcotics; secondly the administration of a large initial intravenous dose of antitoxin. The following conclusions were reached in the previous paper:

1. That the use of tetanus antitoxin was rational and necessary.

2. The combined intrathecal (by the cisternal route), intravenous intramuscular and subcutaneous method gave the most promising results.

The present series of 438 cases was treated along similar lines. The antitoxin used however, came from three different manufacturers; the potency marked on the tubes being uniform. The use of sedatives was standardized. Carbolic acid and magnesium sulphate injections were not used. Out of the total of 438 cases 209 (49.4 per cent) were cured, 214 (50.6 per cent) ended fatally and 15 were discharged at request, 127 patients died within twenty-four hours of admission. Excluding these the mortality works out at 29.4 per cent. The corresponding figures for the previous series were 46.4 per cent and 23.4 per cent. It may be mentioned that all the cases of the previous series had one brand of antitoxin.

For purposes of study the cases are grouped in the following tables: I—Age, II—Incubation period, III—Period of onset, IV—Period of onset with the incubation period, V—Type of injury.

TABLE I—Age

Age	1-10	11-20	21-30	31-40	Above 40	Not known
Number	78	89	120	101	44	6
Cured	42 (55.2%)	42 (49.4%)	63 (54.3%)	45 (46.4%)	15 (34.8%)	2 (40%)
Died	34 (44.8%)	43 (50.6%)	53 (45.7%)	53 (53.4%)	28 (65.2%)	3 (66%)

Discharged at request 15

This table corroborates the observation that the prognosis is better up to the age of 30 and then becomes progressively worse very few patients over 50 recover

TABLE II—Incubation Period

Incubation period in days	1-5	6-10	Above 10	Not known
Number	73	78	109	172
Cured	27 (37%)	37 (47%)	68 (62%)	85 (49%)
Died	46 (63%)	49 (62%)	32 (32%)	87 (50%)

Discharged at request, 15

Out of 214 127 died within twenty four hours the incubation period of 58 out of 127 was under ten days and in 52 it was not known, but was presumably short

TABLE III—Period of Onset

Days	1	2	3	4 and above	?
Number	108	85	94	96	55
Cured	44 (41%)	38 (45%)	47 (50%)	62 (65%)	18 (33%)
Died	63 (58%)	46 (54%)	41 (46%)	29 (31%)	31 (66%)
Died in 24 hours	40	25	25	16	21

Discharged at request 15

The previously published series did not contain this table The rapidity of the development of symptoms appears to be the important factor in prognosis

The following tables show the comparison between the incubation period and the period of onset

TABLE IV—Period of Onset with the Incubation Period

	One Day				Two Days			
	1-5	6-10	11+	?	1-5	6-10	11+	?
Incubation period								
Number	24	35	25	24	15	20	17	33
Cured	5 (20%)	12 (35%)	18 (72%)	9 (62%)	3 (20%)	8 (40%)	10 (62%)	17 (51%)
Died	19 (79%)	22 (64%)	7 (28%)	15 (58%)	12 (80%)	12 (60%)	6 (37%)	16 (48%)
Died in 24 hours	14	12	4	10	40	5	7	4

	Three Days				Four Days and Above			
	1-5	6-10	11+	?	1-5	6-10	11+	?
Incubation period								
Number	18	9	27	40	16	12	26	42
Cured	10 (58%)	2 (22%)	14 (55%)	21 (58%)	8 (50%)	7 (63%)	20 (80%)	27 (69%)
Died	7 (41%)	7 (77%)	12 (44%)	19 (47%)	8 (50%)	4 (36%)	5 (20%)	12 (30%)
Died in 24 hours	5	6	7	7	6	2	1	7

Discharged at request, 15

No history was available with regard to the period of onset or the incubation period in fifty five cases out of these eighteen (33 per cent) were cured and thirty five died (66 per cent) Twenty one of these died within twenty four hours two were discharged at request

The tables show that even with a short incubation period if the period of onset has been three days or over—that is if the disease has been developing gradually and is not progressing rapidly—there are many chances of recovery

TABLE V—Type of Injury

	Nail	Septic	No Evidence of Injury
Number	65	248	115
Cured	23 (35%)	134 (51%)	52 (49%)
Died	42 (64%)	116 (48%)	56 (50%)

Discharged at request 15

The deep penetrating injuries such as by nails are more often followed by tetanus, and the cases carry a high mortality

The type of case suitable for judging the results of any method of treatment falls within the groups of incubation periods from one to ten days and the period of onset from one to two days If the mortality rate can be shown to improve in these groups by any method of treatment that method should receive serious consideration In 115 cases no injury or source of entry could be discovered, this is a large proportion Either apparently trivial or unnoticeable injuries may carry the infection, or the organisms that may be present in the lumen of the bowel may become pathogenic Careful cultural examination of the stools of these patients as well as those of the community at large requires to be done if any light is to be thrown on this question of idiopathic tetanus Even when there is no known portal of entry the disease takes a heavy toll as fifty six out of 115 cases showing no evidence of injury ended fatally

Dosage and Mode of Administration

Great difference of opinion prevails among workers regarding the dosage and mode of administration of the antitoxin Taylor (1934) thinks large doses unnecessary, while Miller and Rogers (1935) recommend large doses intravenously Cole (1934) recommends one large dose intravenously and believes that the amount is sufficient to neutralize all toxin that may be present and that may be thrown into the circulation from the focus of infection That some of the antitoxin is present in the blood ten days after administration Cole has proved by animal experiments

In the present series moderately large doses have been used initially 40 000 units intrathecally through the cisterna magna and 80 000 units intravenously and intramuscularly in equal parts Daily administrations of 40 000 to 80 000 units according to the severity of the case intravenously or intramuscularly or both, were given till the spasms were fully controlled It has been noted that premature stoppage of the serum has been followed by a return of the spasms The total dose has often reached 400 000 units or more

Experiments on Guinea-pig

From recent experimental evidence it appears that intrathecal administration of serum does not act on any toxin present in the cerebro spinal fluid for none is found in it We carried out certain experiments in guinea pigs to find out if any toxin was present in the cerebro spinal fluid Serum and cerebro spinal fluid from tetanus patients were injected intraperitoneally into guinea pigs as well as serum from normal persons serving as controls three guinea pigs were used for each case in the beginning 3 to 5 ccm of the serum and 5 to 10 ccm of the cerebro spinal fluid were injected The animals went into spasms from five to ten minutes after the injection of serum from the patients with tetanus but did not develop any spasms after the injection of cerebro spinal

fluid from tetanus patients or serum from the normal controls. This method can be used as a useful test for the diagnosis of tetanus in doubtful cases. 3 to 5 ccm of blood serum from the suspected patient are injected into the peritoneal cavity of a guinea pig, the animal shows spasms jerky movements of the head and body after a preliminary stiffness if the serum comes from a case of tetanus. An earlier diagnosis is thus possible in doubtful cases. The antitoxin in the cerebro spinal fluid therefore acts through absorption in the blood stream. Clinically it controls the spasms better and earlier. This observation is made so often that it cannot be dismissed lightly. It is possible that the absorption is slower and steadier and the effect of the intravenous injection is thus maintained for a longer period. The rate of absorption of the antitoxin from the cerebro spinal fluid into the blood stream and the amount of antitoxin present in the blood from day to day after this injection are well worth study.

Sedatives to Control Spasms

The control of spasms by the use of suitable sedatives is the other problem before workers. A large number of sedatives are being advocated. The patient is in a state of hyperexcitability. All kinds of external stimuli throw him into spasms. The majority of these patients have received paraldehyde per rectum for the control of spasms—4 drachms in 2 oz of saline by the drop method four hourly varied according to the requirements of each individual case. The use of somnifaine by injection or avertin per rectum has been advocated. Several articles have appeared on the use of curarine the alkaloid from curare the arrow poison. This has a paralyzing action on the neuro-muscular junctions. The dose has to be carefully regulated as respiratory muscles are likely to be paralysed if a large dose is inadvertently given. Very efficient nursing is therefore necessary if this drug is to be used as a routine measure. The work of Abel *et al* (1934 1935) may be mentioned here. They have overhauled the older conception of the disease and consider that the toxin has a peripheral action on the neuro-muscular junctions in the muscles themselves. The descending order of the spasms, however has not been sufficiently explained.

Summary and Conclusions

1 A further series of 438 cases of tetanus has been observed with special reference to the use of antitoxin.

2 The combined method of administration of the antitoxin intrathecally through the cisterna magna intravenously and intramuscularly has continued to be used in this as in the previous series.

3 The total mortality of all consecutive cases, except the fifteen that were discharged by request, has been 50.6 per cent and after excluding those that died within twenty-four hours of admission 29.4 per cent. This compares somewhat unfavourably with the previous figures but may probably be explained by the fact that several brands of sera have had to be used in the present group while only one brand was used for the previously published group.

4 The routine use of paraldehyde per rectum is recommended in all cases as the most suitable sedative for hospital patients.

5 The clinical fact that the intrathecal administration of serum through the cisterna magna along with the other routes controls the course of the disease better, estab-

lishes the need for further study of concentration of anti-toxin in the blood serum after intrathecal injections.

I take the opportunity of thanking Lieut Colonel Vazifdar I.M.S. for facilities with regard to the treatment of the patients and my successive house physicians without whose co-operation this work could not have been carried out. I also thank Dr Manohar and Dr Nene for helping me with the guinea pig experiments.

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TREATMENT OF MENINGITIS WITH MENINGOCOCCAL ANTITOXIN

BY

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Until recent years the only specific agent available for the treatment of meningococcal meningitis was anti-meningococcal serum but lately there has been produced a meningococcal antitoxic serum* with which a series of four cases was successfully treated at the Kingston and District Hospital during the last year.

This serum is the result of the work of Dr N S Ferry who with his associates investigated the properties of broth filtrates of the meningococcus (1931) and showed that specific extracellular toxins were produced with each of the four Gordon types of the meningococcus. Further it was found that animals could be immunized with each of the toxins and true antitoxins produced which when investigated in the case of the guinea-pig and monkey (1932 1934) rabbit (1934) and finally the human being (1935) were shown to have a curative effect against live virulent meningococci, besides a neutralizing one on the specific soluble toxins. These effects were not only specific for the type of meningococcus against which the anti-toxin was produced, but were apparent to a lesser extent for all types of meningococci.

Dr H L Hoyne (1935), in an investigation of a series of eighty five cases treated with antitoxin showed that the mortality was 23.5 per cent as against 45.9 per cent for cases treated with anti-meningococcal serum. After eliminating those cases in which the patient died within 48 hours of admission to hospital the mortality was 9.6 and 29.6 per cent respectively. Dr Hoyne noted that following the use of antitoxin there was a prompt response of the infection and he favoured large doses of 60 to 100 ccm administered intravenously in order that the toxin should be rapidly neutralized. It was recommended that these quantities should be given diluted in twice the volume of normal saline or 10 per cent glucose solution.

The four cases reported below all children were treated with Ferry's serum on these lines and gratifying improvement appeared to follow its use. In two cases meningococci were found in the cerebro spinal fluid but in the other two no organism was identified. In each case there was a rapid improvement in the general condition of the child associated with a decrease in the number of leucocytes in the cerebro spinal fluid. The antitoxin was given

* By Parke Davis and Company

undiluted intrathecally and intravenously in all four cases, two of which developed a well marked serum reaction on the tenth day

From the hospital records as far back as 1928 there appear to have been only six proven cases of meningococcal meningitis of which five were treated with anti-meningococcal serum. All the cases ended fatally, the longest survival period being sixteen days. It is our impression that the use of antitoxin exerts a favourable influence on the prognosis of meningococcal meningitis and that administration by the intravenous route is the most advantageous.

Case I

A girl aged 13 developed generalized headache and persistent pain in the neck which was becoming gradually worse and was admitted to hospital on the eighth day. She then presented a typical picture of meningitis with very marked head retraction. The temperature was 104° F and the pulse 100. The cerebro spinal fluid was under greatly increased pressure and milky in appearance containing 2990 cells per cmm all of which were neutrophil and from a later specimen meningococci were obtained. Daily lumbar puncture was performed under light ether anaesthesia as it was found that this gave a rather better flow of cerebro spinal fluid moreover the child preferred it to local anaesthesia. Antitoxin was given 30 ccm intrathecally on the first day and 90 ccm on the sixth day followed by 110 ccm on the next three days. The cerebro spinal fluid was normal by the thirtieth day the child having made a complete recovery.

Case II

A boy aged 14 had been ill for one day prior to admission with rapidly developing headache abdominal pain and delirium. His general condition was very bad temperature 96° F pulse rate 62 delirious and with well marked head retraction. The spinal fluid was under greatly increased pressure very milky in appearance and contained 100 000 leucocytes per cmm while a stained film showed many organisms morphologically identical with meningococci. Failure to culture these organisms was thought to be due to the fact that the laboratory was some distance away. Repeated spinal puncture was performed under ether anaesthesia and a total of 134 ccm of antitoxin was given intrathecally and 163 ccm intravenously during the first sixteen days. The number of cells in the cerebro spinal fluid gradually fell in association with an improvement in the boy's general condition, and on the twelfth day there were 95 per cmm all lymphocytes while the fluid was normal on the twenty fifth day. The patient made an uninterrupted recovery and there were no sequelae.

Case III

A girl aged 10 had been unwell for three days before admission with severe headache vomiting and general pains in the back and limbs. Her condition was very poor the temperature was 102.4° the pulse rate 110 and she was very irritable with some head retraction and pronounced neck rigidity. Kernig's and Brudzink's signs were strongly positive. The spinal fluid was under increased pressure and milky in appearance and contained 7000 leucocytes per cmm. No organism was ever identified. Repeated spinal puncture was performed under ether anaesthesia and large doses of antitoxin given intravenously 90 ccm on the first day 60 ccm on the second and 30 ccm on the fourth. From the third to the ninth day a total of 85 ccm was given intrathecally. The child became apyrexial by the seventh day and the cell count in the cerebro spinal fluid slowly fell to normal by the twenty seventh day. There were no sequelae and recovery was complete.

Case IV

A girl aged 15 was suddenly taken ill with severe occipital headache and increasing unconsciousness vomiting and involuntary movements of the limbs. She was admitted twenty-

four hours later when her temperature was 97.4° and pulse rate 80. She was unconscious jaw spasm was present and neck rigidity was marked. The limbs were flaccid Kernig's sign was positive and there was a slight strabismus. Lumbar puncture revealed a very turbid white fluid under a pressure greater than 300 mm of cerebro spinal fluid which showed a count of 9120 cells per cmm all polymorphonuclears. No organism could be identified. A dose of 80 ccm antitoxin was given intravenously and lumbar puncture performed under ether anaesthesia each day. On the second day in hospital the patient slowly returned to consciousness and her temperature rose irregularly to 103.2°. Antitoxin was given intravenously and intrathecally for the first thirteen days, the amounts totalling 405 ccm and 200 ccm respectively. By the middle of the third week she was apyrexial and the spinal fluid showed a normal cell count by the thirty second day. The strabismus disappeared slowly and by the seventh week she appeared to have made a complete recovery.

I wish to record my thanks to the late Dr P Vernon Davies medical superintendent of the Kingston and District Hospital for permission to publish notes of these cases and to Dr E C Warner consulting physician to the hospital for valuable advice and criticism.

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A NOTE ON THE EXAMINATION OF TUBERCULOSIS HOME CONTACTS

BY

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It is no longer disputed that there is a greater incidence of tuberculous disease in contacts of persons suffering from pulmonary tuberculosis than in the general population. This is admitted independently of any views that may be held on the mechanism by which the disease develops in the contacts whether it is primary infection or reinfection (endogenous or exogenous) or whether it is due to superinfection or to lowered resistance associated with poor economic circumstances in the family of a tuberculous adult. But much difference of opinion still exists on the extent of this increase in incidence in contacts as a whole and in contacts at various ages. Nor is the significance of latent tuberculous lesions as yet fully appreciated.

The subject of contact examination came up for discussion recently at the annual conference of the National Association for the Prevention of Tuberculosis (1936). It was then stressed by some speakers that active pulmonary tuberculosis in children was uncommon although it was stated with insufficient emphasis that latent lung lesions and active foci in other organs occurred in an appreciable number of children in addition. One speaker pointed out that the supervision of all contacts was not a practical proposition at present. Basing himself on an index of 2.5 (according to the 1931 census the average size of the London family was 3.46 persons) and assuming that it was necessary to follow up 1 contact for five years he calculated that this would mean in London the supervision of about 65 000 people. Arguing on the relative frequency of active pulmonary tuberculosis in children he urged that in stead of paying increasing attention to child

contacts we should therefore concentrate on the adolescent group. I have already (1936) pointed out how inadvisable it was to appear to encourage neglect of examination of child contacts. It has since occurred to me that yet another aspect must be considered in this 'worth while' argument—the relative number of contacts at various ages.

The following investigation is not considered extensive enough for forming definite conclusions but it does serve as a pointer and its publication may encourage a similar investigation on a larger scale.

The Investigation

All the patients in the wards of the County Sanatorium, Clare Hall, were interviewed, and information was obtained on the number and ages of the persons in contact with them before admission to the sanatorium. Particular care was taken to ascertain the actual contacts in the home and neither the family nor the house were taken as the unit. This care is necessary because of lodgers and sublet rooms, and in regard to patients living on their own. The results are shown in Tables I to III, they were worked out separately for the men and the women patients so that there might be a slight check on the error of sampling.

TABLE I—Female Patients

69 patients—211 contacts—3.0 contacts per patient

The contacts were distributed as follows

Age	Number	Per Cent
0-5 years	19	9
6-15	35	17
16-30	66	31
31-50	42	20
Over 50	49	23

TABLE II—Male Patients

119 patients—377 contacts—3.1 contacts per patient

The contacts were distributed as follows

Age	Number	Per Cent
0-5 years	30	8
6-15	75	20
16-30	131	35
31-50	70	19
Over 50	71	19

TABLE III—All Patients

188 patients—588 contacts—3.1 contacts per patient

The contacts were distributed as follows

Age	Number	Per Cent
0-5 years	49	8
6-15	110	19
16-30	197	34
31-50	112	19
Over 50	120	20

Comment

There is a close similarity in the figures obtained from the male and the female patients. The figure of three contacts to a tuberculous patient is interesting as showing that the index of 2.5 may be too low in regard to families containing a tuberculous adult. It should be remembered however that in this investigation the home and not the family was the unit as it should be in dealing with contacts and another point to be noted is that at Clare Hall children under 15 were not admitted.

From the figures in the tables I should like to comment on two age groups. A fifth of the contacts are over 50. At first sight the detection of tuberculous disease in these might appear relatively unimportant. This however is not so. For it is in just this group that the primary case might be found—that is the person responsible for the disease in the patient whose contacts are being examined. And the discovery of the primary case is vital as otherwise the removal of the tuberculous

patient from the home will lead to a fool's paradise in regard to the other inmates.

The low percentage of contacts under the age of 6 is of interest in regard to the argument at the beginning of this note. Tuberculosis is a relatively mild disease in children over the age of 5. Moreover the form it usually assumes in them (affecting bones joints and glands) leads to advice being sought by parents spontaneously. There is too the fact that children over 5 come under the supervision of the school medical service. None of these circumstances applies to very young children. In them detection of tuberculous disease or infection and the prevention of infection is of paramount importance (Kayne 1935 1936). The relatively small percentage (8 per cent) of these children in the whole group of contacts would therefore hardly justify a policy that encourages less concentration on the examination of young children on the ground of the alleged large total number of contacts to be examined.

I have to thank Dr F. A. H. Simmonds, medical superintendent for permission to carry out the investigation and Dr John Tate, county medical officer, Middlesex County Council for permission to publish this note.

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SEVERE RECTAL INJURIES CAUSED BY AN ENEMA GIVEN THROUGH A RIGID NOZZLE

By

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Injuries to the rectum following on the administration of a soap and water enema are not common but when they do occur they may be of so serious a nature that I consider the following case should be put on record.

Clinical Record

A married woman, age 56, of somewhat stout build had suffered for many years from chronic bronchitis and asthma. On March 5, 1932, she was seized with a severe rigor during the night. She felt increasingly ill during the next two days when her doctor (Dr W. D. Allan) was called in. He found her to be suffering from bronchopneumonia affecting one lung. Two days later both lungs were involved and she was critically ill. In ten days time she had improved somewhat, but was still very ill. At this time the patient was given an enema by her daughter. An ordinary Higginson's syringe with a bone nozzle as usually supplied by chemists was used. The result of the enema was said to be poor. The patient complained of no pain at the time the enema was given apart from a little rectal discomfort. Following the enema she had retention of urine which was relieved by catheterization and two days later she complained of pain in the rectum. Pyrexia, which was attributed to the chest condition continued. The pain in the rectum was regarded as being due to piles there being no external evidences of any other cause. Eight days later catheterization was still necessary and at that time the rectal pain which had been relieved by a sedative ointment, became more severe. Faecal matter was noticed issuing from the vagina, and there was also incontinence of

faeces. The chest condition improved but the temperature remained elevated (100°). When her doctor noticed the faecal vaginal discharge (ten days after the enema) he made a rectal examination and was horrified to find no trace of the rectum, but instead his finger went into a huge cavity, limited behind by the coccyx and sacrum and in front by the posterior vaginal wall, in the distal part of which there was an opening of a size sufficient to admit the index finger. Dr Allan asked me to see her in consultation that evening. The patient stated that she had had no rectal pain until a day or two after the administration of the enema. When questioned closely she admitted that the enema caused a slight pain, which she attributed to piles, from which she habitually suffered. As the pain did not persist she did not worry about it. She stated that for years she was accustomed to give herself enemata, as she preferred this to the use of purgatives. Her general condition was poor, and I considered that her best chance was to be nursed at home under the care of her own doctor until her chest condition improved sufficiently to warrant her removal to hospital.

On April 16, 1932, the patient was admitted to the David Elder Infirmary (annexe of the Western Infirmary) under my care. On her admission to the Infirmary it was noted that there was still considerable bronchitis and some embarrassment of respiration. She had retention of urine and a continuous oozing of foul smelling faecal and purulent material from the vagina. Rectal and vaginal examination revealed an almost complete loss of the recto vaginal septum and an absence of the posterior wall of the rectum. The examining finger came in close contact with the coccyx and the foramina in the lower part of the sacrum. Temperature, 98.8°, pulse, 92 respirations, 22. On April 22, 1932 a colostomy was performed. During the operation the lower peritoneal cavity was explored but no abnormality was noted. The colostomy was opened two days later. Following the colostomy the patient made an uninterrupted recovery. The retention of urine was relieved within a day or two, and in fourteen days the recto vaginal fistula had healed. The cavity behind the rectum discharged pus for several weeks but ultimately it closed. The patient was discharged from the Infirmary on June 28, 1932 when it was noted that within the anus there was only a narrow track which was lined by granulation tissue and which would not admit a finger.

The patient has reported from time to time and when last seen a few weeks ago she appeared to be in good general health. She had no asthma or bronchitis and the chest appeared healthy. There was still a small amount of discharge issuing from the anus into which a finger could not be inserted. A sinus evidently existed between the end of the pelvic colon and the anus. She had good control of the colostomy wound which functioned twice daily.

Other Cases

I was called in consultation to see this patient within a few weeks of reading an article by H. H. Rayner (*British Medical Journal* 1932 1 419) in which he described a case in many ways similar but in which the injury was of less extent. I had meant to put this case on record at the time but thought that I should observe the patient for a year or two with a view to ascertaining the final condition following on the injury. At a meeting of the North of England Obstetrical and Gynaecological Society on December 17, 1929 W. W. King (Sheffield) reported a case and subsequently, in the discussion which followed, four similar cases were mentioned by others (*British Medical Journal* 1930 1 113). These communications all referred to injuries caused by enemata immediately before or after labour. Denham Pincock (*Lancet* 1937 1 205) refers to two cases similar to the one above described but in his cases the injury was not so extensive or the history so peculiar.

The rigid douche or enema nozzle can hold such potential dangers that its use should never be permitted under any circumstances, and more especially in the hands of the patient, his friends, or even a nurse.

I desire to express indebtedness to Dr W. D. Allan for his notes about the patient both before her admission and since her discharge from hospital.

Clinical Memoranda

Carcinoma of Rectum in a Youth of 18

The following case seems worthy of record by reason of the patient's age.

A youth aged 18 years consulted me in the late summer complaining of diarrhoea of sudden onset. There was no previous history of diarrhoea and a kaolin mixture was given. There was some improvement, and the medicine was repeated five days later. He was seen again nine days afterwards the diarrhoea having recurred after transient improvement. The rectum was examined and a hard mass was felt three and a half inches from the anus, the tip of the finger slipping over the hard edge into a deep ulcer crater.

Laparotomy was performed that day. The liver was found to be free from secondary growths but there was a hard mass the size of a walnut in the pelvic mesocolon one inch below the sacral promontory. There was a suspicion of a dimpling of the peritoneum covering the left side of this small mass. A left inguinal colostomy was performed and the colon was opened on the third day. Ten days later under spinal anaesthesia an abdomino-perineal excision of the rectum was performed (Miles's technique). When the abdomen was opened the bladder was found to be full in spite of the fact that the patient had passed water before coming to the theatre. Difficulty was experienced in catheterizing him because the growth was deforming the base of the bladder which organ was pulled downwards and forwards in that region presumably by contraction of surrounding tissues. The bladder was emptied by a silver catheter. The operation was completed by lining the large subperitoneal cavity with oiled silk and plugging with vaseline gauze which was renewed on the fifth day and discontinued on the eighth day.

He was allowed home on the tenth day the large cavity being irrigated daily with a pint of cold eusol. Walking was allowed on the twenty-third day the perineum was completely healed eight weeks after operation. He was certified fit for work twelve weeks after operation.

Massive doses of iron (50 of ferri et ammonii cit daily) were given and it was found that not only did the patient gain strength rapidly but the management of the colostomy was thereby facilitated in that the stools were well formed and had very little odour. All that was necessary was to cut a hole the size of the spur in a piece of lint which was laid on the abdomen a vaselined piece of lint was laid on the spur. When he was dressed the formed stool had been deposited on the lint and the whole was removed and burnt forthwith. Very seldom was the skin of the abdominal wall soiled. The skin was kept in perfect condition by a zinc borate and french chalk dusting powder.

The pathologist's report proved the growth to be an adenocarcinoma. The hard mass in the pelvic mesocolon proved to be a lymphatic gland invaded by growth.

CONCLUSIONS

1 Before operation for excision of the rectum the bladder should be emptied by catheter.

2 During the nursing period the colostomy is best managed by giving large doses of the scale preparation of iron.

Longtown, Cumberland

R. RUTHERFORD

Reviews

PRINCIPLES OF MEDICINE

Principles of Diagnosis Prognosis and Treatment 4 Triology By Robert Hutchison M.D., LL.D., FRCP Second edition. (Pp 53 3s 6d net) Bristol J Wright and Sons, London Simpkin Marshall 1937

Medical Diagnosis Some Clinical Aspects By S Levy Simpson M.A. M.D. MRCP (Pp 256 10s 6d net) London H. K. Lewis and Co 1937

It is now nearly ten years since Dr Robert Hutchison collected into a small volume his essays on the principles of diagnosis, prognosis and treatment. With the lapse of time a new edition has been called for, but the author has found need for only minor corrections and alterations in a book which is packed with wisdom from the ripe experience of a learned physician interspersed with the dry humour of the North. It is perhaps caviare for the student but practitioners will enjoy and benefit by its perusal, whether they are just beginning their professional career in a spirit of high hope fresh from the schools with the latest information and most recent laboratory teaching or resting for a moment from the whirl and exigencies of practice or losing faith from weariness. For each there will be a stimulus in these wise words.

Dr Hutchison's aphorisms on diagnosis are quoted with approval in a new book of the General Practice Series on the clinical aspects of medical diagnosis by his former student Dr Levy Simpson and those who follow the principles laid down are bound to find much for which to thank both teacher and pupil. The value of an adequate history is emphasized forbearance and tolerance while listening to the patient's recital are necessary, and give an opportunity for assessing the patient's make up. Questions are often needed to keep the garrulous to the point or to encourage the diffident, but they must be put in such a way that suggestions of a false symptomatology are not implanted in the patient's or doctor's mind. The examination should be made with care and thoroughness. Perhaps the greatest difficulty is weighing the evidence. Here experience and judgement are needed to assess rightly the results of clinical and laboratory investigations. A further source of trouble is to determine the proportion of organic and functional elements in the case. A patient may reserve to himself the right to emphasize even to exaggerate a symptom in order that it may not be passed over. It is the doctor's duty to see that proper weight is given to it, seeing it in proper perspective and catching out the malingerer. Dr Levy Simpson has collected into systematic chapters the main diagnostic features of diseases of the cardiovascular, respiratory, digestive and excretory organs. Under a convenient heading of the acute abdomen practitioners are instructed in the features of the medical surgical and gynaecological conditions which bring about an abdominal emergency. Diseases of the nervous system, blood, endocrine glands and the specific infectious diseases are sketched and a short note is appended on the aspects of disease in children. Readers will find the descriptions clearly given so that the elements of effective differential diagnosis are well set out.

BACTERIOLOGY FOR THE STUDENT

A Textbook of Medical Bacteriology By R. W. Fairbrother D.Sc. M.D., MRCP (Pp 437 illustrated 15s net) London W. Heinemann 1937

In the present state of the medical curriculum ancillary subjects are given only a short time allowance in the clinical years, and the teaching must be of high standard

if it is to retain the interest of the student and at the same time cover the ground adequately. The most sought after textbooks are those which combine adequacy of content with brevity: there are limits to the demands which they can successfully make on either the mind or the purse. To produce a good book fulfilling these conditions is not easy but Dr R. W. Fairbrother has succeeded in this manual. Its outstanding merit is that the proper scope and functions of the science of bacteriology are recognized throughout: this is almost the same thing as to say that it affords sound teaching of general principles which is more than can always be said of works of this size or indeed of some larger ones.

Chapters on the general biology of micro-organisms and on the problems of infection and resistance occupy about one third of the book and the bulk of the remainder is descriptive technique being dealt with in only a few of its aspects at the end. This generally speaking is as it should be: no properly taught student need read about details of technique. Nevertheless in some chapters further directions on practical methods would form a useful addition: for example there are no instructions for treating material containing tubercle bacilli preparatory to cultivation a proceeding which is now quite commonplace. This criticism does not imply that the practical applications of bacteriology to clinical medicine are neglected: diagnostic and therapeutic measures are fully considered in relation to each infection. Exposition is clear but to the student some passages will probably be obscure owing to the use of terms which have not previously been explained and he will be well advised only to read some of the earlier chapters after studying the subjects of later ones. The only other criticism called for concerns the illustrations: of these there are too few in the descriptive section, four species alone being figured. The book obviously owes much to a well known work on a larger scale which it resembles in many ways: the author's indebtedness to this work is acknowledged.

THE TSETSE PROBLEM

Die Tsetsefliegen Ihre Erkennungsmerkmale Lebensweise und Bekämpfung Ein Leitfaden für die Praxis By Dr F. Zumpt (Pp 149 121 figures 15 plates RM 9 geb RM 10 50) Jena G. Fischer 1936

This book deals with all aspects of the tsetse problem. The general morphology of the group receives fourteen pages and twenty one text figures. Most of these figures are taken from earlier books; among them is one intended to represent the birth of a larva, and it actually shows the production of a small abortion. The notes on collecting which follow are intended to be understood by readers who have had no entomological training. The most important part of the book is the systematic section (sixty four pages) in which the methods of identifying every species and subspecies of *Glossina* are described: good clear diagrams of the male and female genitalia accompany the text in all cases. The results of recent systematic studies in various countries are thus made readily accessible to those who work in tropical countries where no libraries are available. There are brief ecological notes for each species.

Fifty pages are devoted to general natural history or ecology: descriptions of technique used in research and control methods. Though this information is up to date and clearly put so that it forms a useful introduction to the subject it is hardly detailed enough to be useful by itself to the field worker. However anyone with experience of the tsetse literature will readily forgive a writer who errs on the side of brevity. Unfortunately Dr

Zumpt appears to have little personal experience of control methods so that in his condensed account he gives undue prominence to fly trapping (which fills half the space devoted to control) although that method now seems of doubtful value in most areas. The bibliography has about 650 references, almost all dealing directly with the tsetse fly.

ORTHOPAEDIC SURGERY

Recent Advances in Orthopaedic Surgery. By B. H. Burns, B.Ch., F.R.C.S. and V. H. Ellis, B.Ch. F.R.C.S. (Pp. 296. 108 figures, 15s.) London: J. and A. Churchill. 1937.

To write a book on recent advances in orthopaedic surgery is no easy task. There is not yet complete agreement as to what conditions are covered by this anachronistic term and recovery from some of the lesions commonly dealt with is such a tedious business that by the time an innovation has by long trial been acknowledged as a real advance it can no longer be called recent. For the reason that the treatment of fractures would require a volume to itself, Mr Burns and Mr Ellis have wisely avoided this subject. It is clearly hard enough to cover the rest of the ground in a book of three hundred pages.

There is abundant evidence that the authors have not only read widely, but have assessed the merits of numerous so-called advances with considerable care, and their selection of material is, on the whole, excellent. The flavour of the book is unmistakably British (some may even accuse them of favouring London), but this is in no way blame-worthy since opinions based on personal observation must always be rated higher than those based on reading alone. Free use has been made of quotation and abstract from many papers including useful contributions of their own, and in certain chapters, notably those on the shoulder and the spine the result is most pleasing.

The opening chapters on theories of bone growth, the principles of transplantation of bone, and the chemistry of bone show that orthopaedic surgery has not only sought guidance from the work of the physiologist, but often has stimulated inquiry into problems that had never before been studied. The pity is that these chapters are so drastically condensed. Although there are still great gaps in our knowledge of the cellular processes in bone formation, and of the way in which calcium is moved about the body, the advances made in recent years are of fundamental importance. The physiology of muscle is not referred to perhaps because the clinical application of much that is known is still so defective.

Bone tumours are dealt with very properly on the basis of the excellent work that has been done in America. The chapters on tuberculous disease of joints will commend themselves to almost all European surgeons and the authors' preference for conservative treatment, with arthrodesis reserved merely for the stabilization of the healing lesion, is supported by excellent arguments. The erythrocyte sedimentation rate is mentioned as of value in assessing the progress of the disease as this is a very recent advance it would have been wise to give the authority for this statement. A valiant attempt is made to deal with painful shoulders, Codman of Boston is the pioneer in this field, and good use is made of his recent work. This chapter, though not easy reading, is perhaps the best in the book. The dreariness of the discussion on "low back pain" is not so much the fault of the authors as of the inadequacy of our present knowledge of this mainly symptomatic group of complaints. By contrast the sections dealing with adolescent kyphosis, spondylolisthesis and Pott's disease are most encouraging. The

advance on these fronts has been considerable during recent years.

It is, unfortunately, necessary to draw attention to lapses from the high standard that the authors have set themselves. Chronic (non-specific) arthritis is allowed only one page. The diagnosis of proliferative arthritis is positively secured by tissue examination and the finding of focal collections of lymphocytes in the marrow and synovial membrane. True, no doubt, but there must be some easier way of doing it—and this is all we are told about diagnosis. The whole subject of chronic joint disease should have been reviewed, it would have meant increasing the size of the book, but its value would also have been enhanced. Here and there curious statements appear. Under acute osteomyelitis it is stated that 'the discovery of lipuria may modify the treatment of the focus'—no word of explanation follows. On page 204 we read 'The posture is maintained by muscular tone, and when this is caused by fatigue the strain falls upon the ligaments.' From the context it is possible to find out what is meant, but the sentence as it stands is nonsense. The illustrations, with two exceptions are well done. But if Denis Browne's splint is so good (and we agree that it is), it should have been allowed several small photographs instead of two fourth-form drawings.

Nevertheless this is an excellent book, a worthy addition to Messrs Churchill's now famous series. If, and only if the reader has some previous knowledge of the subject he will enjoy finding here a balanced and interesting account of the best of the recent work that has been done in this great branch of surgery. Orthopaedic surgeons of experience will learn at least a few things that they did not know before, and will no doubt find expressed a few opinions with which they violently disagree. The book deserves a wide circulation.

FACTORS IN SAFE CHILDBIRTH

Safe Childbirth. The Three Essentials. (1) Round Brim (2) Flexible Joints (3) Natural Posture. By Kathleen Olga Vaughan, M.B. (Pp. 150. 49 figures. 7s. 6d.) London: Baillière Tindall and Cox. 1937.

Dr Kathleen Vaughan's well known interest in maternal welfare has led her to work for many years at the problem presented by the high maternal mortality in civilized countries. The outcome of this work is this interesting monograph to which Dr Howard Kelly, the veteran professor emeritus of gynaecology in the Johns Hopkins University, has written a foreword. Dr Kelly sounds no uncertain note for he speaks of the enormous culpable losses due to our utterly uncivilized treatment of expectant and parturient mothers.

Dr Vaughan's thesis is that 'civilized women have more difficult labours than the uncivilized' because civilized conditions of life both European and Indian lead to stiffening of the pelvic joints and flattening of the pelvic brim. In the primitive woman the pelvic brim is believed by the author to be always round and the pelvic joints remain flexible as a result of hard physical work and an open air life. The flattening of the pelvic brim occurs between the ages of 11 and 15 and converts the round outline seen in the child into the oval shape which has hitherto been regarded as a sex difference between the male and female pelvis having its origin in foetal life. Incipient rickets is believed to play an important part in the change. Interesting arguments are adduced in support of this view which appears to have been first suggested to the author by her experience among Indian women living under the Purdah system, and the native women of Kashmir.

In speaking of primitive races whose women have a round pelvic brim Dr Vaughan says 'all these people bore their children safely in primitive conditions. As it stands this statement is too sweeping and is of course incapable of proof. A contrary instance from patriarchal times is that of Rachel who died in giving birth to Benjamin after a hard labour. The oval brim in addition to causing prolonged suffering to the mother endangers the child, and consequently 'many of our finest children are squeezed to death. What hope Dr Vaughan asks can there be of race improvement under such conditions?

The remedial measures advocated display great courage: they are primarily an open air life and controlled physical exercises for all girls in childhood, so that the round brim may be preserved and the pelvic joints remain flexible. Secondly what is known as the usual obstetric position should be abandoned and women should be delivered in the squatting position—that is, sitting on the heels—or in the kneeling position with the spine dorsiflexed and the arms extended. These postures are shown in a series of photographs of an attractive modern young woman who is not pregnant.

Dr Vaughan's complete detachment from the point of view of the English mothers of the twentieth century is shown by the fact that she makes no mention of anaesthetics or analgesics in labour. Her outlook is one of sturdy independence and for this she cannot be too highly commended.

BASAL-NARCOSIS AND ANAESTHETIC COMPLICATIONS

On the Incidence of Anaesthetic Complications and their Relation to Basal Narcosis. By C J M Dawkins M.A. M.D. B.Chir. D.A. (Pp 56 3s 6d net.) London John Murray 1936.

The giving of an anaesthetic for a surgical procedure is unfortunately not without its risks. In this little volume Dr Dawkins outlines the complications attendant upon anaesthesia, and discusses the part played by basal narcotics in their production. In doing so he has analysed three sets of figures. One set deals with his own personal cases and the other two are compiled from various hospital records. The first of these covers the years 1921-5 before basal narcotics were used, and the second group covers the period 1931-5, after their use had become established.

Dr Dawkins has endeavoured to show that the giving of a basal narcotic before an anaesthetic definitely increases the risk of complications and cannot therefore be regarded as an advance in anaesthesia. It is doubtful whether the majority of anaesthetists will agree with this rather pessimistic conclusion. Basal narcotics are still serving a useful purpose in allaying pre-operative fear and will doubtless continue to do so. It is however good for all anaesthetists and surgeons to be reminded of the pitfalls connected with their labours and herein lies this book's chief merit. Dr Joseph Blomfield has contributed a short foreword.

Notes on Books

A Crab Was Crushed is the apposite title chosen by HARVEY GRAHAM for a novel based upon cancer research (Rich and Cowan 7s 6d). The plot is highly original and the tenuous love interest is completely subordinated to the excitement and vicissitudes of the scientific quest. The author succeeds in presenting his characters and their setting in a remarkably lifelike way and he gives an

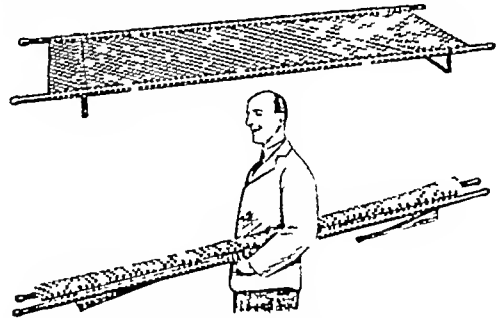
excellent description of the daily routine in a large provincial teaching hospital which many medical readers will think they can identify. The book although it abounds in medical and scientific terms is presumably written for the lay and it will convey to them some idea of the widespread ramifications of patient labour upon which successful research must depend. It will also open their eyes to the very real danger of indiscriminate addiction to potent proprietary drugs. The novel ends on a dramatic note, and may be described as a scientific thriller.

Physic and Fancy by Dr CHRISTOPHER HOWARD (Hutchinson 6s), is a series of sophisticated comments and observations described as thoughts philosophy and medical facts from a physician's notebook. The author confesses that he has only been in practice for ten years, and it is therefore surprising to note his confident dogmatism on medical matters. Nevertheless the book shows evidence of wisdom and common sense and it is obvious that the author forms his own judgements uninfluenced by textbooks or preconceived ideas. Anaesthesia religion diet, cosmetics—Dr Howard is ready to give an opinion on any of them and on a host of other subjects. He disapproves of the modern trend of cosmetics and feminine adornment and cites nipple rings as almost the only ornaments of a past age which have not yet recaptured popularity. This is an amusing and clever book, though perhaps a little too consciously clever.

Preparations and Appliances

A METAL STRETCHER

A disadvantage of the ordinary stretcher of wood and canvas to which attention has been drawn recently is that it readily absorbs poison gases of the mustard type and if thus contaminated becomes a source of grave danger. The Clyde built stretcher is made entirely of metal and will not readily be contaminated by fluids or gases.



If it does become contaminated it can be completely sterilized. A further advantage claimed by the makers is that it can be stored indefinitely in any dry place without deteriorating. Its weight does not exceed that of a standard wooden stretcher. Particulars and prices may be obtained from the makers Cockburn and Co. Ltd 130 Howard Street, Glasgow C1.

SURGICAL HOSE

Elastic stockings have long had some place as auxiliaries in the treatment of varicose veins. Academic surgical hose is made with lastex yarn which gives what is commonly described as a two way stretch. The stockings have in addition a patented heel which compares favourably with the old type of elastic stocking in which the heel was cut away completely in giving a fixed point from which a uniform tension can be exerted. The stockings are seamless and washable and are made in two styles—full length and knee length and three sizes—small medium and large. The stockings can if necessary be made to special measurements at a slightly increased cost. Inquiries should be addressed to the Academic Depot, Mappin House 158-162 Oxford Street W1.

THE FIGHT AGAINST LEPROSY

The report for 1936 of the British Empire Leprosy Relief Association states that the policy of this body which was originally concentrated upon the treatment of the disease is now mainly directed towards effective isolation and more especially to the safeguarding of young children from contact with infective lepers. Another important objective is the education of the community with a view to improving their sanitary and general condition. Although in many countries voluntary isolation has long been carried out in accordance with tribal custom it is the harmless crippled cases who are isolated while the infectious cases mix with the populace, including the children who are particularly susceptible to infection. It is the object of the anti leprosy worker first to gain the confidence of the people then to study their customs with regard to leprosy, and finally to amend such customs so that they may effectively control the disease. The report states that the chief hope of the ultimate eradication of leprosy lies in educating the people at large in the nature of the disease and in the means of prevention using the leper settlements as centres of such education and training. By these means the people may be made leprosy conscious so that they will themselves insist on the isolation of dangerous lepers and on the observance of preventive measures.

With the collaboration of Toe H the Association has sent several volunteers to Nigeria to work on these lines. More men are urgently required but the necessary funds are not at present available. In the early part of the year Dr Ernest Muir, medical secretary of the Association, visited Nigeria the Gold Coast, and Sierra Leone to study the leprosy problems of these colonies at first hand and to make suggestions for further development of anti leprosy work. Since it is estimated that there are some 200,000 lepers among the twenty million inhabitants of Nigeria the problem of effective isolation is naturally one of considerable difficulty. A more extensive formation of clan settlements already successfully established in some districts is advocated in addition to educative campaigns in the villages accompanied by the provision of treatment centres.

Objectives of the Campaign

The annual general meeting of the Association was held at the India Office on April 15 with Viscount Halifax the president in the chair. Following a general survey of the year's work by Sir William Peel, chairman of the Executive Committee, the meeting was addressed by Dr Muir who discussed the objectives of the Association. He arranged these under four heads: (1) the study of leprosy and of the conditions under which it exists and spreads; (2) helping the leper by care, treatment and training; (3) combating leprosy with a view to its final control; (4) interesting, rousing and educating the British public in the problem of leprosy.

Dr Muir said that leprosy must be considered largely as a child problem for those infected in early years furnished most of the severe and infectious cases which spread the disease to the next generation. From the therapeutic point of view, although medicines were useful, the main remedy lay in healthy occupation and sound nutrition. To succeed in effective treatment and in limitation of infection the lepers themselves must co-operate and to attain this end devoted personal service was needed. With this co-operation secured, intelligent patients could be trained in well-equipped and well-staffed settlements during their treatment so that on recovery they could actively assist in the anti leprosy campaign in the villages.

In conclusion Dr Muir stressed the need for more support from the British public. Interest had been stimulated by the Leprosy Exhibition which was shown at eleven centres during the year and it was hoped to form new branches of the Association in Manchester and other Northern cities. Leprosy was a problem of Colonial development and it was incumbent upon the British nation which had undertaken responsibility for the backward races inhabiting certain of its overseas

dependencies, to make every effort to control and eventually eliminate a disease which caused widespread suffering and distress among these people.

Sir William Peel, moving the adoption of the annual report, said that the Association met that day for the first time as an incorporated body—a company limited by guarantee. Lord Halifax announced that the King had become Patron of the Association thus showing his interest in and approval of its work.

BRITISH EMPIRE CANCER CAMPAIGN

In the absence of Viscount Hailsham, Sir Cuthbert Wallace, President of the Royal College of Surgeons of England, presided at the quarterly meeting of the Grand Council of the British Empire Cancer Campaign held on April 12.

The council was informed that the Campaign would move into its new offices at 11 Grosvenor Crescent next door to the present offices on May 1. The following grants, totalling £2,900, were made in addition to the bulk grants of last November and January: £1,000 to be placed at the disposal of Dr F. Dickens, director of research of the North of England Branch of the Campaign at Newcastle for the continuation of the special short wave investigations being carried out under his direction on behalf of the Scientific Advisory Committee at headquarters; £1,200 for the purchase of a plaque of radium in use by Dr F. G. Spear at the Strangeways Research Laboratory, Cambridge; an additional grant of £300 for the year 1937 to the Westminster Hospital; an additional sum of £300 to Mr F. C. Pybus for the salaries of his assistants and expenses during the second half of 1937; and a grant of £100 to Dr L. H. Gray at Mount Vernon Hospital in connexion with the neutron investigations.

Grand Council unanimously ratified the scheme for closer collaboration between the autonomous branches of the Campaign and headquarters—namely the North of England Council, the Yorkshire Council, the Birmingham Council, and the Lancashire, Cheshire and North Wales Council. It was reported that the fourth biennial informal conference of research workers, surgeons, physicians and radiologists had been a great success and the confidential sessions had been attended by over 400. Sir James Walton, K.C.V.O., F.R.C.S., was elected a member of Grand Council.

J. L. Dorsey (*Ann. intern. Med.* November 1936, p. 628) maintains that the first requisite in the cure of the tobacco habit is that the patient, whether for medical, financial, aesthetic, or other reasons, should want to stop the use of tobacco in any form. To lessen the symptoms of deprivation he made use of lobelia or Indian tobacco, which closely resembles nicotine in its effects upon the nervous system. Of the five alkaloids contained in lobelia the chief is lobeline which, like nicotine, causes a brief stimulation of the motor centres in the spinal cord and medulla followed by depression and later paralysis. The symptoms of poisoning resemble those of nicotine poisoning—namely, nausea, giddiness, fainting, vomiting, and cold sweats. The first dose of lobeline sulphate, 1/8 grain, is given by mouth in capsule form immediately after the midday meal when the use of tobacco is abruptly stopped. The second dose is repeated whenever the patient feels the urge to smoke. It has not been necessary to use more than eighteen doses in twenty-four hours and often three or four are sufficient. A week of gradually lessening use of lobeline has been sufficient in most cases. After the first dose of lobeline the desire to smoke becomes less and less insistent. For a day or two there may be nausea, a metallic taste and a feeling of malaise but no other symptoms. In the great majority of Dorsey's cases there was no comparison between the uneasiness of stopping the tobacco habit without lobeline and when the drug was used as a buffer.

A STUDY OF THE TREND OF MORTALITY RATES IN URBAN COMMUNITIES OF ENGLAND AND WALES

WITH SPECIAL REFERENCE TO DEPRESSED AREAS

By

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In a report shortly to be published by the Ministry of Health the problem of the relation of the economic depression of 1928-33 to the death rate of the population of the depressed areas has been minutely examined. In view of the possibility of some delay in publication it has been suggested that a short summary of the investigation—indicating briefly the method of approach, the principal results, and the main evidence which forms the basis of the conclusions—might be of general interest. For detailed analysis the reader is referred to the complete report when published.

Mortality statistics derived from the publications of the General Register Office, whatever their limitations still remain the best index of the health of the general population we possess. They were therefore used in this study, the main object of which was to determine whether in the depressed areas the years of depression could be shown to have exerted a deleterious effect on the mortality experience demonstrable by establishing the existence either of a greater excess in their death rates over those of the country as a whole than was recorded in years previous to the depression or of a slower rate of decline since the depression began than has been apparent in other and more prosperous parts of the country.

Two methods of approach to the problem were adopted: comparison of (a) standardized death rates of all causes of death for the three triennial periods 1911-13, 1920-2, and 1930-2, and (b) of annual death rates in specific age groups from 1911 to 1934, with similar rates for certain towns in the country less severely affected by the depression and with the rates for England and Wales as a whole. The analysis of annual death rates was restricted to towns where no changes in boundary had occurred throughout the period.

My definition of the depressed areas is that generally adopted—namely for England the counties and county boroughs of Lancashire, Cheshire, Northumberland and Durham, and for South Wales the counties and county boroughs of Glamorgan, Monmouth, Brecknockshire and Carmarthenshire.

In making a selection of prosperous county boroughs I had recourse to a list of unemployment rates which calculated for other purposes from data provided by the Ministry of Labour related in all to sixty-eight county boroughs from all parts of the country depressed as well as prosperous. These unemployment rates were for the triennium 1927-9 and referred to males only. From this list I first excluded all north of Lincoln and also seaside and holiday resorts; from the remainder I selected those whose unemployment rate was below the mean of the sixty-eight boroughs. In addition I have included the administrative county of London.

Standardized Mortality Rates 1911-13 1920-2 1930-2

These rates are given for each of the northern counties and for the four Welsh counties as a whole in Table I. They show progressive decline in each successive triennium. Similar rates (omitted here) were calculated for every county borough within these areas and with but two exceptions (where the 1920-2 rate was the lowest) the same feature was apparent.

Rates calculated in precisely the same manner but relating to the prosperous group of towns are given in

Table II and in this group as in the depressed areas mortality has declined during the last two decades in every case examined. In each county borough for both sexes the standardized rates show a fall in 1920-2 and another fall in 1930-2. Thus absolute rates of mortality declined progressively from 1911-13 without serious check by reason of the economic depression.

TABLE I—All Causes Standardized Death Rates per 1000

	Males			Females		
	1911-13	1920-2	1930-2	1911-13	1920-2	1930-2
England and Wales	15.08	12.84	11.01	12.49	10.50	8.78
County of Lancashire*	18.85	15.58	13.20	15.61	12.71	10.50
County of Cheshire*	15.82	12.99	11.16	12.82	10.57	8.65
County of Northumberland	16.18	14.70	12.03	14.13	11.11	9.91
County of Durham*	17.44	15.70	12.96	15.41	13.61	10.93
South Wales†	15.84	13.67	12.03	13.93	11.88	10.20

* Administrative county together with associated county boroughs.

† Geographical counties of Brecknock, Carmarthen, Glamorgan and Monmouth.

TABLE II—Showing the Standardized Rates of Mortality per 1000 for certain County Boroughs outside the Depressed Areas

District	Males			Females		
	1911-13	1920-2	1930-2	1911-13	1920-2	1930-2
England and Wales	15.08	12.84	11.01	12.49	10.50	8.78
Bath	11.85	10.93	9.11	8.30	7.75	6.74
Birmingham	15.66	13.75	11.59	13.03	10.78	9.31
Canterbury	12.83	9.87	9.24	10.28	8.71	7.45
Coventry	14.82	11.91	11.12	12.90	9.60	8.67
Derby	14.16	12.05	10.90	12.25	9.72	8.71
Exeter	15.02	11.51	10.52	12.51	10.23	7.10
Gloucester	14.43	12.11	10.40	11.77	10.85	8.71
Ipswich	14.73	10.91	9.32	11.52	9.75	8.05
Leicester	15.42	13.67	11.23	12.67	11.23	8.83
Lincoln	14.55	13.17	10.33	11.99	9.52	8.74
Northampton	14.01	11.96	9.84	11.79	8.83	8.51
Norwich	14.32	11.91	9.67	11.76	9.69	7.88
Nottingham	16.69	14.16	12.55	14.09	11.64	9.32
Oxford	12.74	10.35	9.09	9.45	8.20	7.35
Reading	13.75	10.76	9.75	11.07	8.74	7.73
Worcester	14.15	12.40	11.30	11.77	9.40	8.65
London	16.30	14.11	11.71	12.76	11.02	8.71

But while in the depressed areas in only three out of thirty-two boroughs was the rate lower than that of England and Wales in any of the three periods examined in the prosperous group only three out of seventeen show mortality higher than that of England and Wales for both sexes at each of the triennial periods and even in these the amount of excess is slight compared with that experienced by the boroughs in the depressed districts. This is seen by reference to Tables III and IV in which the rates for every county and county borough examined are expressed as percentages of the rate for England and Wales.

From Table III it is also seen that in only two (Lancashire and Durham) out of the five geographical counties can the death rate in 1930-2 be said to have been approximately 20 per cent higher than that of the whole country. The three remaining depressed districts show much less excess. Furthermore Lancashire and Cheshire were both in a better position relative to England and Wales in 1930-2 than they were in 1911-13. If the country as a whole has improved from the point of mortality as we know it has these two counties have improved to a still greater extent. In the other three districts the relative improvement has not quite kept level with that in England and Wales since in each there was 2 or 3 per cent more excess in 1930-2 than existed in 1911-13.

Thus whilst it is true that the depressed areas have death rates in excess of England and Wales it is not true

that this excess is a consequence of the post-war depression of 1928-33. On the contrary it appears that these counties have in the last twenty years kept pace with the country as a whole as regards the decline in general mortality. The excess has been in existence for at least the last twenty years and has been nearly constant.

TABLE III—Standardized Death Rates from all Causes for certain Depressed Districts expressed as a percentage of the Standardized Death Rate of England and Wales

	Males			Females		
	1911-13	1920-2	1930-2	1911-13	1920-2	1930-2
England and Wales	100	100	100	100	100	100
County of Lancashire*	125	121	120	125	121	120
Barrow-in-Furness	171	105	111	112	101	110
Blackburn	122	125	110	124	124	117
Bolton	125	121	114	124	125	119
Bootle	140	127	133	137	127	133
Blackpool	107	76	107	100	77	99
Burnley	131	137	115	141	138	121
Bury	118	122	112	116	118	120
Liverpool	144	137	135	142	134	129
Manchester	134	131	129	128	125	123
Oldham	136	137	127	134	137	132
Preston	134	123	123	134	126	122
Rochdale	120	123	120	123	128	124
St. Helens	139	127	124	146	139	124
Southport	79	91	97	72	79	95
Salford	135	131	138	132	130	112
Warrington	122	118	129	128	117	123
Wigan	144	140	135	147	143	145
County of Cheshire*	105	101	101	103	101	99
Birkenhead	120	118	118	113	115	115
Chester City of	114	115	127	108	109	109
Stockport	124	116	115	122	113	109
Wallasey	created 1/4/13	94	96	created 1/4/13	94	87
County of Northumberland*	107	114	109	113	106	113
Newcastle-on-Tyne	121	131	123	120	130	121
Tynemouth	116	128	115	124	121	113
County of Durham*	116	122	118	123	130	125
Darlington	created 1/5/15	115	104	created 1/5/15	110	107
Gateshead	120	133	126	124	138	135
West Hartlepool	121	131	128	125	127	117
South Shields	134	140	138	132	141	138
Sunderland	128	138	132	128	136	135
South Wales†	106	107	109	113	114	116
Merthyr Tydfil	114	118	123	126	128	145
Newport	104	108	111	107	110	110
Swansea	114	110	107	119	109	112
Cardiff	111	114	113	109	109	107

* Administrative county together with associated county boroughs.

† Geographical counties of Brecknock, Carmarthen, Glamorgan, and Monmouth.

Transferring attention from the counties as a whole to individual county boroughs, it may be briefly mentioned here that the exceptionally favourable position of Blackpool, Southport and Wallasey is shown in the report to be due mainly to the fact that they are better-class residential areas than other boroughs in the depressed areas. Omitting these therefore it is found that out of the remaining twenty-nine boroughs there was greater excess male mortality in 1930-2 than in 1911-13 in ten cases and of female mortality in ten cases also. But the excess of mortality in 1930-2 was greater than that of 1920-2 in only seven cases as regards either male or female mortality.

Even among the prosperous county boroughs of the South places can also be found whose position relative to England and Wales with regard to mortality has worsened (see Table IV).

Generally it may be said that in 1911-13 the boroughs of Lancashire had the highest male mortality which was 44 per cent in excess in Liverpool and Wigan. The tendency appears to have been for Lancashire to improve relatively its place being taken by Durham. The highest male mortality in 1930-2 is found in South Shields, bracketed with Salford with 38 per cent excess.

As regards female mortality, the most noteworthy point is the case of Merthyr Tydfil with 26 per cent excess in 1911-13, 28 per cent in 1920-2, but increased to 45 per cent excess in 1930-2. Detailed analysis of this increase shows it to be due to increase in tuberculosis of the respiratory system and of 'other tuberculosis, to an increase in heart disease at ages 5 to 24 (particularly at ages 15 to 24) and to an epidemic of diphtheria which in 1929-30 caused an increase in deaths of children between ages 5 and 14. I give evidence in my complete report in favour of the view that the increase in the rate of mortality from tuberculosis among females in Merthyr Tydfil is due to emigration of healthy young adult females between ages 15 and 24, with the result that on the average the weaker lives are left behind and the death rate increases.

TABLE IV—Showing the Standardized Rates of Mortality per 1000 for certain County Boroughs outside the Depressed Areas expressed as a percentage of the Standardized Rates of England and Wales

District	Males			Females		
	1911-13	1920-2	1930-2	1911-13	1920-2	1930-2
England and Wales	100	100	100	100	100	100
Bath	79	85	83	66	74	77
Birmingham	104	107	105	104	103	101
Canterbury	85	77	84	82	83	85
Covevory	98	93	101	103	91	99
Derby	94	94	99	98	93	99
Exeter	100	92	96	100	97	81
Gloucester	96	94	94	94	103	101
Ipswich	98	85	85	92	93	97
Leicester	102	106	102	101	107	101
Lincoln	96	103	94	96	91	100
Northampton	93	93	89	94	84	97
Norwich	95	93	88	91	82	96
Nottingham	111	110	114	113	111	110
Oxford	84	81	83	76	78	84
Reading	91	84	89	89	83	88
Worcester	94	97	103	94	90	99
London	108	110	106	102	105	99

Annual Death Rates in Age Groups, 1911-34

The analysis in this section was limited to the following groups of county boroughs these having experienced no changes in boundary during the period examined.

Northern Group (Depressed Areas)		Southern Group (Prosperous Areas)	
Bolton	} Principally textile	Gloucester	} Gloucester Leicester Norwich Nottingham Ipswich London (Administrative County)
Oldham			
Salford			
Wigan			
Bootle	} Shipping and heavy industries		
Newcastle			
Tynemouth			
West Hartlepool			
Merthyr Tydfil	} Coal mining and steel smelting		
Newport			

Annual death rates from all causes of death, in ages 0-4 5-14 15-24 25-44 45-64 and over 65 were calculated for each of these groups for the years 1911-34 and compared with similar rates for England and Wales. It was evident that the only satisfactory means by which the salient points of such a mass of data could be made apparent was graphical representation on logarithmic scales. For the purpose of this article it must suffice to

note the principal deductions which were made from the diagrammatic comparison

Over the period 1911-34 the general rate of mortality in England and Wales steadily declined the fall being greatest at ages 0-4. At age group 5-14 the fall was not so great, at 15-24 it was very slight indeed and at 25-44 somewhat faster again. At ages 45-64 a sudden fall occurred during the war years, the rates for some years before the war and since the war being roughly stationary. At ages over 65 the same phenomenon occurs, but the difference between the pre-war level and the post-war level is very much less in the older age groups.

With the exception of the Welsh group the graphs show that both in the depressed and in the prosperous areas the trend of mortality has been one of decline in proportion to the relation which each group bore to England and Wales in the years immediately preceding the war. The amount of excess or deficiency in mortality varies between the groups but is roughly constant for each group throughout the period. South Wales is differentiated in

at both 1911-13 and 1920-2 falling to 22 per cent in 1930-2 whilst for females the figures are 24, 22 and 21 per cent in excess. With the exception of age group 15-44 it will be noted that the percentage for both males and females was slightly lower in 1930-2 than it was in 1911-13. The death rate in the depressed areas has fallen at a slightly slower rate at these ages than that of England and Wales as a whole. In the former the rates of 1930-2 were 77 and 78 per cent of the 1911-13 figures for males and females respectively in the country as a whole they were 75 and 77 per cent. It follows that the very slight deterioration in the relative position at these ages is due to a somewhat smaller fall in the rate of mortality in the depressed areas than occurred in England and Wales as a whole. This is the sole piece of evidence I can find in support of the view that there was a worsening of the position of the depressed areas in the years of the depression.

The greater excess mortality at the adult ages among females than among males is yet another phenomenon

TABLE V—Showing the Death Rates in Age Groups in the Depressed Areas expressed as a percentage of the Death Rates of England and Wales

Age Group	1911-13			1920-2			1930-2		
	Death Rate in Depressed Areas per 1000	Death Rate in England and Wales per 1000	Percentage of England and Wales	Death Rate in Depressed Areas per 1000	Death Rate in England and Wales per 1000	Percentage of England and Wales	Death Rate in Depressed Areas per 1000	Death Rate in England and Wales per 1000	Percentage of England and Wales
Males									
0-14	19.81	16.12	123	14.82	12.08	123	9.81	8.05	122
15-44	5.72	5.16	111	5.24	4.69	112	4.40	3.85	114
45-64	24.56	21.04	117	19.48	16.98	115	18.35	16.51	111
65+	96.88	87.62	111	86.75	79.74	109	86.39	80.63	107
All Ages	16.40	14.99	109	14.29	13.31	107	13.47	12.71	105
Females									
0-14	16.95	13.67	124	12.11	9.92	122	7.87	6.49	121
15-44	5.00	4.32	116	4.59	3.98	115	3.90	3.33	117
45-64	19.64	16.16	122	15.22	12.89	118	13.75	11.97	115
65	84.38	76.23	111	77.77	69.66	112	74.65	65.39	107
All Ages	14.48	13.16	110	12.39	11.60	107	11.74	11.24	104

that its mortality which was but little in excess of the average before the war increased in most age groups and remained stationary in others. Particularly is this true of female mortality. Thus the trend of mortality there has been upward and its position relative to England and Wales decidedly worse at the end of the period.

In the textile and heavy industry groups in the depressed areas excess mortality prevailed for both sexes at every age group throughout the period but in South Wales only since the war. In the prosperous towns mortality has been roughly at the level of England and Wales as a whole. London can be classed with the prosperous group except at ages 25-44 and 45-64 where male mortality is found to have been consistently in excess of the general level.

Finally I combined all the counties and county boroughs of the depressed areas and calculated death rates in broad age groups for this aggregate depressed area for the three triennial periods 1911-13, 1920-2 and 1930-2, and compared the rates so found with the rates of England and Wales in the same age groups and for the same periods. The figures are given in Table V.

Broadly speaking the figures for 1930-2 show that in those years the excess mortality was greatest at the youngest age group and also that among adult females the excess was greater than among males. But when attention is turned to the earlier triennia it becomes clear that the excess mortality in 1920-2 cannot be associated with the economic depression of that time. The two earlier periods show precisely the same type of relationship. At ages 0-14 the mortality of males in the depressed areas was 23 per cent above the rates of England and Wales

which though present in the depressed period, is found to have occurred at 1920-2 and 1911-13 and presumably has been present consistently throughout the period.

These results it would seem must lead to the conclusion that there is no evidence from the trend of mortality rates from all causes of death that the health of the population of the distressed areas has been unfavourably affected by the economic depression. Excessive mortality, these areas certainly have but this excess is not peculiar to the years of the depression. It has been a consistent feature of their mortality experience for at least the past twenty years.

Whilst on the one hand we may be inclined to regard this as a matter for congratulation let us not overlook the fact that my analysis shows that we are concerned with a more deeply rooted evil possibly involving genuine geographical and racial factors. The existence of evil conditions is not mitigated by reason of their having always been evil.

The preliminary programme of the Health Congress to be held at Birmingham from July 12 to 17 by the Royal Sanitary Institute has now been issued. The list of subjects to be discussed includes the development of the maternity service, care of the pre-school child, physical education, incapacitating sickness, health education, housing progress and prospects, safeguarding of bill mill, and the value of medical services to industry. Lord Dudley is president of the congress and the Minister of Health will address a general session.

WHAT IS OSTEOPATHY?

A FRANK ANALYSIS

Dr Charles Hill and Dr H A Clegg ask, in the title of their book, 'What is Osteopathy?' but after an entertaining and informative analysis really find themselves unable to answer the question. Indeed it cannot be answered. Sincere osteopaths, like sincere homocopaths, find themselves in the thrall of a declaration of faith delivered once for all. Though they realize that in science the old shibboleths have constantly to be revised in the light of new discoveries they feel, if they utter heresies against the creed of Still or of Hahnemann, as a Jesuit would on renouncing the vows of his order. They carry religious fervour into the cool atmosphere of science with the result that the outsider reading their writings finds himself in a world compared with which Cloud Cuckoo Land or the land Through the Looking-glass seems solid ground indeed. Still believed in such things as a 'poisonous gas' theory of infectious disease, in spontaneous generation in honey for diabetes, and in treating meningitis by half-pint doses of whisky. Since the prime tenet of the faith is that the body contains everything necessary to its own cure why the whisky? He said 'No system of allopathy, with its fatal drugs, should ever be permitted to enter our doors. When other methods are brought in just that much of osteopathy must move out.' Yale Castilo says 'It has never been found necessary to retract in the slightest degree from [this] original creed.' Yet he describes antiseptics, anaesthetics, stimulants, sedatives, anodynes, cathartics and narcotics as 'useful or indispensable.' E J Conley, writing in 1935, said that Still 'never expected his followers to prostitute his discovery by making it a tail to any other therapeutic project.' Yet Dr Kelman Macdonald, who may be regarded as the most distinguished and reasonable of British osteopaths, admits that he would recommend insulin, adrenaline, parathormone and liver extract, though 'our views are all at complete variance with those of the medical school.' He discards Still's teaching of the displaced bone as a 'delightfully simple but utterly erroneous hypothesis,' but he believes that typhoid fever only attacks the osteopathically unsound while admitting that we have no evidence whatever for that belief. It must be difficult to try to be a modernist and a fundamentalist at the same time.

Mr Streeter says that the osteopathic lesion is a name given to any structural derangement, no matter how small or where found in the body in that case why osteopathic? Our authors summarize the various views which have been expressed as to the nature of the lesion thus. It has in its time played many parts, a dislocated hip, a twisted rib, a dislocated spine, a contracted muscle, a fixed joint, a strained joint. It presses and it does not press. It is swollen and it is contracted. It can be demonstrated by x rays and it cannot be so demonstrated. It has been seen post mortem, and it has not been seen post mortem.

So long as the theory of osteopathy remained a faith it was secure. But when challenged it appealed to the Caesar of the experimental method—and with disastrous results. It is always dangerous to start on research with preconceived notions as to what is going to be found. It is still more dangerous when the observer does not know the difference between the anterior and posterior horns of the spinal cord (p 94) describes non-existent lateral ligaments of the spine (p 104) and a thirteenth thoracic vertebra (p 109) thinks that carbonates exist as such in the blood and that carbon dioxide is an important factor in increasing the alkalinity of the blood (p 96). I have

read the *Bulletins* of the A T Still Research Institute, and agree with Drs Hill and Clegg that 'if any medical man carried out research in such a way he would find it impossible to get his results published in a decent medical journal.' Nay more he would quite rightly be refused a licence by the Home Office for carrying out such experiments on animals. Partial dislocations of the spine leading to severe surgical shock were produced without an anaesthetic. It is interesting to note that osteopathic treatment was of no avail in restoring the animal to health. This does not afford much support for osteopathy as a treatment for a demonstrable osteopathic lesion!

A reading of these *Bulletins* reminds one of the passage in Anatole France's *Penguin Island* in which he burlesques the Dreyfus trial. As it had been objected that there were no proofs, literally cartloads of documents poured into the War Office. The Minister for War shook his head.

We were safe as long as there were no proofs. He knew that proofs such as these condemned themselves.

It may well be asked if the theory of osteopathy rests on such unsound foundations how can its practical successes be explained. That is not difficult. Some of Sydenham's theories were fantastic, but his clinical observations were sound. In the past absurd explanations have been given of the mode of action of drugs which had been empirically proved to do good. But we have no subconscious sense of guilt in accepting the observations while discarding the explanations, since we are bound by no creed except the search for truth. Osteopathic manipulation may certainly do good in some conditions, where (as Wharton Hood put it) muscles, tendons or even articular extremities are tied down. And it cannot be denied that the medical profession, influenced perhaps by Hilton's classic *Rest and Pain* were unduly slow to recognize that fact. Secondly, a successful osteopath is often a shrewd judge of character. I knew a lady who derived great benefit from an osteopath because while he pummelled her back vigorously he poured out a stream of home truths from which she could not escape. Each session ended in tears and protests that she had been insulted. But she continued the treatment!

This book can be cordially recommended to all who wish to know the facts about osteopathy, clearly stated and well documented. The authors' conclusion is that if the osteopath restricted his therapeutic claims [to manipulative surgery] and did not attempt to erect a new theory of health and disease on an imaginary pathology and unproved hypotheses, the medical profession would have no excuse for not listening to him. But they point out the necessity for accurate diagnosis in order to avoid the disasters resulting from manipulation, say, of a tuberculous knee or of the spine for cancer of the breast. As to the training necessary to avoid such disasters the conclusion of the Select Committee of the House of Lords may be quoted. The claim of the osteopaths to treat all diseases has not been established and it would not be safe or proper for Parliament to recognize osteopathic practitioners as qualified to diagnose and treat all human complaints. The only existing establishment in this country for the education and examination of osteopaths was exposed in the course of evidence before us as being of negligible importance, inefficient for its purpose, and above all in thoroughly dishonest hands. So an appeal to another kind of Caesar met with no better fate.

Mr H G Wells contributes a preface in which he sums up the whole position with characteristic directness and lucidity. While recommending the medical profession to adopt as speedily as possible whatever good there is in manipulative healing he says: 'There can be little doubt that the creation of such an alternative school of healing, duly recognized and incorporated would flavour the general discussion of health with much obscure intisim, sectarianism and bitterness.'

W LANGDON BROWN

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CALCIUM REQUIREMENTS IN MAN

It is so often suggested in nutrition surveys that calcium intakes are below the optimum that a recent review of the calcium requirements of man by Dr I Leitch of the Imperial Bureau of Animal Nutrition¹ is of great interest. He calculates that the maintenance requirement of adults is 0.55 gramme daily. Sherman, whose figures have been very generally used in the past, put the equivalent figure at 0.45 gramme. Both these figures are maintenance requirements and exclude the additional health allowance which is advisable. It has been shown by Sherman in America and Orr in this country that many diets do not even reach the figure of 0.45 gramme. Leitch enters into some interesting speculations as to the possibility of senile osteoporosis being due to deficient calcium intake. In his estimates of the requirements at different age periods the most striking feature is the high requirement in adolescence increasing up to 2 grammes between the years 15 and 16. Assuming that milk provides two thirds of the calcium intake, this means that children at the age of 16 need two pints of milk a day.

An interesting section is devoted to the calcium supplied to the infant in breast milk. Leitch brings forward evidence that breast milk is often qualitatively and quantitatively inadequate as a source of calcium for the infant. Qualitatively in the figures he quotes from various authorities there is a range from a minimum of 0.126 to a maximum of 0.717 gramme per litre of breast milk. On the quantitative side numerous experiments are quoted which indicate that the supply of breast milk is often inadequate. More important is the suggestion that there may be a disparity between calorie value and calcium content of breast milk. If this is true, then growth may be occurring in the infant without the calcium needs being properly met. Taking the optimum growth curves for infants Leitch calculates that in order to maintain the optimum 10 grammes of calcium per kilogramme of body weight which is found at birth the calcium intake must be 0.2 gramme at 1 month and 0.52 gramme

at 6 months. This corresponds in breast milk of average calcium content (0.32 gramme per litre) to a daily intake of 30½ fluid ounces at 1 month and 57 fluid ounces at 6 months. There are many nursing mothers who do not reach this yield, and if the calcium content is much lowered the possibility of deficiency arises. There are at least two assumptions in this reasoning that might be challenged. The first is the assumption that it is physiological for the birth ratio of calcium to body weight to be maintained. Too little is known about changes in the ratio of bone weight to body weight in the first few months of life. The second assumption on which the calculations have been made is that 60 per cent of the ingested calcium is retained by the body. We are confronted again by the paucity of knowledge of the processes of absorption from the intestine. It is obvious that the subject of the calcium intake of infants requires careful examination. The most urgent need is to know whether the calcium content of breast milk can be affected by the mother's diet. Cow's milk contains nearly four times as much calcium as breast milk, but until there is more information about the fate of the calcium in the intestine it cannot be deduced that cow's milk is a better source of calcium for the infant. The review deals with some of the points raised in this connexion. Cow's milk usually has to be diluted before being given to infants, but more important is the fact that the buffering power of cow's milk is much greater than that of breast milk. Since it is likely that the absorption of calcium depends on the pH of the intestine the ability of the infant to absorb the calcium of cow's milk will depend to a certain extent on its power to secrete gastric hydrochloric acid. Existing knowledge of the secretion of hydrochloric acid in children points to marked variations. To a certain extent the high buffering power of cow's milk can be reduced by treating the milk with acid. Further, it seems more than likely that one of the functions of vitamin D is to lower the pH of the intestinal contents and hence increase the absorption of calcium.

Dr Leitch's review suggests many possibilities in relation to stature and its dependence on diet. Certainly all nutrition workers in England and America are agreed about the ever-present danger of calcium deficiency in modern diets, and as the reviewer points out there is need for much more research work on the subject.

¹ *Nutr. Abstr. Rev.* 1937, 6, 553

THE DEFENCE BUDGET

Mr Neville Chamberlain's sixth Budget is of more than ordinary interest not only because it is apparently his last, but because it sets up a new source of revenue which it is hoped will go a long way towards solving the financial problem created by the special defence expenditure of the next few years. Not that the new levy is likely to provide more than a comparatively small part of the money necessary, the greater portion will have to be borrowed, but it will facilitate that borrowing by establishing the soundness of the nation's financial system and helping to provide for payment of interest on the money borrowed. In spite of the unexpected falling off in receipts from income tax and surtax the past year was very satisfactory and (apart from debt reduction) showed an excess of ordinary receipts over ordinary expenditure of £7,500,000. Taking the revenue for the present year on the basis of existing taxation the increase in expenditure would create a deficit of nearly £15,000,000, and the Chancellor's primary task was to fill that gap.

In accordance with general expectation the income tax is to be raised to 5s in the £ and the increase of 3d in the £, coupled with additional revenue to be anticipated from levying the tax on the higher profits of 1936 instead of on those of 1935 and from taking steps to reduce artificial avoidance of the tax is expected to produce an additional £13,000,000. The balance of £2,000,000 could no doubt be raised by modification of existing taxes such as the petrol duty or the tobacco tax or from some of the new sources of revenue which Mr Chamberlain had considered—such as the suggested tax on cosmetics. He has however taken a more far-sighted and as many will think, a more statesmanlike view of the situation. The new defence levy which he has explained in outline is obviously derived from the excess profits duty which was so prominent a feature of the national finance during the great war. It must be admitted that apart from the outstanding difference that happily we are not actually at war the circumstances are in many respects similar. Now as then enormous Government expenditure is tending to the enrichment of some but to the impoverishment of the community as a whole and the reaction of any one industry on others is such as to render hopeless any attempt to disentangle from the general result such elements of increased prosperity as are due to that expenditure. The conclusion is irresistible that in such circumstances those who are fortunate enough to participate in the special

prosperity should contribute specially out of their increased gains. There is not space here to discuss the form the defence levy is to take, it will suffice to say it is clear that the Chancellor's advisers have followed the main lines of the old excess profits duty but have endeavoured to introduce such modifications as will remove some of the worst features of that much disliked but very prolific tax. We are glad to note that it is not proposed to extend it to employments or to professions. Such an extension would be unlikely to produce much revenue—for it is in the world of industry and trade that increasing demand and rising prices create extra profits—but it would undoubtedly cause inconvenience and expense in connexion with the various returns and computations that would be necessary. The Chancellor does not anticipate from this source in the current financial year more than the £2,000,000 necessary to balance his account, but for the following year it is estimated to produce over £20,000,000.

The increase in the income tax will make an appreciable addition to the already heavy burden borne by the professional man but after the rumours that have appeared in the Press or have passed from mouth to mouth in the past few weeks he can at least feel that he has escaped other calamities. The petrol duty is not increased the surtax limit is not lowered to £1,500 and not less but nearly £4,000,000 more is to be spent on roads. Mr Neville Chamberlain has again brought to the management of the national finances those qualities of foresight and business acumen which the public have learned to associate with his previous Budgets. He has not only solved the immediate problem in a sound and equitable manner he has laid the foundation for the finances of the next few years and his successor should have good cause for gratitude.

CONTROL OF FOOD HANDLERS

Complete knowledge of the amount of illness caused by people who deal with food—food handlers—in the American sense—must obviously be lacking. Epidemics of scarlet fever, typhoid and paratyphoid fevers and epidemic sore throat in recent years in England must have convinced people of the dangers of this source of infection and a perusal of the rich store of facts compiled by J. C. G. Ledingham and J. A. Arkwright vividly brings home the fact that the carrier is a danger to the food handling trade. The Americans take these matters more seriously and logically and the supervision of food handlers is enforced by comprehensive regulations in the U.S.A. A recent report gives rise to the speculation that some greater measure of control in

England might be advisable although typhoid for example is not the common danger here that it is abroad—the result of the pioneer and progressive work on sewage and water supply which England gave to the world. Dr J R Scott¹ of Albuquerque New Mexico records the results of ten years' examination of specimens—presumably faeces—from food-handlers. Among 6 600 specimens examined twenty from twenty individual food handlers gave cultures of typhoid bacilli; the positive carriers derived from various occupations being 3 per 1 000 among milk producers and among restaurant staffs and four among 700 bakers. It may be that our English system of general supervision and intense "detective work" by efficient bacteriologists when an outbreak occurs is in the long run more effective and less costly than the American system, but is it? Such a system might be described as 'delayed preventive medicine' and delay may entail loss of life.

HISTAMINE AND ANAPHYLACTIC SHOCK

The association of histamine or histamine-like substances with various conditions of shock and anaphylaxis has for long been the object of experiment. Several investigators have observed the liberation of histamine-like substances during anaphylactic shock using the isolated lungs of "shocked" guinea-pigs. Recently the matter has been reinvestigated by H Schild, who considers that the available evidence is strong enough at least to warrant the working hypothesis that it is indeed histamine which is liberated in the guinea-pig's lung during anaphylactic shock. Schild also used the isolated perfused lungs of guinea-pigs previously sensitized actively or passively with egg albumen or with serum from rabbits previously sensitized to egg albumen. The shock condition was induced in the perfused lungs by introducing 10 mg albumen into the perfusing fluid. The presence of histamine-like substances was tested for in the perfusate by the usual pharmacological methods using histamine acid phosphate as comparison. By inducing shock at different intervals from the time of sensitization it is possible to obtain more or less graded responses in bronchoconstriction and vasoconstriction in the lung. Thus any correspondence between the degree of shock phenomena and the liberation of histamine could be observed. Schild discovered a close relation between the bronchial and the vascular reaction and the amount of histamine detectable in the perfusate. Histamine does not, however, seem to be the only agent concerned in the phenomena of shock, since the amount of histamine detectable is many times smaller (probably 1/100) than that necessary to reproduce the intense effects of anaphylactic shock. As it could be shown that the bronchoconstriction brought about in the lung preparation by addition of barium chloride to the perfusing fluid does not lead to a liberation of histamine, it can be concluded that "shock histamine" is not a result of the muscular contraction in the bronchi and the vessels. This is an important finding, because it was

conceivable that the known changes in permeability in the muscle cells during shock might lead to a liberation of intracellular histamine. As many agents can cause shock symptoms in non-sensitized guinea-pigs (1 molin agar, inorganic potassium and calcium salts, distilled water, etc.) it was important to demonstrate as Schild did that such "anaphylactoid" reactions do not release histamine from the isolated lungs. Distilled water was an exception to this, but Schild attributes this to a disintegration of the cells rather than to an active response of the tissue. It is well known that adrenaline inhibits the bronchoconstriction of anaphylactic shock, and it was found that this was so in the 'shocked' isolated lung and also that adrenaline decreased the vasoconstriction. Investigation of these effects of adrenaline revealed that there was a parallel diminution in the liberation of "shock histamine" when the inhibition was marked, thus confirming the close correlation of histamine and smooth-muscle contraction. It would appear too that if histamine is not the only substance associated with the smooth muscle contractions, adrenaline also inhibits the liberation of the unknown others. It is clear that the solution of the problem of anaphylaxis is still remote, but the method of the perfused lung seems to offer a rich field.

SKIN DISINFECTION

It is remarkable that there should be no general agreement on the best method of disinfecting normal skin. If the truth were known the method might be found to vary with circumstances, but some of the innumerable reagents or combinations of reagents now in use could certainly be abolished if only for the sake of simplicity. Unfortunately there is no generally recognized method of testing a skin disinfectant, although many have been suggested and used. Dr Jørgen Ernst in his recent monograph¹ describes an extensive series of tests of this nature, in which the method of cultivation was rubbing the skin of the hand and forearm with a gauze swab which was then shaken in a measured volume of sterile saline from which 1 c.c. was then sown as a shake culture in blood glucose-agar. Such tests were carried out daily for a month on physicians and nurses in a maternity hospital who employed a specified method of disinfection throughout this period. The object of this long continued repetition was to discover whether repeated chemical treatment of the skin abolished its natural power of self-disinfection and whether it led to a persistent decrease or increase in the bacterial population of the skin. The flora involved was only that of the normal skin, no extraneous bacteria being applied; this difference from Colebrook's technique perhaps accounts for the fact that the conclusions reached are diametrically opposed to his. Ernst found 0.1 per cent mercury perchloride the most effective of his reagents and dettol cream useless. Killing extraneous and possibly dangerous bacteria on the surface of the skin is both more impor-

¹ Canadian Pub. Hlth. J. 1937, 28, No. 1, 42.

² Quart. J. Physiol. 1936, 28, 165.

Hautdesinfektions Probleme By Jørgen Ernst, Copenhagen, Levin and Munksgaard, 1937. (10 Cms.)

tant and an easier matter than getting rid of saprophytic staphylococci which live not on but actually in its superficial layers indeed "scrubbing-up" even increases the recoverable number of such comparatively harmless bacteria. This is a distinction which Dr Ernst himself does not seem fully to appreciate. Nevertheless the apparent incompatibility of his results with those obtained by others indicates clearly enough that the last word has yet to be said in this difficult field of study. Other disinfectants tested were spirit and alcohol in various forms and iodine unfortunately there were no tests of ether organic mercury compounds, picric acid flavine or other dyes these would have afforded an interesting comparison. A factor which had to be considered was the skin's tolerance of chemical treatment. Whatever roughness was produced either in this way or by such harmless pursuits as tennis playing the bacterial counts rose as of course they did when there was any sort of skin lesion. The figures in the tables of results are somewhat more erratic even than those need be which are obtained by a quantitatively imperfect method and it is unfortunate that they are not averaged for the sake of closer comparison. Nevertheless this is a careful and interesting study.

LONDON'S MENTAL HOSPITAL SERVICE

The London County Council looks after a population of mentally afflicted persons—including only those under institutional care—equal to the total population of towns of the size of Aldershot Macclesfield or Gravesend—namely about 34 000. The twenty institutions in which the mentally disordered or the mentally deficient are housed occupy more than 3 000 acres and employ a staff of nearly 9 000. The annual report of the Council on this subject¹ is almost entirely statistical, but from the figures much interesting information can be gathered and many speculations may start. For example among the certified patients of all ages in mental hospitals the single are in excess of the married but among the voluntary and temporary patients from middle age onwards the married are in excess of the single. Among certified single patients the males exceed the females down to and including the age period 35–44 but afterwards the females exceed the males eventually doubling them in number while among married patients the females are in excess at all ages. During 1935—the year with which mainly the report deals—of the 3 356 cases admitted directly to mental hospitals over 71 per cent were 'first attacks. The most frequent cause was prolonged mental stress' and the next was acquired syphilis. The commonest form of mental disorder among the new admissions was recent (that is under one year) melancholia with non-systematized delusional insanity second on the list. As to the occupations of those admitted in a list of thirty classes the one described as 'housewives retired persons children scholars and students' accounted for twice as many as any other.

The number discharged recovered was 1 046 the ten year age period showing the largest number of recoveries was 35–44 for females and 45–54 for males. Of the 41 000 patients discharged 'recovered' during the last forty years 13 000 were readmitted to a London mental hospital, 4 500 of them within twelve months of their discharge. Of the 1 194 patients who died in mental hospitals in 1935 the greatest number were of the age period 55–64 but this was very closely followed by the number for the period 65–74 and 163 of the total number lived to 75 or over. Tables are given relating to the special work of the Maudsley Hospital with its out-patient department and the three out-patient psychiatric clinics attached to general hospitals. The number of patients disposed of during the year in these four out-patient clinics was 2 775 while 469 were admitted from the clinics to the wards of Maudsley. The average daily number of patients on parole in mental hospital grounds was 10.66 per cent of the total number of certified patients while 2.28 per cent were allowed outside the hospital grounds and 12.05 per cent had short periods of leave. The new cases of mental deficiency with which the Council was called upon to deal during the year numbered 774. The total number of defectives living of whom the Council has records is 16 378. 10 361 of these are under active care under the Acts while the remainder have already been under care. This figure which excludes the 3 752 children attending special schools for the mentally defective gives a ratio of 3.91 of the population of the county. Finally there is a brief appendix by Dr F. L. Golla pathologist to the mental hospitals in which he touches on the routine investigations and the special researches. The latter as he mentions them one by one seem very numerous but he adds the comment that the work (of research) continues to be patchy in its distribution and 'in certain institutions there is a spirit of inquiry among the medical staff that is lacking in others with equally good facilities for investigation'.

THE SEVEN STAGES OF JOHN BLAND SUTTON

Sir Comyns Berkeley contributes an interesting account of his friend and colleague the late Sir John Bland Sutton to the *Journal of Obstetrics and Gynaecology of the British Empire*¹. Entitled "The Seven Stages of John Bland Sutton and an Epilogue" it has as a frontispiece George Belcher's portrait from *Punch* with the old Middlesex Hospital in the background. Sir Comyns traces the history of Bland Sutton from his schooldays when lack of peace nearly led him to become a school master in an elementary school through the period when he lived by coaching perverse and idle medical students at Cooke's School of Anatomy until he had saved the £100 which he paid in golden sovereigns to the dean of the Medical School at the Middlesex Hospital in exchange for a perpetual student's ticket. And says Sir Comyns the dean had a hole in his pocket so that some of the hard earned coins never reached the bank for they literally fell out on the way. Plodding industry

¹ *Annual Report of the London County Council 1935*, Vol. VI, Mental Hospitals and Mental Deficiency, Westminster: P. S. King and Son Ltd. (14s.)

² Supplement to the *Journal of Obstetrics and Gynaecology of the British Empire*, April, 1937. Sherratt and Horley, The Surt and Sons, Pres., Limerick, Chelsea.

and skill in teaching led Bland Sutton slowly up the ladder to success until as he used to say himself he discovered a gold mine in the bellies of women and exploited it. He then turned his attention to public work for the profession and did it well as he had done everything else well lecturing at the Royal College of Surgeons serving on its Council and finally attaining the acme of his ambition when he was elected President. He rose slowly but not without friction jealousy and personal feelings often obstructed his progress but never made him bitter and his many hobbies enabled him to make light of them. His love for and curiosity about every kind of animal and the constant urge to travel were a godsend and enabled him to reach a happy old age for he was more than 81 when he died. It was right that his memorial service should be held in Westminster Abbey for apart from his professional eminence he was a Londoner of Londoners and his speech ever bewrayed him.

ACTION OF ACETYLCHOLINE ON SKELETAL MUSCLE

The theory that nerve impulses are transmitted in the autonomic nervous system by chemical intermediaries is now widely known and accepted as a result of the work of Loewi, Dale and their colleagues. Dale, Feldberg and Vogt¹ developed this general conception further and presented evidence that acetylcholine is liberated by nervous impulses at the endings of motor nerves to skeletal muscle. They naturally suspected that the acetylcholine so liberated might act as the normal transmitter of excitation from the nerve endings to the muscle end plate. To strengthen the evidence in support of such a view it was necessary to show that injected acetylcholine could cause a quick contraction of skeletal muscle resembling that produced by normal stimulation of a motor nerve. Dale and Gasser² had previously demonstrated that acetylcholine injected intra-arterially gave rise to a contraction of denervated skeletal muscle (which had been deprived of its motor nerve supply by appropriate section some weeks earlier). The Simonarts³ were apparently the first to prove that large doses of acetylcholine could cause a contraction of normally innervated skeletal muscle though the responses obtained were weak and irregular. Brown, Dale and Feldberg⁴ have advanced the subject further by showing that acetylcholine when injected rapidly enough into the empty arteries of normal mammalian muscle (the method of "close range injection") in doses as small as 0.002 mg produces with absolute regularity a contraction equal to or exceeding that resulting from a single maximal shock applied to the motor nerve. The muscle response to acetylcholine is abolished by previous treatment with curari as is the response to stimulation of a motor nerve but it is unaffected by atropine. After small doses of eserine a single shock applied to the motor nerve produces not a simple twitch

as is normally the case but a repetitive response resembling an evanescent tetanus. This result is compatible with the view that eserine by exerting its well known action of inhibiting the esterase which normally destroys acetylcholine permits the acetylcholine liberated at the motor nerve endings to persist longer and so gives rise to a series of responses on the part of the muscle. Bacq and Brown⁵ have further demonstrated that other members of the eserine series increase (potentiate) the response to stimulation of a motor nerve to a degree which is proportional to their ability to inhibit the action of cholinesterase *in vitro*. Recent studies by Brown⁶ show that acetylcholine sets up electrical changes in the muscle of a repetitive character like those occurring during normal activity. He examined the reactions of single muscle fibres after the injection of acetylcholine and found that the action currents were first of a high frequency and then gradually tail off; this would be in agreement with the view that acetylcholine acts as a stimulus in proportion to its concentration. But as Eccles has suggested in a recent review a number of points still remain obscure and will need clearing up before the acetylcholine theory of transmission at motor nerve endings can be completely accepted. It is for instance known that eserine in suitable doses may cause not potentiation but a depression of the response to motor nerve stimulation particularly if it is repetitive at frequencies over six per minute. Again after the administration of eserine acetylcholine may depress the response of the muscle to subsequent stimulation of a motor nerve. Dale has suggested in explanation of these findings that under certain conditions the persistence of acetylcholine in the vicinity of the muscle fibres may interfere with their normal reactivity. It must be borne in mind, however that whatever may be the ultimate fate of the acetylcholine theory (and the evidence as a whole in its favour is very strong) it has already led to practical results of great value in clinical medicine in suggesting the prostigmine treatment of myasthenia gravis which has proved so helpful in the management of patients suffering from this disease.

Dr R. A. Young will deliver the annual oration before the Medical Society of London at 11 Chandos Street, Cavendish Square on Monday, May 10 at 8.30 p.m. His subject is "Perspective and Poise in Practice."

The *Canadian Medical Association Journal* announces that the conjoint sessions of the Canadian Medical Journal and the Ontario Medical Association to be held in Ottawa during the week beginning June 21 will be graced by the presence of their Patron-in-chief the Governor-General. Lord Tweedsmuir will attend as guest of honour the luncheon on June 23 and participate in the ceremonial function on the evening of the same day.

¹ *J. Physiol.* 1936 86 353

² *J. Pharmacol.* 1926 29 53

³ *Arch. Int. Pharmacodyn.* 1935 49 302 51 381

⁴ *J. Physiol.* 1936 87 394

J. Physiol. 1937 89 45

⁵ *Ibid.*, 1937 89 220

⁶ *Ergebn. Physiol.* 1936 38 339

ENDOCRINES IN THEORY AND PRACTICE

This article is one of a series on Endocrinology, contributed by invitation

THYMUS AND PINEAL GLANDS

BY

SAMSON WRIGHT, M.D., F.R.C.P.

Structure and Development of the Thymus

The thymus is made up of lobules bound together by connective tissue. Each lobule consists of a deeply staining outer cortex of closely packed lymphocytes and a more faintly staining central medulla containing a reticulum of large branched cells in the meshes of which are comparatively few lymphocytes. The medulla also contains the concentric corpuscles of Hassall, which consist of a hyaline centre surrounded by several layers of flattened cells with poorly staining nuclei. Developmentally the thymus is an ectodermal structure which later becomes invaded by numerous lymphocytes derived from the mesoderm.

It is uncertain whether any of the original epithelial elements of the thymus persist after birth and function as secreting cells. Hammar regards the Hassall corpuscles as epithelial cells that have undergone a peculiar form of differentiation. Some histologists attempt to distinguish between lymphocytes and so-called "thymic" cells but it is doubtful whether such a distinction is possible. According to most workers the thymus continues to enlarge in size until about the time of puberty, and usually reaches its greatest development between the ages of 14 and 16 years. It then becomes progressively smaller, and atrophies at 50 to 60 years of age. The statement commonly quoted that the thymus attains its maximum size at the age of 2 is almost certainly incorrect.

Effects of Thymectomy

The published reports of the results of extirpation of the thymus are conflicting, but on the whole the changes observed are small. In young animals nutritive changes, characterized mainly by adiposity, are said to occur. The skeleton is small and the bones are atrophic. Interesting experiments have recently been carried out to determine the effects of thymectomy in five successive generations of rats. Growth is definitely retarded in the second and later generations, especially in the first four or five weeks of life: thus a control rat at 18 days weighed 23 grammes and a thymectomized rat of the second generation at the same age weighed only 12.5 grammes.

It is important to stress that the thymus undergoes atrophy in any condition of malnutrition or prolonged illness and more especially perhaps in deficiency of vitamin B.

Enlargement of the Thymus

After castration in young animals the thymus remains large, and does not undergo its customary involution at puberty. It has been suggested on the basis of this observation that the normal decrease in the size of the thymus is due to an internal secretion formed by the gonads. In a number of clinical conditions the thymus fails to undergo involution at the proper time or possibly may show renewal of growth after involution has taken place. Such hyperplastic glands usually associated with general lymphoid overgrowth are sometimes found in infants. The abnormal thymus may weigh as much as

60 grammes at birth, and may constitute an obstruction to the respiratory passages or to the great veins.

A disorder called "thymic asthma" is described in older children; this is attributed to mechanical obstruction by an enlarged thymus, and is said to be relieved by partial removal of the gland. The thymus is enlarged in many cases of exophthalmic goitre, Addison's disease, acromegaly, eunuchoidism, and in a high proportion of cases of myasthenia gravis. Neither the mechanism of production of this enlargement nor its significance is at present understood.

The condition known as status thymo lymphaticus merits fuller consideration. In many young persons who have died suddenly after some slight injury or infection apparently insufficient to account adequately for the fatal result, general swelling of the lymphoid structures and enlargement of the thymus may be found at necropsy. It is commonly assumed that the hyperplasia of the thymus is related in a significant manner to the occurrence of sudden death. The whole subject needs further investigation. Recent studies suggest that general lymphoid overgrowth is not regularly associated with thymic enlargement in these cases, and that there is, therefore, no justification for the term 'status thymo lymphaticus'. Others assert that the thymic overgrowth is of no importance in itself and is only of interest as one manifestation of a general constitutional inferiority of the affected person. It is claimed that in these subjects the heart is weak and the large blood vessels relatively narrow and thin-walled. It may be that the failure of the inadequate circulatory mechanism is an important factor in causing death. The male subjects tend to show female secondary sex characters, such as scanty hair, smooth skin and small external genitals. In women the thorax and extremities are slender, the reproductive organs are poorly developed, and menstruation is irregular or absent. The incomplete development of the gonads which characterizes these cases may perhaps be responsible for the failure of the thymus to undergo its normal involution after puberty. It must again be stressed, however, that there is as yet no evidence that the state of the thymus is in any way directly responsible for the sudden death in these cases.

Action of Thymus Extracts

Earlier workers such as Asher, claimed that thymus extracts produce general skeletal growth and hasten the development of the gonads: the active principle was called thymoeresein. More convincing experiments have recently been carried out by Rowntree who injected thymic extracts into successive generations of young rats. The extracts were prepared by Hanson's method, which consists of making an extract of the neck thymus gland of calves with 0.5 per cent hydrochloric acid. The extract is a golden yellow liquid with a pH of about 5. It is non-toxic in relatively large doses and non-irritating locally when injected. 100 ccm of the extract correspond to 60 grammes of raw calf thymus.

The result in the first generation of treated rats was that the animals became heavier than the controls, bred more frequently and gave rise to larger litters which were above the average in weight. In the third to seventh generation there was increasingly precocious differentiation. In the data which follow quoted from Rowntree the normal

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SPECIAL NOTICE TO MEMBERS

Every Member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he or she belongs. The Financial Statement will appear next week.

MATTERS REFERRED TO DIVISIONS

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PRELIMINARY

ANNUAL MEETING, BELFAST, 1937

1 THE ANNUAL MEETING, 1937, commences at Belfast on Friday July 16th under the presidency of Professor R. J. Johnstone, F.R.C.S., F.C.O.G., Member of Northern Ireland Parliament.

ANNUAL MEETING, OXFORD, 1936

2 The Council has had pleasure in conveying the thanks of the Association to the President (Sir E. Farquhar Buzzard), the Honorary Local General Secretary (Dr F. G. Hobson), the Honorary Local Treasurer (Mr W. M. Goodenough) to the municipal and university authorities and to other official and private persons who contributed to the welfare of the members of the Association taking part in the Oxford meeting.

ANNUAL MEETING, PLYMOUTH 1938—ELECTION OF PRESIDENT, 1938-39

3 In connexion with the Annual Meeting to be held in Plymouth in 1938 the Plymouth Division has nominated Dr. Colin D. Lindsay as President of the Association, 1938-39.

The Council recommends

Recommendation That Colin D. Lindsay, M.D., Honorary Senior Physician, Prince of Wales's Hospital, Plymouth Physician Royal Eye Infirmary Plymouth and Consulting Physician Tavistock Hospital, be elected President of the Association, 1938-39.

Loyal Address to His Majesty The King

4 The Council has submitted the following Loyal Address to His Majesty the King, George VI, upon the occasion of His Accession to the Throne.

To the King's Most Excellent Majesty

The Humble Address of the President and Members of the British Medical Association

May it Please Your Majesty

We, Your Majesty's dutiful and loyal subjects, the members of the British Medical Association distributed throughout Your Majesty's Empire, humbly tender to Your Majesty congratulations upon Your Accession to the Throne.

We beg leave in this our expression of loyalty to associate Her Most Gracious Majesty Queen Elizabeth who by her devotion to the common good of the people, has won the affection and admiration of Your subjects. It is our fervent

hope that Your Majesties may have many years of happiness together and that Your Reign may be long, illustrious and blest with peace

Signed on behalf of the British Medical Association,

E. Farquhar Buzzard, President

E. Kaye Le Fleming, Chairman of Council

H S Souttar Chairman of Representative Body

N Bishop Harman, Treasurer

King George VI as Patron of the Association

5 The Association has received a memorandum from the Privy Purse Office, Buckingham Palace, intimating that His Majesty King George VI is pleased to become the Patron of those Societies and Institutions recently granted Patronage by King Edward VIII. The Association thus continues the Royal Patronage with which it has been so long honoured

Honours

6 The Council has pleasure in announcing that during the present session His Majesty the King has conferred honours upon the following members, to each of whom the congratulations of the Association have been sent

K C V O

John Fraser, Edinburgh

KNIGHT BACHELOR

Joseph Arthur Arkwright, London

John Charles Grant Ledingham, London

Ernest Kaye Le Fleming, Wimborne

John Henry Morris-Jones, London

CB (MILITARY DIVISION)

Thomas Seymour Coates, Aldershot

CMG

William Henry Kauntze, Entebbe

CIE

Richard Edward Flowerdew, Calcutta

Graham Colville Ramsay, Calcutta

CBE

William James Carr, Melbourne

Percival Alfred Dingle, North Borneo

OBE

George Moncrieff Barron, Manly N.S.W.

Sydney Letts Dawkins, South Australia

William Stewart Empey, London

Bernard Hart Armthorpe, Doncaster

Victor William Tighe McGusty, Suva, Fiji

William Egbert Thompson, Jerusalem

M.B.E.

Manikkam Durairaj David, Rangoon

KAISAR I HIND GOLD MEDAL

George McGregor Millar, Kashmir

OBITUARY

7 The Association has to deplore the loss of the following members. Their names are followed by the offices they respectively held in the Association

DR CASEMENT GORDON AICHA, President, New Zealand Branch
Chairman Auckland Division

DR ALEXANDER BALLANTYNE, Chairman Southport Division.

DR STEPHEN EDWARD BAXTER, President South Midland
Branch. Representative Northampton Division.

DR HOWARD BARCLAY BILLUPS, Chairman, Isle of Wight Division
SIR JOHN BLAND-SUTTON BART, Secretary 1895, Vice President,
1910, Section of Surgery

SIR ALFRED PERCY BLENKINSOP, Member of Council, Secretary,
Section of Navy, Army and Ambulance, 1910

DR LOU'S CHARLES SOUTHALL BROUGHTON, Chairman, West
Bromwich and Smethwick Division

DR JOHN HENRY CHAMBERS, President Isle of Man Medical
Society (Isle of Man Branch)

DR LUCIEN MILBOURNE CLARK, President Jamaica Branch

DR ARTHUR WARD COLLINS, Chairman Furness Division

DR ALBERT ERNEST COFE, Representative, Westminster and
Holborn Division, Member Insurance Acts Committee.

MR FRANK PEARSON SAEFFINGTON CRESSWELL, Secretary, 1906.
President, 1928, Section of Ophthalmology

DR SYDNEY WALTER CURL, Chairman North East Essex
Division

DR GEORGE WARWICK BAMPFYLDE DANTELL, Representative,
Cape of Good Hope Western Branch, Vice President, Section
of Anaesthetics, 1932

DR GURTH EAGER, Secretary, East Hertfordshire Division.

LT COL. ROBERT HENRY ELLIOT, Member of Council, Representa-
tive, South Indian and Madras Branch, Vice President,
Section of Naval and Military, 1920, Vice President, Section
of Ophthalmology 1921

COL. CHARLES ROULSTON ELLIOTT, Chairman and Representative,
North East Essex Division

DR ARCHIBALD FAIRLIE, President, North of England Branch
Chairman and Representative Blyth Division

DR JOHN NORMAN CHUBA FORD, Secretary, Section of Ob-
stetrics and Gynaecology, 1931

DR THOMAS FORREST, Chairman Glasgow Southern Division

DR GEORGE ROY FORTUNE, Vice Chairman, Newcastle-on
Tyne Division

PROF DAVID FRASER HARRIS, Secretary Section of Anatomy
and Physiology 1911

DR ARCHIBALD GILLESPIE, Chairman East Yorkshire Division
DR JOHN MAXWELL GOVER, Chairman, Newcastle-on Tyne
Division

DR ALFRED GREENWOOD, President Kent Branch, Representative,
Maidstone Division, Member, Public Health Committee

SIR WM HEATON HAMER, Chairman, St Pancras Division.
Secretary Section of Public Medicine 1902

DR JOHN HERN, Chairman and Representative, Darlington
Division

DR JAMES HILL, President Glasgow and West of Scotland
Branch, Chairman, Renfrewshire and Buteshire Division

DR WM HUNTER, Secretary, Section of Pathology and Bac-
teriology, 1897, Vice-President, Section of Pathology, 1907

Vice-President, Section of Medicine, 1911

DR ORLANDO INCHLEY, Secretary Section of Physiology,
Pharmacology, Therapeutics and Dietetics 1921

DR. GEORGE WM NEILD JOSEPH, Member Public Health
Committee, Secretary Section of Public Medicine and In-
dustrial Diseases 1924

MR THEODORE HARTMANN JUST, Secretary, Section of Laryn-
gology and Otology, 1924, Vice President, Section of Oto-
Rhino-Laryngology 1934

DR JAMES TYSON KITCHIN, Secretary, Section of Medical
Sociology 1924

DR. HERMAN FERMOR LAWRENCE, Vice President, Section of
Dermatology 1935

DR FRANK WHITWELL KINNEAR LAWRIE, Chairman, North
Northumberland Division

DR. CHARLES JAMES LEWIS, Vice-President, Section of Pathology,
1911

DR. DAVID MCASKIE, Chairman and Representative, Ports-
mouth Division

DR DONALD CAMERON MACASKILL, President, Malaya Branch.
Chairman Federated Malay States Division

DR DUNCAN ROBERT MACDONALD, Chairman Lothians
Division

DR. THOMAS WM McDOWALL, Representative Morpeth
Division

PROF JOHN ALEXANDER MACWILLIAM, Vice President 1898
President 1922, Section of Physiology, Vice President, Section
of Anatomy and Physiology 1914

DR HAMILTON CLELLAND MARR, Vice President, Section of
Mental Diseases 1927

DR HUGH MEYRICK MEYRICK JONES, President Gloucestershire
Branch, Secretary, Section of Radiology and Radio-Thera-
peutics 1929

DR JOHN INNES MOIR, President British Honduras Branch

THE RIGHT HON. LORD MOYNHAN OF LEEDS, Vice President
of the Association, President, Section of Surgery 1925, 1930
and 1932.

DR. KENNETH FRANCIS MULLIGAN Chairman, Monmouthshire Division
 DR. HENRY TEMPLE MURSELL Representative Johannesburg Division
 DR. IAN OGILVIE Chairman, Warrington Division
 DR. HESLOP LAIRD PEARSON Representative, Birkenhead Division
 DR. EDITH CICELY PHILIPS Secretary, Tower Hamlets Division
 Member Anaesthetics in Midwifery Committee
 DR. ROBERT LACHLAN PINKERTON Chairman Croydon Division
 DR. ROBERT GEORGE RIDDELL Chairman Torquay Division
 SIR JOHN ROBERTSON Secretary, Section of State Medicine
 1903 Vice President Section of State Medicine and Industrial Diseases 1911
 DR. JOHN WM ROWLANDS Chairman and Representative, South Caernarvon and Merioneth Division
 DR. JOHN ENSLIE SKINNER President, Aberdeen Branch
 Representative, Aberdeen Division Member, Scottish Committee
 DR. JOHN SMALE President, North of England Branch Representative, Darlington Division
 DR. FRANCIS VICTOR SMALL Secretary Uganda Branch
 DR. HUGH ROSS SOUPER Chairman City of Aberdeen Division
 Secretary Section of Orthopaedics and Diseases of Children 1921
 DR. FREDERIC WILSON STANSFIELD President, Oxford and Reading Branch Chairman, Reading Division
 DR. JAMES ERNEST STRATTON Chairman Camberwell Division
 DR. EDWARD MERVYN THOMSON Chairman Westminster and Holborn Division
 DR. RICHARD TIMMIS TURNER Chairman, Crewe Division
 DR. WILLOUGHBY MASON WILLOUGHBY President, Section of Public Medicine, 1936
 DR. FREDERICK ERNEST WITHERS Representative, Lincoln Division

Dr Martha Adams Dr Isobel Macindoe Malcolm Aitken Dr John Macquarie Alcorn Dr Samuel Hazlett Browne Allison Dr David Anderson Dr Wm Bain Dr Noel Charles Beaumont Dr Joseph John Bell Dr Thomas Percival Berry Dr James Andrew Blair Dr Charles Wm Sproule Boggs Dr John George Wilson Boleyn Dr James Joseph Fitzgerald Bourke Dr Joseph Edward Bowser Dr James Boyd Dr George Francis Bradley, Dr George Bruce, Dr George Henry Burford Dr Michael Burke Dr Montagu Francis Butler Dr Gordon Gould Cameron, Dr Harold Victor Cantor Dr Ernest James Chambers Dr Herbert Child Dr Wm Henne Crawford Clarke Dr Patrick John Clarke, Dr Abraham Cohen, Dr Harold Fitzwilliam Comyn Dr John Burton Cook Major General Thomas Martin Corker Dr David Corry Dr Daniel Samuel Coto, Dr James Allan Coutts Dr Frederic Denys Crew, Dr Harry Crichton Dr John Frank Crombie Lieut Col Henry Joseph Crossley Dr Godfrey Christopher Dalton Dr Walter Dammis Dr Wm Burwell Darroll, Dr Percy Vernon Davies Dr Thomas Beveridge Davis Dr Rose Lilian Humphrey Davy Dr John Dawson Dr Barnfield Dayman Dr Robert James Dick, Dr Arthur Herbert Dodd, Dr Charles Edward Dolling, Dr John McFarlane Donnan Dr Frederic Bernardus Dreyer, Dr Alfred Duckworth Dr Michael Dundon Dr John Thomas Dunston Dr Hubert de Burgh Dwyer Dr Henry Alexander Eason, Dr Edmund Eccles Dr Percy James Edmunds Col Norman Faehnie Dr Herbert John Fausset Dr Archibald Ferguson, Dr Ralph Sanderson Ferguson Dr Maunce Fitzgerald Dr Wm Alfred Fitzherbert, Dr Joseph Fletcher Dr Thomas Forde Dr Henry Mellor Fort Dr Thomas David Fraser Lieut. Col John Kennedy Gaunt, R.A.M.C. Dr Henry Gibbons Dr Robert McLean Gibson Dr John Wm Gormley Dr James Wm Grange Dr Henry Gordon Greaves, Dr Kelburne King Grieve Dr Joachim Gunnane Dr Cuthbert Murray Halsall, Dr Arthur Butler Harris, Dr Wm Roberts Harris Dr Samuel Henry Harris Dr Walter Sidney Hart, Dr Wm Thomas Henderson Dr Arthur Machen Hill, Dr Henry Hardacre Irving Hitchon Dr Arthur Noel Hodges, Dr Henry Holt Dr Wm Nichols Horsfall Dr Hillis Kyle Houston, Col Harry Arthur Leonard Howell Dr James Linklater Thomson Isbister, Dr John Wm Moir Jameson, Dr Victor Alexander Jaynes Dr Henry Douglas Johns Dr John McCubbin Johnston Dr Thomas Johnstone Dr John Keay Dr Harold Kelson Dr Charles Kemp Dr Thomas Butler Kerr Dr Herbert Dove King, Dr Isaac Thiagarajah Kunaratnam Dr Thomas Lavery Dr David Lawrie, Dr Cecil Vivian Le Fanu Dr Robert Wellesley Lethbridge, Dr John Liddell, Dr Ithel Penderel Llewellyn, Dr Edward James Lloyd Dr James Ernest Long Lieut.-Col Bell Wilmott Longhurst, Dr Henry Stinton Lowe Dr Frederic Sidney Jermaine Lulham, Dr Victor Alfred Luna Dr Hugh Angus McColl Dr Joseph Edward McDonagh Dr Robert McDowell Dr John Macfee Dr Daniel Florence MacGillcuddy Dr David Robertson MacGregor Dr David Valentine McIntyre Dr Keith Stuart Mack, Dr John Alexander McLeay Dr Robert Maxwell McMaster Dr Samuel McNair Dr James Joseph McNamara,

Dr James Campbell MacNellie Dr Olive Christian Hislop Campbell MacRae Dr Henry Joseph McShane, Dr Wm Stevenson Malcolm, Dr Samuel Mallinick Dr Charles Edward Marsden Dr Edward Fuller Martin Dr Robert Martin Dr Thomas Muirhead Martin Dr Victor Harold Mason Dr Samuel Lightfoot Melville, Dr James Millar Dr Charles James Milligan Dr John Kenneth Milward Mr James Murray Duff Mitchell Dr David Aitken Montgomery, Dr Alexander McCambridge Dixon Monypeny Dr Bedlington Howel Morris Dr Dinesh Krishna Mukerji Dr Charles Clements Murphy Dr Timothy Joseph Murphy Dr Wm Paul Anthony Murphy Dr Lionel Myers Dr Dardapani Nagarajan Mr Henry Philbrick Nelson Dr Sheffield Neave Dr Robert Nevin Dr Charles Joseph O'Connor Dr Joseph Patrick O'Hara, Dr Frederick Wm Oldershaw Dr Ingersoll Olmsted, Major Philip Adams Opie, R.A.M.C. Dr Henry Alexander Osborn Dr Allan Cameron Owen Dr Arthur Gruffudd Wm. Owen Dr Wm Smith Paget-Tomlinson, Dr Edward Watson Palin Dr Samuel James Parkhill Dr Wm Edwin Peacock Dr Alfred Llewellyn Perkins Dr Mathias Michael Perl Dr Charles John Perrott, Dr Robert Nelson Perrott Dr John Hare Phipps Dr Arthur Starkie Plant, Dr Louis Hauti Potaka Dr Mary Isabel Prentice Dr Ethel Jane Mildred Pryce Dr Richard Hay Pulpaka Dr John Smith Purdy Dr Ernest Bidgood Randall Dr Herbert Jack Rawson Dr Hugh Llewellyn Rees Dr James Renach Dr Jules Frederick Rey Dr Arthur Rhodes Dr Wm Gerald Ridgway Dr James Jenkins Robb Dr Frederick Wm Robertson Dr George Burton Robinson Dr Leland Robinson Dr Neil Robson, Dr Jacob Rosenthal Dr Wm Arthur Rudd, Major John Milo Ryan R.A.M.C. Dr Joseph Charles Ryan Dr Francis Joseph Sadler Dr Harrington Sainsbury Dr Henry Thomas Samuel Dr John Harry Saunders Dr Monica Lucien Mary Saunders Lieut Col Arthur de Courcy Scanlan Dr Edward Reginald Secord Dr Wm Seldon Lieut Col Sir David Semple Dr Richard Burrows Sephton Dr Patrick Francis Shanahan Dr Albert Sophron Sieger Dr Frank Campbell Smith Dr Lilian Winifred Smith Dr Wm Torrance Smith Surg Capt Alexander Kenneth Smith Shand Dr Jessy Winifred Staley Dr Wm Edward Stevens Dr Edward Alfred Strahan Mr Clement Sturton Dr Wm John Taggart, Col Charles John Wilmer Tatham Dr Georgina Temperley Mrs G M Thomas Dr Ieuan George Thomas Dr Henry Philip Thomason Dr Arthur Hugh Thompson, Dr Francis Henry Thompson Brevet Col Harold Hay Thorburn I.M.S. Dr John Joseph Tuohy Dr Hugh Vallance Dr George Rayleigh Vicars, Dr Alfred Bertram Vine, Dr James Waldo Wallace, Dr Robert Wallace, Dr John Hackett Walsh, Dr James Maxwell Warnock Dr Richard James Warrington, Dr Edwin James Wenyon Dr Frank Whitby, Dr George Morton Wilcockson Dr John Wilkinson Dr George Gilmore Drake Willett, Dr Griffith John Williams, Dr James David Wilson Dr Wm Gordon Wright Dr Alfred Langford Wykham, Dr Eric Melvyn Wylie, Dr Wm Andrew Wylie Moor, Dr Samuel Zobel

Representation on Outside Bodies

8 During the session the following appointments and reappointments have been made by the Council

Health and Comfort Conditions in Housing Dr E H Snell, Council of Society of Medical Officers of Health
 Sir Henry Brackenbury, Dr W Paterson Committee of Management of the Royal Medical Benevolent Fund
 Dr C O Hawthorne Child Guidance Council Dr R Langdon-Down, Board of Governors of University College of Hull Dr D M Mackay, Central Council for Care of Cripples Mr W McAdam Eccles, Mr P Jenner Verrall, Association of Special Libraries and Information Bureau
 Dr S Monckton Copeman, National Central Library
 Dr C O Hawthorne, National Ophthalmic Treatment Board Mr N Bishop Harman, Dr P Macdonald Mr J D M Cardell, Governing Body of the British Post-Graduate Medical School Sir Henry Brackenbury, Joint Committee of Epsom College and its Royal Medical Foundation Dr L G Glover Poisons Board Dr J W Bone Board of Directors of the Scholastic Medical and Clerical Association Ltd (British Medical Bureau)
 Mr N Bishop Harman Dr J W Bone Sir Humphry Rolleston, Dr J D Ewart Sir Robert Bolam Advisory Committee of the International List of Causes of Death Dr C O Hawthorne Council of Empire Rheumatism Campaign Dr F G Thomson Central Council for Health Education Dr A N Mathias Dr Charles Hill Dr H C Boyde, Joint Council of Midwifery Professor James Young

DELEGATES OF THE ASSOCIATION TO CONFERENCES OF OUTSIDE BODIES -

9 During the session the following members have been appointed delegates to represent the Association at the conferences indicated

48th Royal Sanitary Institute Congress Prof R M F Picken 7th English Speaking Conference on Maternity and Child Welfare Dr W H F Oxley Eighth Imperial Social Hygiene Congress Dr W G Willoughby, Annual Conference of National Association for the Prevention of Tuberculosis Sir Robert Philip

Protection of Practices of Members Joining His Majesty's Forces

10 The Council is considering the following Minute 155 of the A R M 1936, and it hopes to be in a position to deal with the matter in its Supplementary Report

Minute 155—Resolved That the Council be asked to consider the advisability of the appointment of a committee to consider the protection of the practices of members of the medical profession who join His Majesty's Forces in times of national emergency

Gifts to the Association

11 The Council has pleasure in reporting the following gifts

By Mrs Elizabeth Fergusson, a framed crayon portrait of Dr Richard Thomas Hunt one of the Founders of the Association in conjunction with Sir Charles Hastings

By the Wellcome Foundation, Ltd a replica of the medal struck in honour of Dr Frederick Belding Power, who for over 18 years was the Director of the Wellcome Chemical Research Laboratories, London, and later became Director of the Phyto-chemical Research Laboratory of the Bureau of Chemistry, United States Government, Washington

Introduction of National Health Insurance in New Zealand

12 A national health insurance scheme is being introduced into New Zealand this year and in view of the far-reaching effects of such a measure upon the position of the medical profession in the Dominion the New Zealand Branch appealed to the Council for the help of an expert to guide them in their negotiations with the Government The Branch suggested that if Sir Henry Brackenbury would consent to go to New Zealand his assistance would be extremely valuable to the Branch The Council has had much pleasure in acceding to the request of the New Zealand Branch and is glad to report that Sir Henry Brackenbury has consented to visit New Zealand as the representative of the home Association

Joint Standing Committee of B.M.A. and Trades Union Congress

13 The Council has considered a communication from Sir Walter Citrine the General Secretary of the Trades Union Congress General Council, stating that for some considerable time that body had had under consideration the possibility of a closer working link between the trade union movement and the medical profession that it felt there was a wide range of subjects which would provide a source of co-operation between themselves and the medical profession as a whole and that it was of opinion that the establishment of a Standing Joint Committee to deal with such subjects including possible differences on local medical schemes would prove of value to all concerned The Association was invited to represent the medical profession on such a Committee The Council, believing that a ready interchange

of views between the two bodies could result only in mutual good in the public interest decided to accept the invitation The Joint Committee consists of seven nominees of the British Medical Association and seven nominees of the General Council of the Trades Union Congress The following have been appointed as the Association's representatives on the Joint Committee Chairman of Council, Dr J W Bone, Sir Henry Brackenbury, Dr H G Dain Professor R M F Picken, Dr H W Pooler, and the Medical Secretary

It should be understood that the Committee is purely advisory in character, and that each side will be free to bring forward any relevant questions upon which it desires the advice of the Joint Committee The autonomy of the Association and of the Trades Union Congress General Council will be in no way impaired, although each will naturally seek the views of the Joint Committee on questions of mutual interest

One of the first questions dealt with by the Joint Committee related to the Factory Bill at present before Parliament. Upon certain aspects of this measure representations were made to the Home Secretary

Association Office Arrangements

14 The Council, after a careful investigation of the whole of the circumstances, has come to the conclusion that the present Association organisation for the production of the *British Medical Journal* is not satisfactory and that there is need for the appointment of two new officials to give their whole time to the work of the *Journal* under the direction of the Board of Directors of the *British Medical Journal* to which reference is made in para 57 of this Report The Council has therefore decided that directly responsible to the Board of Directors on matters of *Journal* production there should be two officials, (1) a whole time secretary to the Board, whose duties would comprise, in addition to the secretaryship of the Board, the preparation of the *Journal* accounts, the supervision of the publishing and dispatch arrangements, and the *Journal* records, and any receipt of money on behalf of the *Journal*, and (2) an advertisement manager who should be responsible for all business connected with advertisements except the collection of accounts As these decisions necessitate such a radical change in the terms and conditions of the office of Financial Secretary and Business Manager, the Council has decided that that office in its present form be abolished at the end of six months, and it has accordingly given notice to the present holder, Mr L. Ferris Scott, to terminate his appointment at that date

The Council is proceeding further with its inquiry into Association office arrangements

Proposed Investigation of Umckaloabo

15 In its Supplementary Report in June, 1936 the Council stated that it had been approached by a lay body known as the Committee of Investigation on Treatments of Tuberculosis for advice and assistance in reference to a proposal to investigate Umckaloabo a substance known to many members of the profession as Stevens' Consumption Cure As a result the Council prepared a statement upon the position which was submitted to the Committee of Investigation and published in the Supplement of June 27th 1936

In reply to a further communication received from this Committee the Council repeated its former advice that laboratory tests directed to determine the action positive or negative of Umckaloabo on the tubercle bacillus should be arranged, and that an agreed number of patients reported as cured under the administration of Umckaloabo should be examined by an expert physician relative to their history and present condition

The Council further suggested that a complete knowledge of the source of supply and of the chemical and physical properties of Umckaloabo should be obtained and it urged the Committee of Investigation to meet the conditions under which the Medical Research Council conducted its enquiries

Association Professionnelle Internationale des Medecins

16 The Council submits the following report of the Association's correspondent the Medical Secretary, on the Eleventh Annual Conference of the above-mentioned body.

I attended the eleventh annual conference of the APIM, which was held in Amsterdam last September. The President was Dr Mattlet of Belgium, and the following countries were represented: Belgium, Czechoslovakia, Denmark, France, Germany, Great Britain, Holland, Hungary, Luxembourg, Norway, Spain, Sweden and Switzerland.

The Secretary Dr Decourt presented his annual report, in which he said that the increase in the average number of correspondents replying to the questionnaires was evidence of an increased interest in the work of the APIM. He appealed, however, for more contributions from correspondents on medico-social topics for the *Revue*. The report of the Treasurer Dr Fortuyn showed a small deficit. The cost of administration had been reduced to the lowest possible level consistent with efficiency and the Conference was asked to agree to the issue of an official letter to those national organisations which continually failed to pay their subscriptions. This course was adopted and the Secretary's draft letter appealing for more active support and warning defaulters that continued failure to pay their subscriptions might lead to exclusion from the privileges of membership was approved. Dr Decourt said that he realised that there was difficulty in certain cases owing to the prohibition of the export of capital. The German National Association had overcome this difficulty by undertaking the printing in Berlin of four numbers of the *Revue*, and the Hungarian organisation proposed to pay its debt in kind in a similar way. Danzig and Portugal had withdrawn from membership during the year, the former on financial grounds and the latter owing to the absence of a national medical association.

THE WORK OF THE CONFERENCE

The work of the Conference consisted chiefly in the discussion of the questionnaires and questions issued during the year. Three questionnaires had been issued with the following subjects:

- (1) Private and voluntary sickness insurance for middle-class and professional persons
- (2) The repercussion of sickness insurance on the practice of medicine
- (3) Hospital organisation

In addition, two questions had been submitted by Poland and Switzerland. The Polish association asked for information on medical chambers and professional organisations, and the Swiss association asked what alterations had been made in the provision for first aid in accident cases since the issue of the questionnaire on this subject in 1929.

SICKNESS INSURANCE FOR MIDDLE CLASSES

Dr Csillery, the representative of Hungary, acted as the reporter of this enquiry. He found that most of the seventeen countries from which replies were received possessed facilities for private sickness insurance for middle class and professional persons. The nature of the facilities naturally varied considerably with respect both to organisation and to benefits offered. Most of the organisations had developed without the co-operation of the medical associations, but the majority of the replies expressed approval of the principle of providing such insurance. After a general discussion certain resolutions were passed by the Conference approving the principle of schemes of private and voluntary sickness insurance and recommending that institutions established for the purpose should co-operate with the medical profession, which should be represented in their administration and direction. The conditions on which the profession should agree to co-operate should include such principles as free choice of doctor and patient, the preservation of professional secrecy, and the control of all medical matters by medical practitioners.

EFFECT OF SICKNESS INSURANCE ON THE PRACTICE OF MEDICINE

The results of the questionnaire on the effect of sickness insurance on the practice of medicine revealed a position in many Continental countries which happily does not exist in Great Britain. The reporter, Dr Fortuyn of Holland, found that sickness insurance and social health legislation tended to diminish private and family practice of medicine, for the measures which had been begun for persons of modest means had gradually extended their scope to include persons in easier circumstances. Moreover the substitution of the insurance doctor for the family doctor tended to substitute standardised treatment for the treatment of the individual patient and the creation of collective institutions had in most countries undermined the independence of the medical organisations. While most of the latter regarded the loss of their influence as unfortunate for both patients and doctors, some were content to accept it as a natural evolution. After considering Dr Fortuyn's report the Conference reiterated the principles it had already formulated in its International Medical Charter.

HOSPITAL ORGANISATION

The report submitted by Dr Cibré, the French representative on the question of hospital organisation illustrated the fundamental difference which exists between this country and most Continental countries on the question of the basis of hospital provision. The report on the replies to the questions, which were mostly concerned with public hospitals and the motions submitted by the reporter showed that the Continental mind visualises hospital accommodation as being sharply divided into two categories: one for necessitous persons for whom the State must make provision and the other for those persons in easy circumstances who can afford to pay for their maintenance and treatment. It was proposed to formulate a separate policy for "public" hospitals, the principles including one that these hospitals should be reserved for the poor and necessitous and another that members of medical staffs of public hospitals should receive a small remuneration.

I explained to the Conference that in Great Britain admission to local authority hospitals was based on medical need and not on social or financial circumstances. I pointed out that the term 'poor and necessitous' was misleading, because about 80 per cent of the community were poor in the sense that they could not afford to pay the full cost of their hospital services. They endeavoured however to meet the cost by means of insurance, and they could not therefore be regarded as 'poor and necessitous' and deserving of charity. I also submitted that, if 80 per cent of the community receive from the hospital the essential services which it alone can provide, the remuneration of the medical profession should not be small, on the contrary, it should be substantial. My point of view was evidently quite new to some of those present, although during the discussion that followed I was glad to observe that the majority of the representatives agreed with the point of view I had advanced.

The Conference finally came to the conclusion that in view of the fundamental differences existing in the various countries, the formulation of an international hospital policy was impossible, but it passed a resolution expressing its opinion that in each country there should be prepared a carefully considered policy for the development of hospital organisation and accommodation.

PROGRAMME FOR 1937

It was arranged that the questionnaires for 1937 should be on the following subjects:

- (1) The campaign against cancer
- (2) Methods of controlling the patient and the doctor in medico-social legislation
- (3) Organisation of a night medical service and a service for Sundays and holidays

The next Conference is to be held in Paris in July, 1937, under the presidency of Dr Haedekamp, the representative for Germany.

Council Dinner

17 The Council Dinner was held on November 10th, 1936. The guests included the Minister of Health, the Secretary of State for India, the heads of various Government Departments with which the Association has relations, and the medical departments of the Defence Forces, the Presidents of the Royal Colleges, the officers of kindred Associations and Societies, various civic authorities, Members of Parliament, etc. The dinner proved a most successful function.

Hospitality to Over-seas Members

18 The Council has arranged to hold a reception to which will be invited those members of the Association from over seas who are visiting this country in connexion with the Coronation Celebrations.

A Radiology Group

19 The Council has, on the petition of members interested, formed a Radiology Group within the Association. The Group is composed of all those members of the Association who are engaged predominantly in the practice of radiology.

A Psychological Medicine Group

20. The Council has, on the petition of members interested, formed a Group of Practitioners of Psychological Medicine within the Association. The Group is composed of all those members of the Association who are engaged predominantly in the practice of psychological medicine.

Health Services

21 The Council appointed a Special Committee to consider the following Minutes 130, 142 and 154 of the A.R.M. 1936.

Minute 130—That the Representative Body deprecates the increasing tendency for the employment by Municipal Authorities of part-time and salaried medical officers not engaged in private practice for the performance of clinical work within the sphere of private practice, as this must lead to overlapping and waste and (a) considers that in the public interest and on medical grounds the services of local private practitioners should be utilised for all clinical work wherever their suitability and competence, and other local circumstances permit, and (b) requests the Council to take whatever steps it considers desirable to represent these views to the Minister of Health.

Minute 142—That the Council be asked to appoint a Special Committee to consider the Departmental Report on Scottish Health Services and to make recommendations as to (1) any necessary alterations in the documents setting forth Association Policy on Health Services and (2) what steps should be taken to secure that so far as possible, any legislation arising, directly or indirectly from the Report, shall conform with Association policy.

Minute 154—That the time has now come when the Council should consider the taking of more active steps towards implementing the Association's proposals for a General Medical Service for the Nation.

and will refer to this subject in its Supplementary Report.

Council Attendances

22. A list of attendances at meetings of Council from the Annual Representative Meeting, 1936, to April, 1937 will be found in Appendix I.

FINANCE

23 The Balance Sheet and Accounts for the year 1936 as audited by Messrs Price Waterhouse & Co. and presented to the Council by the Finance Committee, disclose the steady and cumulative progress made by the Association in recent years. The decision taken last year to close the printing department of the Association has released the

Reserve Fund which had been raised for the eventual replacement of the Printing Machinery and the assets thus released have been transferred, together with an allocation of £15,000 in respect of 1936 to a new 'Reserve Fund against commitments for Extensions of Premises'.

The Association entered in 1929 into engagements to build further additions to the House of the B.M.A. and Tavistock House, and in the latter half of 1937 a commencement of this work must be undertaken.

Towards this expenditure a reserve of £26,716 5s has thus been provided, represented by trustee securities of the market value at December 31 1936, of £27,004.

A balance of £1,612 2s 8d, after providing for adequate depreciation and allocation to reserves, has been added to the Surplus Account, which now stands at £279,086 19s 2d.

Although the future obligations of the Association are heavy, the financial record of recent years proves that they may be faced with confidence.

The balance or surplus of assets over liabilities at the end of 1936 was £331,609 7s 3d, an increase in the capital value of the Association's property during 15 years of £190,998 14s 6d, arrived at after providing sums amounting to £66,401 6s 7d for depreciation on B.M.A. property, buildings and contents.

In addition there is an unrealised profit in the market value of investments of £6,768, and in the surrender values of the Sinking Fund Policies of £1,070.

An unusual item appears amongst the creditors. An Assistant Medical Secretary of the Association died on December 8 1936 and the surrender value of the Deferred Annuity Bond taken out on his behalf was held in trust upon deposit pending transfer to his legal personal representatives. This transfer has now been effected.

The overdraft shown at the Bank was purely a temporary book accommodation repaid in the first days of 1937.

The Leasehold Premises in London and the houses held by Feu Charter in Edinburgh have again been written down in value.

Similarly, percentages of depreciation have been written off such assets as the Library, Furniture and Office Equipment, Plant and Type.

The Subscriptions in arrear are largely represented by overseas subscriptions collected locally which have not reached the Head Office. The figure for 1936 includes £817 8s 6d for 526 subscriptions from the Irish Free State remitted on February 2 1937. Such subscriptions were previously collected from London instead of Dublin. The very large proportion of subscriptions carried forward as in arrear which are collected in the following year, is set out later in this report.

The Reserve for Bad Debts and Discounts is adequate to meet any possible loss from this source.

Income and Expenditure Account

The income for the last three years has been as follows

	£	s	d
1934	154,821	3	0
1935	160,090	6	4
1936	166,870	17	8

The expenditure after allowing for all transfers to Sinking Fund and Reserve Accounts, including provision towards the cost of completing the existing front building, has been

	£	s	d
1934	152,277	17	0
1935	158,121	18	0
1936	165,258	15	0

so that a net sum in the books of £1 612 2s 8d has been added to the Surplus Account.

Subscriptions

24 The membership of the Association at December 31, 1936 was 36,290 an increase on the year of 907.

The subscription income for 1936 increased by £979 0s 1d the subscriptions in arrear collected for the previous year.

decreased by £6 3s 7d, but in respect of former years subscriptions previously written off an additional £32 16s 3d was recovered making a total increase of £1,005 12s 9d

It has on previous occasions been pointed out that of the sum carried forward in the Balance Sheet as 'Subscriptions in Arrear' the great majority are rapidly paid up. The Balance Sheet at December 31, 1934, included such an amount of £3 70s 5s 5d of which no less than £3 26s 7s 2d was recovered during 1935, leaving a balance of £442 5s 3d to be included in the sum of £3,937 4s 1d written off at the end of 1935. During the past year further amounts have been received on account of the previous and former years amounting to £2,772 19s 11d, as set out in the income and expenditure account.

Similarly out of the sum of £3,937 8s 6d carried forward in the Balance Sheet dated December 31, 1935, no less than £3 47s 1s was recovered during 1936, leaving an outstanding balance of £461 7s 6d.

Rents Received and Accrued

25 Further lettings and the readjustment of tenancies in Tavistock House have shown an increase during 1936 but the full effect of the changes will not be seen until the accounts for 1937 are prepared.

Interest on Investments

26 As moneys have become available they have been invested, until required, in Trustee securities.

National Ophthalmic Treatment Board

27 The larger return during the year is gratifying as showing the increasing success of the scheme. The sum is not however a source of revenue but a repayment of expenditure previously made, the further amount which can be received under this heading being limited to £305 8s 6d.

The Agreement for this advance made no provision for interest.

ABSTRACT A

"Journal" Revenue

28 An increase in the Revenue from Advertisements had been anticipated but the amount actually earned during the year exceeded the estimates made.

The following are the comparative figures of pages

	1935	1936
Literary and Epitome	2,848	2,892
Supplement	620	724
Advertisement	3,284	3,500
	6,752	7,116

The decrease in the sale of *Journals* to non-members which follows almost automatically upon the expansion in the membership of the Association has received notice on previous occasions.

The revenue from royalties upon the sale of publications bearing articles collected and reprinted from the *Journal* will be noted with interest.

"Journal" Expenditure

Editorial—It has been found desirable to extend the system by which the Editor had the advice and assistance of a pharmacologist, and to provide him with specialist advisers in other branches of medicine.

Managerial—It had been intended to close down the composing department of the B.M.A. at the end of December, 1936 but for technical reasons connected with new machinery ordered by the new printers it was found necessary to continue the production of the new *Journal* during the first three months of 1937 in the House of the Association by the

compositors in direct employment the printing machining and distribution were continued by Odhams Press. For this reason there appears in the Balance Sheet for 1936 a purchase of printing plant the cost of which will be partly recouped to the Association when the new system of production is commenced. Similarly action taken in connection with the sale and realisation of printing machinery and plant and the disposal of the composing room staff will be reported with the accounts for 1937.

Compositors Wages Machining etc—The costs chargeable under these headings are dependent not only upon the total number of pages and the total number of copies of the *Journal* produced, but also to some extent upon the various 'sizes' in which the weekly issues of the *Journal* must be made, and the amount of material which has to be set and corrected, used, or destroyed as 'cancelled matter'.

The weekly issues of the *Journal* were made up as follows:

	1935	1936
100 pages	—	1
104	2	—
108	3	1
112	1	1
116	3	1
120	7	1
124	4	3
128	5	5
132	6	9
136	7	6
140	4	9
144	5	6
148	2	3
152	1	—
156	2	3
160	—	1
172	—	1
176	—	1
	52	52

The total number of pages in the year increased from 6,752 to 7,116, the number of copies printed from 1,989,250 in 1935 to 2,029,340 in 1936.

Paper—The paper now used for the *Journal* has been standardised as affording a reasonable result under the conditions governing the production of the *Journal*. New contracts have been entered into by the Board which will offset to a considerable extent the great rise in the general market price of the commodity.

Postages—The larger journals produced have the effect of increasing considerably the cost of postage both for the home circulation and the foreign. The increase of £1,132 6s 1d is partly due to the wider circulation, but partly also to the heavier weekly issues.

Advertising and Changes—The expenditure under the headings of Propaganda Booklets and in connection with changes in the format of the *Journal* is not necessarily recurrent.

The expenditure of the newly constituted Board of Directors of the *British Medical Journal* appears for the first time.

ABSTRACT B

29 The activities of committees of the Association are fairly set out in detail from a financial point of view in Abstract B.

The holding of the Annual Meeting again in Great Britain (at Oxford) involved considerably less expenditure in 1936 than in 1935.

Representative Meeting—The attendances for which railway fares have been paid during the last three years have been as follows:

In 1934	Bournemouth	238
" 1935	London	183
" 1936	Oxford	241

Council—The attendance at Council Meetings

In 1934 incurred 206 fares	
1935	185
1936	189

Committees—The *Arrangements Committee* meeting in connection with the Meeting at Belfast involved heavier railway fares

The *Health Services Committee* has been recently set up but the Committees on *Fractures*, *Indian Medical Service*, *Medical Education*, *Nutrition* and the *Relation of Alcohol to Road Accidents* have discharged their references

The figures shown in connection with the *Insurance Acts Committee* are as usual net allowances having been made for reimbursement by the National Insurance Defence Trust of the following items

	£	s	d
Railway Fares 1936	233	12	10
Printings	109	4	4
Clerical Assistance	252	10	0
Postage and Sundries	41	8	10
	£636	16	0

Organisation—The Articles and By-Laws of the Association were reprinted, but not the Medical Practitioner's Handbook, during 1936. In accordance with decisions previously taken the fares of newly appointed Honorary Secretaries of Divisions and Branches who visit the Head Office are paid

ABSTRACT D

30 *Legal Charges*—The heavy expenditure during 1935 incurred in the successful opposition organized against the Osteopaths Bill had no counterpart in 1936

Grant to Australian Federal Council—This grant of £1 000 towards the expenses of the Federal Council in Australia is paid in Australian currency the advantage of the exchange rate remaining in this connection with the Association

Indian Tour—A full report is made elsewhere as to the tour of the Indian Branches undertaken by the Medical Secretary

ABSTRACT E

31 *General Repairs*—In the report presented last year it was pointed out that the amount expended upon repairs and upkeep had been considerably reduced during 1935, the amount required, however will necessarily vary from year to year

Rates—The increase in the rates levied was foreshadowed last year

Electricity and Gas—There has been an increase in the cost of lighting the corridors, entrances, etc. for tenants in Tavistock House. This is offset by rents received

ABSTRACT F

32 There have been certain increases paid to the staff under the approved scale of salaries

Under the heading *Premiums of Deferred Annuities for Officials* have been included the premiums in respect of recently appointed officials, and alterations in remuneration

The reduction shown under the heading *Annual Meeting Expenses* is slightly modified by the extra cost of travelling and subsistence incurred by Officials and Staff

TRUST FUNDS

33 *Office Staff Superannuation Fund*—The Actuary is satisfied with the present position of this Fund and has advised as to variations in the rates of contributions. A full revaluation of the Fund in connection with the obligation to each member thereof will take place shortly when the effects of certain renewals can be seen

Sir Charles Hastings Fund—It is satisfactory to note that the upward trend has continued in the market value of some of the securities representing the original capital of this Fund although for a time such investments had only a nominal value

Katherine Bishop Harman Fund—*Middlemore Fund*—Prizes have been awarded from the income of these Funds

Charities Trust Fund—It had been hoped that greater progress would have been made, but the grants which are allocated to the medical charities are of great assistance, are gratefully received and judiciously applied

ORGANIZATION**Membership**

34 The following is a summarized statement of the changes in the membership of the Association during 1936, as compared with 1935

	1935	1936
New Members	1,856	2,267
Paid arrears	1,280	1,290
Resignations withdrawn	50	21
	3,186	3,578
Resignations	767	685
Deaths	389	370
Arrears	1,675	1,614
Expelled	1	—
Erased under Art 9 (c) (ii)	—	2
	2,832	2,671

Membership December 31st 1935	35 383
Membership December 31st 1936	36 290

Work of the Divisions, Branches and Federal Councils

35 Annual Reports for 1936 have been received from the majority of the Divisions and Branches and show continued and increasing activity throughout the wide field covered by the Association. The interest taken by the local units in clinical scientific and social matters is noted with particular pleasure. An attempt is being made to rekindle activity in the few unorganized or inactive Divisions in England and Wales. In this connection it should be remembered that it is only by the continued interest of members in local affairs and by their active support of the local unit that the Association can function effectively in their interests

On behalf of the Association, the Council wishes to thank the chairmen, presidents, secretaries, treasurers and executives of the Divisions, Branches and Federal Councils for their unselfish and unstinted work on behalf of the profession and of the Association

New Divisions and Branches and Alterations of Area

36 Since the A.R.M. 1936 the Council has formed new Leicester and Rutland and Nottingham Branches in place of the former Midland Branch. Readjustments have been made in the areas of certain Divisions with a view to increasing their effectiveness, and other possible readjustments are under consideration

As a result of the visit of the Medical Secretary to the Indian Branches new Delhi North West Frontier, and Sind Branches have been formed and arrangements are in train for the formation of Bihar and Central Provinces Branches

It is proposed also to form a Mauritius Branch. The Council has approved pursuant to Article 12 and By-laws 19 and 20 an application for incorporation by the Cyprus Branch, formed in February, 1936

Financing of Branches not in Great Britain and Northern Ireland

37 The Council has continued to apply to certain Branches outside Great Britain and Northern Ireland the system of variable capitation grants (a system which has

been applied for many years to home Branches) according to needs as shown by annual reports received. Two overseas Branches agreed to forgo capitation grants in respect of 1936.

The Association's Annual Handbook, 1936-37

38 In accordance with the usual procedure the *Annual Handbook* has been issued gratis to those members who have applied for it, as well as to presidents, chairmen, and honorary secretaries of Branches and Divisions and other persons and bodies closely associated with the work of the Association.

Medical Practitioners' Handbook

39 The Association's *Medical Practitioners' Handbook* (which superseded the *Handbook for Recently Qualified Medical Practitioners*) and which was published in October 1935 has met with marked success and has proved to be particularly useful to the recently qualified members of the profession. Copies of this *Handbook* are obtainable (3s 6d or post free 3s 10d.) from the Financial-Secretary and Business Manager, or from any bookseller.

Medical Students and Newly Qualified Practitioners

40 All the Branches and Divisions in the British Isles in whose areas medical schools exist conduct an active propaganda on behalf of the Association among the medical students and newly qualified practitioners in their areas.

Of the practitioners qualifying in Great Britain and Ireland in the year October 1934, to September, 1935, 43 per cent joined the Association within one year of registration.

Election of Representatives, 1937-38

41 The Council has repeated the 1936-37 grouping of the Divisions in Great Britain and Northern Ireland for election of Representatives 1937-38 except that the Leicester and Rutland and Nottingham Branches (which have replaced the Midland Branch) have been created independent constituencies. The Branches in the Irish Free State have three Representatives in the Representative Body. Each Division and Division-Branch outside Great Britain and Ireland has, as in previous years, been made an independent constituency. The complete list of constituencies appeared in the *British Medical Journal Supplement* of April 17, 1937.

Conference of Honorary Secretaries, 1937

42. The conference of Honorary Secretaries of Divisions and Branches in Great Britain and Northern Ireland will be held at Belfast in the afternoon of Wednesday July 21, 1937. The Secretaries' Dinner will be held the same evening.

AMENDMENTS TO ARTICLES AND BY-LAWS

"Associates" and "Associateships"

43 The Aden and Sudan Branches expressed a desire to elect to a special or restricted form of membership those practitioners who although eligible to practise locally, did not possess a qualification registrable in this country. The Council has considered the matter and is of opinion that the situation can best be met both in these Branches and elsewhere by an alteration of the By-laws to enable Overseas Branches to elect "Associates" of the Branch. Such Associates would not be members of the Association and would be persons who are not eligible for membership. The Branch electing them would decide the privileges which such Associates should have, and subject to the approval of the Council the amount of subscription payable by them. Associates would not in any event be entitled to vote either at meetings or in a postal vote. Arrangements would be made for the making of capitation grants by the Council to the Branches concerned in respect of subscriptions received from such Associates.

Existing By-law 25 (2) (vi) empowers Overseas Branches to adopt, without the sanction of the Council a rule providing for the election as members of the Association of "practitioners not registered in Great Britain or Ireland." The Council proposes that in future any such rule should be subject to its sanction (see proposed amendment to By-law 25 (2) (viii)).

Discontinuance of Annual List of Members

44 The Council is of opinion that the publication of the Annual List of Members of the Association serves no useful purpose, and it is supported in this view by a resolution adopted by the Conference of Honorary Secretaries at Oxford in 1936. The Council is advised that there is no legal obligation upon the Association to publish such a List, and it therefore proposes that publication should be discontinued. It should be clearly appreciated that there is no intention of discontinuing the periodical supply to Branch and Division Secretaries of lists of members of their respective Branches or Divisions.

The Council submits amendments to the Articles and By-laws to give effect to the foregoing proposals and recommends

Recommendation That the amendment to the Articles and By-laws contained in Appendix II be adopted and that the Council be instructed to submit the amended Articles to the necessary General Meeting of the Association for approval.

Members of more than 50 Years' Standing

45 The Council is of opinion that the two guineas subscription for members of the Association of fifty or more years standing constitutes a real hardship in some cases. As the number of such members is small the Council feels that it would be a graceful gesture on the part of the Association to make it possible for them to continue their membership without further payment of subscription. The Council therefore recommends

Recommendation That Articles 5 and 6 and By-law 14 be amended as follows, and that the amendments to Articles 5 and 6 be submitted to the necessary General Meeting of the Association.

Page 10, Article 5, Line 1

Before By-laws insert Regulations or

Add at end

Provided always that in the case of any person who shall have been a Member of the Association for a period of 50 years no further annual subscription shall be payable as from the 1st of January next succeeding the expiration of such period or in the case of existing Members who have been Members for more than 50 years then as from the 1st January 1938 but so that this proviso shall be without prejudice in the case of a Member who is a Member of a Corporate Branch or of a Corporate Group to his obligations as such Member of the Corporate Branch or of the Corporate Group.

Page 10, Article 6

Add the following additional paragraph

Provided further that in the case of any person who shall have been a Member of the Association for a period of 50 years such person shall without payment of any annual subscription, as from the 1st January next succeeding the expiration of such period or in the case of existing Members who have been Members for more than 50 years then as from the 1st January 1938 and during the continuance of his Membership be entitled to all the privileges aforesaid but so that this proviso shall be without prejudice in the case of a Member who is a Member of a Corporate Branch or of a Corporate Group to his obligations as such Member of the Corporate Branch or of the Corporate Group.

Page 38 By-law 14 (1) Line 2

After shall insert in the case of Members (not being persons who shall have been Members of the Association for a period of 50 years or more)"

Add at end of By-law 14 (1)

A person who shall have been a Member of the Association for a period of 50 years shall not be required to pay

any annual subscription as from the 1st January next succeeding the expiration of such period or in the case of existing Members who have been Members for more than 50 years then as from the 1st January 1938 but so that this proviso shall be without prejudice in the case of a Member who is a Member of a Corporate Branch or of a Corporate Group to his obligations as such Member of the Corporate Branch or of the Corporate Group

Re-eligibility for Membership of the Association

46 Article 9 lays down the reasons for which membership of the Association may be terminated, and Article 7 gives the Council discretionary power regarding the re-election to membership of those whose former membership shall have been terminated by reason of conviction or expulsion as provided in Article 9 (c) (i) and (d). This power does not, however, extend to members whose membership ceases by reason of erasure from the *Medical Register* or forfeiture through misconduct of medical qualifications, as provided in Article 9 (c) (ii) (iii) and (iv).

The Council feels that this inconsistency should be remedied and recommends

Recommendation That Article 7 be amended as follows, and that the amendment be submitted to the necessary General Meeting of the Association

Page 10 Article 7, Lines 6-8

Substitute under Article 9 (c) or (d) "for by reason of his conviction or expulsion as hereinafter provided

The Article as amended would read

No person who shall have been a Member of the Association and ceased to be such shall be eligible for re-election until he shall have paid all arrears of subscription (if any) due from him to the Association at the date when his former membership ceased, and no person whose former membership shall have been terminated under Article 9 (c) or (d) shall, without the previous sanction of the Council, be eligible for re-election by any Branch

Subscription of Whole time Medical Members of Government Department Teaching Staffs

47 The Council has considered the question of the subscription payable to the Association by the whole-time medical instructors recently appointed by the Air Raid Precautions Department of the Home Office. The number of these officers is small, their duty is to conduct courses of instruction in anti gas measures for medical practitioners, nurses and medical students, and they are not permitted to engage in medical practice. The Council is of opinion that these practitioners should be considered on the same basis as whole time members of the teaching staffs of universities and medical schools and therefore eligible for a reduced subscription of two guineas and consequently that By law 14 (1) B (iii) should be amended accordingly. The Council recommends

Recommendation That By law 14 be amended as follows

Page 39 By law 14 (1), Schedule para B (iii), line 5. After school insert or Government Department. The paragraph would then read

Any Member who is not engaged in medical practice whether as consultant or otherwise and is a whole time member of the teaching staff of a university or medical school or Government Department and has signed and transmitted to the Treasurer a declaration to the foregoing effect in relation to the year for which the subscription is due. Two guineas

Representation of R N V R and Territorial Army on Naval and Military Committee

48 For the reason set out in para 135 of this report the Council recommends

Recommendation That the sixth column of the Schedule to the By laws relating to the Duties Powers, etc. of the Naval and Military Committee be amended by the addition

of the words 'the medical personnel of the Royal Naval Volunteer Reserve and the Royal Army Medical Corps (Territorial Army)'

Representation of Public Health Committee on Medico-Political Committee

49 Under the Schedule to the By-laws the Chairman of the Public Health Committee is ex-officio a member of the Medico Political Committee. It is desirable that the Public Health Committee should be allowed to nominate one of its members not necessarily its Chairman as a member of the Medico Political Committee, and the Council recommends

Recommendation That the Schedule to the By laws referring to the members, powers and duties of the Medico-Political Committee be amended by the deletion of the words 'The Chairman of the Public Health Committee' in the second column, and the insertion in the fifth column (otherwise appointed) of the words 'I to be appointed by the Public Health Committee'

Issue of "B M J" to Final year Students

50 Arrangements are being made by the Council for the supply of the *British Medical Journal* to senior medical students in Great Britain and Northern Ireland at a special annual subscription of 10s 6d. The issue will be limited to undergraduate medical students who have completed the second year of the clinical part of the curriculum subject to direct application and a written declaration by the student that he is eligible under the conditions laid down

Organisation of the Association

51 The Council reports an important development in connexion with the organisation of the Association in the Metropolitan area. For some time the Council has held the view that there is need in many areas for more active propagation of the Association's policy, and that it would probably be necessary in the near future to develop a system of regional secretarial organisation to implement and stimulate the medico political and other activities of the Association in the Divisions and Branches. The Metropolitan Counties Branch approached the Council and urged the appointment of a Medical Secretary for the Branch area. After careful consideration of the particular problem in London the Council decided to appoint for the London area a whole time regional medical secretary and organiser who, while working as a member of the headquarters staff, should devote his whole time to enhancing Association activities in that area.

Dr A K Gibson, one of the joint honorary secretaries of the Metropolitan Counties Branch, was appointed to the position.

In this connexion the Council has considered the following Minutes of the A R M 1936

Minute 22—Resolved That (with reference to para 30 of Annual Report of Council) the Council be instructed to consider and report on the steps necessary to secure better area organisation within the Association

Minute 38—Resolved That (with reference to para 171 of Supplementary Report of Council) owing to the special problems of medical practice in Wales, the Council be asked to consider the advisability of appointing a separate Secretary for Wales, with an office at a convenient centre in the Principality

The Council believes that the appointment of a Medical Secretary for the Metropolitan Counties Branch, the cost of which to the Association will, it is estimated be in the neighbourhood of £1 100 to £1,300 per annum will give general satisfaction to the members of the Branch and that the improved service will result in an increase of membership in that area. But in considering any extension of the arrangement there are various factors quite apart from the question of cost which must be borne in mind. The organisation of the Metropolitan Counties Branch presents features which are not necessarily present elsewhere, and the success

of the Association is so largely dependent upon the efforts of the honorary officers of its local units that it is essential that nothing should be done which would in any way disturb the position of these officers. After careful consideration of the whole question the Council feels that until practical experience of the Metropolitan Counties Branch experiment has been obtained it is not possible to express any useful opinion regarding the further extension of this method of organisation.

Apart, however, from any question of the extension of the Metropolitan Counties Branch arrangement the Council is of opinion that the time has arrived when an enquiry should be conducted into the peripheral organisation of the Association, with a view to strengthening it. A special committee has therefore been appointed to go into this question.

Medical Defence for Members Overseas

52 The Council is investigating the facilities available in respect of individual medical defence and financial indemnity for practitioners resident overseas.

"BRITISH MEDICAL JOURNAL"

53 The Council believes that the *British Medical Journal* during 1936 has kept its high position among the professional and scientific periodicals of the world. The close attention paid to its contents by members in all branches of practice, and not least by general practitioners, is reflected in the very large number of letters for publication that reach the Editor week by week. Heavy claims on the correspondence columns, and on other sections of the paper, led to a further increase in the total number of pages of letterpress. In the choice and presentation of material published in the *Journal* the aim has always been to supply members with a weekly periodical giving them a comprehensive review of progress in the science and practice of medicine, and a means for the exchange of opinion. The main function of the *Supplement* is to keep members informed of the course of the business of the Association and of the numerous directions in which it acts as the medico-political organisation of the profession. Much of this matter is of a kind that would not be published so fully in a journal conducted as a commercial undertaking, but further efforts have been made during the past year by co-operation between the Editorial and the Medical Departments to present such information in a more attractive form. The Council believes that this policy is approved by members, and that those engaged in medical work under the Insurance Acts value the prominence given in the *Supplement* to their interests and problems.

Typography of Journal

54 After more than two years' consideration by sub-committees acting under expert guidance, a complete scheme for reforming the typography and lay-out of the letterpress and title page and table of contents was carried into effect at the end of the year and the *British Medical Journal* with *Epitome* and *Supplement* came out in its new dress on January 2, 1937. An article describing and explaining the typographical changes was printed in that issue (p. 32) and the Council has put on record its appreciation of the advice given throughout all the preparatory stages by Mr. Stanley Morison. This reform in the outward appearance of the *Journal* has been widely welcomed by members at home and abroad; messages of congratulation still continue to reach headquarters and criticisms have been very few. Starting with the first issue of 1937 the *Journal* adopted the Harvard system of giving bibliographical references, and began the use of abbreviations of the names of scientific periodicals in accordance with the *World List*.

Special Series

55 The first group of thirty-five signed articles contributed to the *Journal* by invitation, on the Management of Major

Medical Disorders met with in General Practice was republished in book form in March, 1936, by Messrs. H. K. Lewis & Co. Ltd. under authority from the Council. This volume of 260 pages (price 8s. 6d.) was very favourably received and a second impression has now been called for. The second group of fifty articles was re-issued on November 18, 1936, by the same publishers, as a companion book of 426 pages entitled *Treatment in General Practice Vol. II* (price 10s. 6d.) and some 1,300 copies had been sold by the first week in March, 1937. Early in 1936 a collection of articles by Mr. D. Harcourt Kitchin, barrister-at-law, were reproduced from the Medico-Legal columns of the *Journal* in a book entitled *Legal Problems in Medical Practice* (Edward Arnold & Co., 10s. 6d.). The first of a series of signed articles on Endocrines in Theory and Practice, contributed by invitation, appeared in the *Journal* of October 17, 1936, and this feature has been continued weekly since that date. The Endocrinology series will be followed after an interval by a further series of weekly articles on Anaesthesia in General Practice. The possibility of supplying members with more up-to-date and reliable epidemiological news has been explored and it is hoped that this service will be started before long.

Some Figures for 1936

56 The average weekly number of pages in the *British Medical Journal* in 1936 was 136.8 distributed as follows:

<i>Journal and Epitome</i>	55.6
<i>Supplement</i>	13.9
Advertisements	67.3

The total number of pages of text and advertisements was 7,116 as compared with 6,752 in 1935, 6,396 in 1934 and 6,338 in 1933. These figures do not include the half-yearly indexes or special plates on art paper.

The Council appeals once again to members when sending communications to the Editor for publication to bear in mind the great variety of scientific and professional interests which rightly look to find representation in the pages of the *Journal*. In the year under review 966 addresses, papers and clinical memoranda were submitted, and of these it was possible to publish 513. An appeal has been made to contributors to summarise their articles and set out their conclusions in a terminal paragraph, while cross-headings are now inserted more freely throughout the pages in order that the reader, who cannot be expected to peruse the whole *Journal*, may grasp the gist of its principal contents. If further improvements in appearance and readability are to be achieved greater conciseness may be necessary, especially in correspondence. While it is desirable to encourage this section of the *Journal*, members are urged to make their points within the briefest compass.

Management of the Journal

57 At the November meeting of the Council the management of the *British Medical Journal*, the two special journals and all miscellaneous printings undertaken for the Association was put under the supervision of a Board of Directors elected for three years, each member receiving a remuneration of £5.5s. per meeting and under certain obligations as to attendance at meetings. The Board consists of R. G. Gordon (Chairman), R. J. A. Berry, J. C. Matthews, H. Robinson, R. Scott, Stevenson.

The Board has met on the following dates with full attendance on each occasion: November 20, 1936; December 4, 1936; December 18, 1936; January 22, 1937; February 19, 1937; March 12, 1937; and April 2, 1937. The officers of the Association receive all documents and attend all meetings but do not vote. Under the auspices of the Board the following action has been taken:

The *Journal* in its new present typography and cover appeared with the issue of January 2, 1937. Composition of the *Journal* ceased to be done in the printing office at B.M.A. House at the close of March, 1937, and this work with the machining and despatch was transferred to Messrs. Eyre & Spottiswoode, Ltd., with the number dated

April 3, 1937 This is in accordance with a five-year contract entered into between the Council and Messrs Eyre & Spottiswoode, Ltd, for composing, machining and despatch of the *Journal* after competitive tenders had been obtained from several firms and considered. The new printing arrangements involved the termination of the employment of some 29 employees of the Association, but all but four of these have found employment with the firms undertaking the work of the Association or elsewhere.

A contract for the supply of paper for the *Journal* for 33 months as from April 1, 1937, has been entered into with Messrs Townsend Hook & Son, Ltd on terms which are believed to be highly advantageous in view of the exceedingly rapid rise which is taking place and in the opinion of experts is likely to continue to take place, in the price of raw materials used for paper making. This was agreed upon after tenders from other firms able and willing to supply the type of paper required had been received and considered. A contract for miscellaneous printings required for the Association other than those which had appeared or would appear in the *Journal* has been entered into with Messrs Vacher & Sons, Ltd, who were adjudged the most suitable tenderer from among a large number of competing firms. The contract is from April 1, 1937, for five years. A contract has been entered into with Messrs William Clowes & Sons, Ltd, for the production of both special journals, the *Journal of Neurology and Psychopathology* as from July, 1937, and the *Archives of Disease in Childhood* as from March, 1938. In future these journals will have the same typography, the same size of page, will both appear quarterly and will cost 25s per annum to non members and 20s per annum to members of the B M A, single numbers to cost 7s 6d. This contract was also determined after a survey of a large number of tenders.

Arrangements have been made for the disposal of the machinery and equipment in the printing office on the fourth floor of the north-east wing of B M A House, and some of the resulting space will be used for a much-needed expansion of editorial accommodation, and the rest will be available for letting purposes. Canvassing for suitable advertisements has been actively pursued by the distribution of folders, a special booklet drawing attention to the new format of the *Journal*, as well as by personal visits and contacts. The Board has instituted a system of routine return of costing statements, lists of advertisements received etc., whereby a close check can be kept on the general financial status of the *Journal* and other publications of the Association.

Cost of Production and Distribution

58 The *Journal* account to be published next week in Abstract A of the Annual Financial Statement shows the gross cost of the production and distribution of the *British Medical Journal*, including all editorial and a portion of the managerial expenses. The figure was £75,637 in 1936, compared with £71,715 in 1935. It must not be forgotten, however, that the *Journal* account as set forth in the Financial Statement does not bear any proportion of the cost of construction or maintenance of the premises in which the *Journal* is produced nor does it allow for depreciation of the plant and type. The revenue from advertisements sales of *Journals*, reprints, reports, etc., amounted to £66,057, compared with £62,319 in 1935.

Censorship of Advertisements

59 While the acceptance of advertisements is not to be understood to imply a recommendation or guarantee and while no responsibility can be accepted with regard to the accuracy of the statements contained in advertisements a very strict censorship is maintained by the Journal Committee. The cash value of advertisements which, in pursuance of the Association's policy have been declined or discontinued represents a large sum but the policy of excluding undesirable advertisements from the official organ

of the Association is a duty which the Council feels it owes to the members of the medical profession. All new advertisements submitted for publication are scrutinised in the Finance or Medical Departments. Details of advertisements suspended or refused and of the grounds for the action taken are periodically reviewed by the Journal Committee.

"Archives of Disease in Childhood"

60 Early in 1926 the Council of the Association decided, in response to the wishes of many members interested in paediatrics to issue a periodical which would worthily represent the British school by recording the investigations and conclusions clinical and pathological, of all its workers. The first number of the *Archives of Disease in Childhood* appeared in February, 1926, and the eleventh volume was completed with the number dated December, 1936. The joint Editors are Dr Charles Harris and Dr Alan Monciffe and an Editorial Committee meets periodically, under the chairmanship of Dr G F Stull. The *Archives* has hitherto been issued six times a year, but with the next volume it will be issued quarterly. The subscription (post free) is 25s. (20s to members of the Association) payable to the Financial Secretary, British Medical Association, Tavistock Square, W C 1, subscription for Canada and the United States, 6 dollars (post free), price of single numbers, 7s 6d.

"Journal of Neurology and Psychopathology"

61 Since midsummer, 1926 the *Journal of Neurology and Psychopathology* has been issued by the British Medical Association, and the sixty-sixth number appeared in October, 1936. Its contents include original communications and editorial articles, together with abstracts of current neuropsychiatric literature, and critical reviews, and the scope and arrangement of this journal are such that it fills a place which no other published in English exactly occupies. The *Journal of Neurology and Psychopathology* is edited by Dr S A Kinnier Wilson, with the assistance of an Editorial Committee, and under his guidance it has established itself as one of the foremost periodicals for the record of progress in the branches of medicine with which it deals. Hitherto it has been published quarterly and the subscription of 30s. a year is payable to the Financial Secretary British Medical Association. The price of a single number is 8s 6d (post free). Under the new printing arrangement entered into with Messrs Clowes & Son certain alterations will have been made after the end of the present volume. The size of page will be larger and the cost 25s per annum (20s per annum to members of the British Medical Association), single numbers, 7s 6d post free.

SCIENCE

Scientific Sections at Annual Meeting, 1937

62 The following Sections will meet in connexion with the forthcoming Annual Meeting at Belfast

Three Day Sections—Medicine, Surgery, Obstetrics and Gynaecology, Pathology, Bacteriology and Immunology, Pharmacology and Therapeutics, including Anaesthetics,

Two Day Sections—Anatomy, Physiology, and Biochemistry, Diseases of Children, Neurology and Psychopathological Medicine, Nutrition, Ophthalmology, Orthopaedics including Treatment of Fractures, Otorhino-laryngology, Hygiene and Public Health, Radiology, Tuberculosis,

One Day Sections—Dermatology, Medical Sociology

The Association's Scholars and Grantees, 1936-37

63 During the year 1936-7 the Council allocated for the direct encouragement of original investigation and research £1,000, from which the following awards were made

Ernest Hart Memorial Scholarship (£200)

Kerr A S (Liverpool) M.B., Continuation of research into the functions of the diencephalon with special reference to its influence on gastric and intestinal motility and with reference to its part in the maintenance of body temperature. The method used involves the employment of the Souttar stereotaxic instrument.

Ordinary Research Scholarships (£150 each)

Archer Nora E. R. (London), 1 To investigate the clinical use of Protamine Insulin (a) a preliminary clinical assay of the various brands of Protamine Insulin and (b) an investigation of its therapeutic worth

2. To investigate the influence of salt deficiency on secretion of urine in cases of Diabetic Coma and other cases where salt deficiency occurs

Bingham D L C (Edinburgh), An investigation by clinical methods and animal experimentation into Fluid Balance and Salts Balance after operation or traumata of any kind

Lewis Beatrice (London), M.D., An investigation into skin diseases of known or suspected virus origin

(a) a preliminary study of the organisms found in impetigo with particular reference to the bacteriology of bullous eruptions of suspected virus origin

(b) study of the histology of the lesions

(c) demonstration of auto-infectivity of tissue extracts

(d) animal inoculations

(e) antigen-antibody reactions, complement fixation precipitation absorption reactions.

Travers, T & B (Melbourne), To continue an investigation into (1) the manner in which suppression of vision occurs in squint with a view to throwing more light on the development of amblyopia in squint (2) abnormal retinal correspondence in squint—with particular reference to the association of suppression of vision and abnormal correspondence

Owing to the resignation of the holder the Walter Dixon Memorial Scholarship has remained in abeyance during the present year

Work of Scholars and Grantees, 1935-36

64 Satisfactory reports have in all cases been received from the members of the Association who examined the work done by the scholars and grantees for 1935-36. Papers have been contributed by scholars and grantees to various scientific journals, and a synopsis of the work carried out was published in the *Supplement to the British Medical Journal* of August 22, 1936

The Library

65 The activities of the Library during the past year have increased in all departments and further increases may be expected as a result of the better service made possible by the additional £100 per annum granted by the Council in April

1936, for the purchase and supply of books. The number of readers has increased from 24 512 in 1935 to 25 226 in 1936 and the number of books borrowed from 16 227 to 16 819 during the same period. The arrangement for co-operation with other Libraries continues to be of great value, particularly in the case of the London School of Hygiene, the National Central Library and University College. Requests for literature on various specific subjects also continue to increase.

The Council acknowledges receipt during 1936 of 308 presentations of books, including calendars reports and society transactions.

Pending the establishment of a central library by the Irish Free State Medical Union (I M A and B M A) the Council has extended the facilities of the Association's Lending Library for a period of three years to members of that body, subject to certain conditions agreed to by the Union.

The Council regrets that a few members of the Association persistently disregard the Rules of the Library regarding the return of books. It has authorised the Science Committee at its discretion to suspend any such member from the privileges of the Library.

B M A Lectures

66 The system of B.M.A. Lectures under which each Division and Branch in England Scotland Wales and Northern Ireland may have one such lecture during the course of the year the expense being borne by the Central funds of the Association continues in popularity. The Council extends its cordial thanks to the following, who have given B.M.A. Lectures during the period April 1 1936 to March 31 1937: Mr A Lawrence Abel, Dr D K Adams, Dr J O W Bland, Professor F J Browne, Dr F G Chandler, Dr W S C Copeman, Professor F A E Crew, Dr H Crichton Miller (two), Dr D M Dunlop, Professor Daniel Dougal, Mr R C Elmslie, Dr William Evans (two), Mr A G Timbrell, Fisher, Mr D C L Fitzwilliam, Sir John Fraser, Dr A Rae Gilchrist, Professor John Glaister, Dr F Temple Grey, Dr H P Himsforth, Dr C M Hinds Howell, Mr J P Hosford, Mr R Watson Jones, Dr R D Lawrence, Mr R J McNeill, Love, Mr J B Macalpine, Mr G D F McFadden, Dame Louise Mellroy, Professor Sir Ewen Maclean, Mr D A Miller, Dr Reginald Miller, Dr W J O'Donovan, Dr J R K Paterson, Mr K Hampden Priddy, Dr Eric Pritchard, Dr W B Purchase, Mr Robert Richards, Dr Arnold Stott, Mr C Price Thomas, Dr H Letheby Tidy, Dr F M R Walsh, Sir William Willecox, Professor L. J. Witts, and Dr W G Wyllie.

Sir Charles Hastings Clinical Prize, 1937

67 The Sir Charles Hastings Clinical Prize, consisting of a certificate and cheque for 50 guineas which was established by the Council in 1924 for the promotion of systematic observation research and record in general practice has been awarded for the year 1937 to A Hamilton Harvie, M.B.N.Z., F.R.C.S. Ed., D.T.M. Calc., of Jagadhri, Punjab for his clinical study entitled 'Amoebiasis its Syndrome and other Clinical Features'. The essay which is the author's third contribution in competition for this prize contains much careful clinical observation among both European and Indian communities. Results are clearly presented the thesis is simply developed treatment and prevention are discussed and in the opinion of the adjudicators the essay is of a high order of merit. Special letters of commendation have been sent to the following: J A Moore, Hall M.B. Ch.B. Shotts Lanarks (The Blood Sedimentation Reaction in General Practice with special reference to Chronic Chest Diseases particularly amongst Coal-miners), L. S. Potter M.B. Ch.B. Buxton (Treatment of Infections by Intramuscular Injections of Whole Blood with special reference to the part played by Complement), and C L Potts, M.D. Redditch (A Study of the Value of Punctate Basophilia in the Control of Lead Hazards).

The Council has expressed its cordial thanks to Sir Humphry Rolleston and Professor F. R. Fraser, who examined the ten essays submitted for this prize

Katherine Bishop Harman Prize, 1938

63 The object of this Prize, which consists of a cheque for £75 and a certificate, is the encouragement of study and research directed to the diminution and avoidance of the risks to health and life which are apt to arise in pregnancy and child-bearing. It will next be awarded in 1938 for the best essay submitted in open competition, the competitor being free to select for presentation any subject falling within the object of the prize

Prohibition of Chemical Warfare

69 The Council has considered the following Minute 46 of the A R M, 1936

Minute 46 Resolved That this Meeting condemns unreservedly the use of poison gas in warfare as inhuman in its results and degrading to civilisation and relies upon the Council to do everything in its power with a view to securing the co-operation of the medical profession of all countries in order to prohibit the use of poison gas

Certain steps have already been taken in regard to chemical warfare. The League of Nations, by means of a protocol drawn up in 1925 and signed by 44 States, and through the Conference on the Reduction and Limitation of Armaments appointed by it, which reported in July, 1936, has expressed condemnation of the use of chemical, incendiary and bacterial methods of warfare, and of their preparation in time of peace.

The Netherlands Medical Association, through its Committee for War Prophylaxis has, since 1931, endeavoured to promote a campaign of international collaboration for War Prophylaxis of which the prohibition of poison gas in warfare has formed an important part.

In the hope of stimulating interest in this question, the Council has brought the opinion expressed in Minute 46 of the A R M, 1936, to the attention of the various national medical organisations and of the Association Professionnelle Internationale des Medecins

Anti-Gas Measures

70 The Council has had before it the following resolution passed at a meeting called by the Medical Peace Campaign on November 25, 1936

That this meeting asks the Council of the British Medical Association to consider instituting an enquiry, similar to the enquiry into nutrition, into the value of anti-chemical warfare measures

and is making enquiries of the Home Office regarding the general position

The Council has placed at the disposal of the Air Raid Precautions Department of the Home Office the local machinery of the Association in connexion with the scheme of that Department for the instruction of medical, veterinary and dental practitioners in anti gas measures. Sixteen whole-time medical instructors have been appointed by the Department, distributed at various centres throughout the country and responsible for the holding of courses of instruction in definitely prescribed areas. The arrangements for the courses are made in close collaboration with the local Honorary Secretary of the Association. To the end of March 1937, 4 782 practitioners 3 328 nurses and 754 students had been trained and the instruction is still continuing. The scheme has been received with great enthusiasm but owing to the limited number of instructors progress is necessarily somewhat slow. It is the ultimate intention to cover the whole of the country

Treatment and Cure of Leprosy

71 The Council has considered the following Minute 128 of the A R M 1936

Minute 128 Resolved That the following Motion be referred to the Council for consideration

121 Motion by Sheffield That the Representative Body desires to call attention to the advance that has been made in the treatment and cure of leprosy and the increased possibilities thus opened up for measures for the stamping out of this disease, and requests the Council to consider what steps, if any, the Association should take to assist in devising and promoting measures for its eradication

Various agencies are already engaged in leprosy work. The British Empire Leprosy Relief Association, established in 1923, is a very active voluntary body. One of its main interests is research, and it has organised and assisted financially leprosy work in many British possessions. It conducts active propaganda by means of lectures, films and literature embodying the latest advances in treatment, and publishes a quarterly bulletin and annual report dealing with its work in various parts of the world. Its chief need is for additional funds.

The League of Nations, through its Leprosy Commission, is also doing valuable work in connexion with leprosy. It does not undertake direct action in the matter of treatment or prophylaxis, but endeavours, by means of conferences of experts, to define the general principles of leprosy prophylaxis as ascertained by scientific research and practice. Under the auspices of the League a permanent central research centre has been established by the Brazilian Government at Rio de Janeiro. The centre is amply equipped, has an expert staff and abundant material available. It is accessible to experts of all countries, keeps in constant touch with international research, and through its pharmacological laboratory is able to supply at very reasonable terms to institutions which require them the chaulmoogra products for the treatment of the disease.

The Council is satisfied that, so far as the limited funds available permit, all possible steps are being taken for advancement of the treatment and cure of leprosy.

Remuneration of Medical Teachers, Laboratory and Research Workers

72 The scale of remuneration for non professional medical teachers, laboratory and research workers approved by the A R M in 1926 and 1929 presents considerable difficulty from the administration point of view. The Council is of opinion that the time has arrived when an attempt should be made to establish an agreed scale, and with this end in view representatives of the universities and other employing authorities are being invited to discuss the matter with representatives of the Association.

Proprietary Remedies

73 The possibility of action being taken to make available information regarding the composition and therapeutic activity of the various proprietary remedies advertised to the medical profession remains under consideration by the Council, in collaboration with the Pharmaceutical Society. Progress is necessarily slow, but trial investigations now being conducted into certain groups of preparations will, it is hoped, shortly be completed, when the Council will be in a position to proceed further with its consideration of this matter.

MEDICAL ETHICS

Labelling of Medicine Bottles

74 It has long been a statutory provision that a practitioner supplying a medicine containing a scheduled poison must include his name and address on the container. In view of the greatly extended list of scheduled poisons under the new Poisons Rules the Council has come to the conclusion that no exception can now be taken to the inclusion of the practitioner's name and address on the labels of all medicine bottles whether or not the ingredients therein include a scheduled poison. The Council advises practitioners to ensure that small lettering is used on the labels.

Cancer Investigation

75 Medical officers of health in various parts of the country are co-operating with the Ministry of Health in a

voluntary scheme with a view to obtaining the medical history of patients who have died from cancer, and are seeking to obtain information from practitioners on this subject. The Council sees no objection to practitioners completing the questionnaire on this subject, but the Council regards it as desirable that the questionnaire should be drafted so as to refer to the patient by means of an identification number and not by name, and that the practitioner should first approach the relatives of the deceased patients as to whether they have any objection to the information being supplied. (See also para 86)

Adoption by Divisions of Resolutions under their Ethical Rules

76 The Council has, during recent years, urged Divisions and Division-Branches to adopt under their ethical rules resolutions upon three items of Association policy. The present position in this matter is as follows:

Memorandum of recommendations as to salaries and conditions of service of whole time public health medical officers	Adopted by 101 Divisions
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Provision of domiciliary attendance by consultants in private practice and not by whole-time medical officers	Adopted by 71 Divisions
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Provision of domiciliary attendance upon public assistance patients by private practitioners and not by whole time medical officers	Adopted by 102 Divisions
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The Council again draws the attention of those local units which have so far taken no action in this matter to the desirability in their own interests and those of the profession generally of adopting binding resolutions under their ethical rules in relation to the above questions.

Association Disciplinary Procedure

77 The Council has under consideration a suggestion that the initiative for expulsion of members who accept whole-time public health appointments under authorities which are not applying the Memorandum of Recommendations or appointments which are not in conformity with the Memorandum should be taken by a central Committee of the Association and not by the local units.

78 Representation was made to the Council under Article 10 as to the conduct of a member and after due inquiry by the Central Ethical Committee the Council in exercise of its powers, expelled the member from the Association.

Advertisements on Prescription Forms

79 The Council's attention has been drawn to the practice which is said to be growing among doctors of using prescription forms supplied by a firm of chemists the name of which is printed at the foot of the form. The Council has expressed the opinion that it is very undesirable that medical practitioners should use prescription forms which bear the name or the advertisement of any individual pharmacist or firm of pharmacists.

MEDICO-POLITICAL

Public Medical Services

80 During the past year there has been a steady increase in the development of Public Medical Services new services having been formed in the following areas: Ipswich, Dorset, Hull, Oxford and Peterhead. Consideration is being given to the formation of services at Bradford, West Norfolk, Leeds, East Somerset and Llandudno. The total number of Public Medical Services now in operation is 60.

The Council is continuing its efforts to co-ordinate this form of medical contract practice and in pursuance of this a further Conference of representatives of established Public Medical Services was held in November last. The

Conference was extremely well attended practically every Public Medical Service in the country being represented. It afforded an excellent opportunity for an exchange of views among those practitioners who are interested in this type of work. The remuneration paid to practitioners working under Public Medical Service arrangements has been reviewed by the Council and it appears that in the majority of cases, an adequate capitation fee is being paid for each person at risk. In those instances where the position is not satisfactory the Council has urged the Service in question to give the matter very serious consideration. The Council draws attention to the action recently taken by the Ipswich practitioners through the local Division of the Association which has led to the abolition of private medical clubs and Friendly Society contracts and the establishment through the formation of a Public Medical Service of unification of contract medical practice in the area. This has led to practitioners receiving a rate of remuneration considerably in advance of that previously paid by the local Friendly Societies for medical attendance upon their members, and to the public having free and open choice of doctor. The Friendly Societies now act as collectors for the Public Medical Service in addition, of course, to carrying out their ordinary functions.

The Annual Representative Meeting, 1936 empowered the Council to approve suitable forms of contract practice for persons with incomes above £250 per annum and acting under this authority the Council on the recommendation of the Metropolitan Counties Branch has approved an extension of the London Public Medical Service to persons with a total income up to £550 per annum. The rules of the extended scheme closely follow the model laid down by the Association for a Public Medical Service. They thus ensure (a) that the service will be under the complete control of its members (b) that membership is open to any registered medical practitioner in the area (c) that there is free choice of doctor by patient and of patient by doctor and (d) that there is provision for non-co-operating practitioners. The privileges of subscribers of the extended service include a general medical practitioner service with the supply of ordinary medicines, also (where desired by the subscriber) a complete examination annually.

Central Emergency Fund

81 This fund which is entirely supported by voluntary contributions, was created in 1906 with the object of where necessary, assisting members of the Association by grants which cannot be made from the funds of the Association to maintain the interests of the profession against organised bodies.

There is an urgent need for augmentation of the fund and the Council strongly commends it to the support of members.

National Deposit Friendly Society

82 The Council has previously expressed its concern at the reduction in the scale of medical charges paid by the National Deposit Friendly Society but it is now glad to report that, as a result of representations the Society has agreed to modify its scale and to bring it into line with the Association's suggestions.

Dental Benefit Regulations

83 The Annual Representative Meeting, 1936 (Min. 113) expressed strong condemnation of the Dental Benefit Regulations (1936) as the result of which Approved Societies have power to withhold dental benefit from their members if the fee of the practitioner who has administered the anaesthetic exceeds that allowed under the Regulations and the Council has carefully considered this situation. The profession was not consulted before the Regulations came into force and the Association was informed upon enquiry that the scale would be in no way binding on medical practitioners. Certain of the fees payable for the admini- tra-

tion of anaesthetics are below those recognised by the Association for work of this character

The Council suggested to the Ministry of Health that insured persons should be allowed to pay any difference between the fee payable by the Approved Society under the scale and the fee charged by a medical anaesthetist, and informed the Ministry of the decision of the Representative Body concerning the fees for such services. The view expressed by the Ministry after consulting the Dental Benefit Council was that under the Regulations a satisfactory service of dental treatment for insured persons could be secured, and that while the Regulations were not binding on medical practitioners there was no reason for granting to them a higher fee than that payable to dentists. In view of this unsatisfactory position the Council raised the whole question with the Dental Benefit Council, the statutory body charged with the duty of administering the Regulations. The Dental Benefit Council was unable to accept the suggestion advanced by the Association that an insured person engaging his own practitioner as anaesthetist should be allowed to pay any excess over the scale fees to meet the practitioner's charge, while retaining his title to grant from the Approved Society on the basis of the normal scale fees, as, in its view such a form of "contracting out" would be contrary to the spirit of the Regulations and would, if permitted, constitute a grave danger.

Upon the question of the fee payable for the service, however, the Dental Benefit Council stated that it was reviewing the financial effect of the Regulations and that it was prepared to consider further representations from the Association upon this point provided that they did not involve any extension of the principle of "contracting out."

The policy of the Association is that for the simple administration of nitrous oxide, or a similar anaesthetic, there should be a minimum fee of 10s 6d, that if more than one patient is dealt with at the same time and place the fee should be 7s 6d per patient, and that for other administrations, whatever the anaesthetic, the fee should be £1 1s.

The present Regulations allow for the payment of fees on a sliding scale according to the number of teeth extracted, but in respect of two items of service the fees are below the Association's minimum. Although the Council holds the view that the period of anaesthesia required and the responsibility incurred by the anaesthetist are not necessarily dependent upon the number of teeth extracted, it realises that there are certain advantages in the sliding scale method drawn up by the Dental Benefit Council. It must be assured however, that the Association's minimum fee is adhered to. The Council has therefore made representations to the Dental Benefit Council that para 4 (b) of the second schedule be amended to read

(b) Administration of General Anaesthetics in connexion with the extraction of—	Fee per case in
One to eight teeth	10s 6d
Nine to twelve teeth	12s 6d
Thirteen to sixteen teeth	17s 6d
Seventeen or more teeth	£1 1s. 0d.

Mortuary Facilities

84 The Council has considered the following Minutes 98 and 99 of the A R M 1936

Minute 98—Proposed That the British Medical Association demand provision of public mortuaries in country areas for the reception of dead bodies and for the proper conduct of post mortem examinations

Minute 99—Resolved That the motion be referred to the Council for consideration

and has obtained information on the subject from the Divisions and Branches in rural areas. It is evident from this information that the mortuary facilities, including proper arrangements for the conduct of post-mortem examinations in many parts of the country are either entirely lacking or totally inadequate.

The Council is approaching the Ministry of Health on these subjects and the Council will urge the Minister to take

appropriate action with the local authorities concerned, and to use, where necessary the powers recently conferred upon him by Section 198 of the Public Health Act 1936, which will come into operation in October next

Payment of Civilian Practitioners for Attendance on Members of Defence Forces Fees for Examination of Recruits for Territorial Army

85 The following are the fees at present paid to civilian medical practitioners for attendance upon members of defence forces

Consultation at Surgery	2s 6d
Visit by practitioner	3s 3d
Night Visit	4s 6d

With increased allowances for mileage

The Council has always regarded these fees as being inadequate and has from time to time made representations thereon to the Departments concerned, but without success. The Council is again pursuing the matter with the Admiralty, the War Office, and the Air Ministry, and is urging that the fees should be increased.

The fee at present paid for examination of recruits for the Territorial Army is 2s per recruit. Some years ago the Council endeavoured to secure an increase in this fee, but, at the request of the Divisions concerned the matter was allowed to drop. The Council feels that it is an opportune moment to press for an increase in this fee, and representations are accordingly being made to the War Office (and if necessary to the Territorial Associations) that the fee should be increased to a minimum of 5s.

Investigation of Deaths from Cancer

86 Inquiry has been made of the Council as to whether those practitioners who furnish information to medical officers of health in connexion with the investigation of deaths from cancer should receive a fee for completing the questionnaire and, if so, by whom the fee should be paid. The Council is (1) informing the Ministry of Health that a fee should be paid to the practitioner completing this report and (2) suggesting to the Ministry that the medical officer of health before approaching the practitioner in these cases should first ascertain from the relatives if they have any objection to such information being supplied by the practitioner. (See also para 75.)

Medical Referees to Friendly Societies

87 The Council has considered the following motion passed by the annual meeting of the Scottish Association of Friendly and Approved Societies in June last

That the Executive consider the advisability of setting up a Panel of Medical Referees so that Friendly Societies may be in a position to have members who are not insured for national health purposes examined at reasonable fees

After some little discussion it was unanimously agreed that the Association approve the principle of setting up a panel of Medical Referees for Friendly Societies and that it be remitted to the Executive to make the necessary arrangements,

and has approved the principle of setting up a panel of medical referees of Friendly Societies for the examination of those of their members who are not insured. In the opinion of the Council such a panel should be open to practitioners of considerable experience in general practice

Licensing Regulations Governing Electrical Treatment

88 The Chartered Society of Massage and Medical Gymnastics proposes to approach the L C C with an application that the following treatments should be placed in the same category as ultra violet ray treatment, diathermy, galvanism, faradism, high frequency sinusoidal current and x ray, and should be given only under medical direction and is desirous of obtaining the Association's support in this application. The Council has informed the Society that the Association will be prepared to support the application.

Duties of and Ethical Rules for Industrial Medical Officers

89 The Birmingham Central Division represented to the Council its concern at the tendency for industrial medical officers to encroach upon the work of private practitioners and the Council came to the conclusion that in view of the steadily increasing number of practitioners now employed by industrial firms on a whole time or part-time basis, it was desirable that the Association should attempt to define the relationship of such officers to the general practitioner. The Council has prepared rules outlining the duties and governing the ethical conduct and relationships of industrial medical officers, and these are embodied in Appendix IV of this report.

The Council draws attention to the following points

(i) The schedule of duties (Part I) is comprehensive, but every industrial medical officer would not necessarily be required to undertake all these duties.

(ii) The intention of Part II of the rules is to define the scope of the treatment which should be given by the industrial medical officer and to promote his co-operation with the worker's own medical attendant. At present there are considerable variations in the matter of treatment given at the works-clinic and there is frequently no co-operation between the industrial medical officer and general practitioner. It is proposed that the industrial medical officer shall not undertake domiciliary treatment and that except in the special circumstances indicated in Rule I (iv) he shall only give emergency or first aid treatment at the factory or workshop.

(iii) Rule I (xiv) and (xv) deals with the medical records kept by the industrial medical officer and the maintenance of professional secrecy. This is a matter of considerable importance.

(iv) In order to maintain the independent position of the certifying surgeon under the Factory Acts the Council suggests that it is desirable to stipulate that the industrial medical officer shall not hold the position of certifying factory surgeon in the same area as that in which the factory concerned is situated (Rule 4).

The Council recommends

Recommendation. That the statement of the duties of Industrial Medical Officers and the ethical rules relating to such officers be approved. (See Appendix IV)

Representation of Medical Profession on Local Authorities

90 The Council has considered the following Minute 103 of the A R M 1936

Resolved. That the Representative Body, believing it to be of the utmost importance that medical practitioners should seek election to local authorities, urges Divisions (a) to encourage members of the Association to interest themselves in local politics and to offer themselves as candidates through the recognised machinery of the area, (b) to maintain the closest contact with the medical members of the local authorities and continually to keep them informed of the views of the Division on matters before local authorities,

and is taking the following action

(1) At the following times in each year Divisions and Branches will be urged to act on the lines suggested in para (2) of Minute 103

In June in respect of the local authority elections taking place in the following November

In November in respect of the County Council and other local authority elections taking place in the following March and

(2) Divisions and Branches will be informed of the following statement outlining the more important ways and means in which the local profession may help when a medical practitioner has in fact secured election to a local authority (whether with the help of a Division or not)

(i) Steps should be taken to establish and maintain the closest contact with him. It may be feasible to elect or co-opt him to the Executive Committee of the Division or to the Branch Council. In any case the Branch Council or Executive Committee should itself or through a special Subcommittee assume responsibility for maintaining a liaison with such a practitioner or practitioners and for keeping him informed of the views of the Association generally and of the Division on matters under consideration by the local authority. The local authority member for his part should keep this Committee informed of possible future developments of his authority's work.

(ii) The Division should consider where necessary what arrangements can be made to help the member of the local authority in his practice, thus enabling him to attend meetings of committees and of the Council without fear of prejudicing his practice.

Nursing Problems

91 The Council has considered a communication from the College of Nursing inviting the views of the Association upon a number of important nursing questions. The Council has prepared a comprehensive report on the questions raised which it has submitted to the College of Nursing.

The Council hopes to publish this report, which is of considerable interest to members of the Association, in an early issue of the *Supplement*.

Though the question of the scope of the examination papers of the General Nursing Council was not one of those submitted to the Association by the College of Nursing, the Council felt that it had a bearing on several of the issues discussed. The Council is aware that the General Nursing Council has decided that the education of the State Registered Nurse must reach a high standard in both theoretical and practical subjects but it finds it difficult to understand why it should be necessary or indeed advisable for nurses to acquire the special knowledge needed to enable them to answer some of these questions which relate to diagnosis and medical treatment as distinct from nursing care of certain diseases, some of them of a rare nature.

The Council is further of opinion that the inclusion of such questions must of necessity lead a candidate to spend valuable time in the study of matters that are not in fact the business of a nurse which might be employed more profitably in learning the essential principles of nursing. It also considers that the inappropriate nature of such questions may be a possible cause of the difficulty experienced in securing a sufficient supply of State Registered Nurses. The Council has so informed the General Nursing Council and the College of Nursing.

Emergency Treatment under Road Traffic Act

92 The Council again reminds members that it has prepared for their use model forms for making claims for emergency treatment rendered under the Road Traffic Act.

Application for these forms should be made to the Medical Secretary. There is no charge.

Information to Insurance Companies

93 The Council has communicated to the Life Offices Association the following Minute 87 of the Annual Representative Meeting 1936

Minute 87—Resolved. That where any medical certificate is required by an insurance company in the case of a deceased patient not previously examined for life insurance, such certificate should not be furnished without the previous consent of the nearest available competent relative and that a fee of not less than 10s 6d should be paid by the insurance companies for any such certificate.

and has been informed in reply that when an insurance office makes direct application to a medical practitioner for a certificate on the lines indicated in above-quoted Minute 87, it should pay the practitioner's fee. The Life Offices Association has informed its members of the fee suggested by the Association for such certificates.

Select Committee on Medicine Stamp Duties

94 The Council submits in Appendix III a Memorandum of Evidence given on behalf of the Association before the Select Committee on Medicine Stamp Duties.

Medical Officers of Ministry of Labour Training Centres

95 The Ministry of Labour has been considering the establishment in the special areas of a new class of local training centre for unemployed men and one of the functions of

the centres will be to provide medical, dental, and optical treatment for such of the men attending the centre as are in need of it

The Council has forwarded for the consideration of the Ministry of Labour a statement of duties of the medical officers of these centres and has made suggestions as to the fees which should be payable for this work. In the statement of duties the Council has suggested, *inter alia*

(a) that where as the result of his examination the Centre doctor forms the conclusion that the trainee needs medical attention before he can profit by the facilities provided at the Centre, he shall refer the trainee to his own practitioner or (if the trainee cannot obtain medical attendance by private or insurance arrangements) to the District Medical Officer

(b) that the Centre doctor shall give emergency and first-aid treatment where required, but shall refer the trainee for further treatment if necessary in accordance with (a) above, and

(c) that the Centre doctor shall conduct such periodical examinations as may be necessary of persons undergoing training, and shall certify as to their capacity and fitness for work, and advise as to transfer or training in other parts of the country

Fees to Post Office Medical Officers

96 As the fee for a medical examination and report in workman's compensation cases is ordinarily one guinea, the Council suggested to the Postmaster General that a similar fee (in place of the fee of 10s.) should be paid in those cases where a member of the public was involved in an accident in which the Post Office was concerned, and upon which an examination and report was made by a Post Office medical officer. The Postmaster-General has agreed to raise the fee to 15s

Workman's Compensation and Accident Cases

97 The Council has considered the following Mins 94 and 95 of the Annual Representative Meeting, 1936

Minute 94—Resolved That with reference to para. 87 of Annual Report of Council a medical man, when called upon to visit and report on a workman's compensation and accident case should not report upon such a case without first meeting in consultation the usual medical attendant of the patient, and that the latter should be paid a fee of not less than one guinea by the insurance company for his attendance at such a consultation

Minute 95—Resolved That the Motion be referred to the Council for consideration

It appears to the Council that the Association's rules for Medical Inspectors deal adequately with the first point raised in Min 94. Concerning the second point, the legal position appears to be that the employer cannot be required to pay a fee for the attendance of the workman's doctor if the latter attends the examination, and that the workman has no absolute right to have his doctor present at an examination, although in many instances it is not unreasonable and in some it is definitely desirable that he should be present. In view of this position and the fact that a number of insurance companies at present invite the attendance of the workman's own practitioner and pay a fee for such attendance the Council does not propose to take any action in respect of Min 94

Administration of Drugs by Members of Nursing Profession

98 The Council has expressed general approval of the following resolution adopted by the Association of Hospital Matrons

That no Nurse, trained or in training should administer dangerous drugs or medicines containing dangerous drugs on verbal orders only but that all such orders should be prescribed in writing by a qualified Medical Practitioner and further, that the attention of Hospital Authorities of the College of Nursing and of the British Medical Association be called to the risks involved in the carrying out of verbal instructions of which no proof can be obtained

Factory Legislation

99 The Council has made representations to the Home Secretary upon a number of health questions arising from the new Factory Bill which is at present before the House of Commons. In particular, the Council has (i) suggested modifications in the hours of work, as to the weights which should be lifted by women and young persons employed in factories, and as to cleansing and ventilating of factories, (ii) urged that pregnant women should not be employed in factories during the last six or eight weeks of pregnancy, (iii) urged that shuttle kissing should be abolished

In view of the revision of factory legislation the Council is of opinion that the Association should press for a substantial increase in the fees paid to certifying factory surgeons. These are at present

For an examination at the works 1s for each person examined (minimum fee 2s 6d) and mileage at the rate of 6d for each complete half-mile over and above the mile

For an examination away from the works, 1s for each person examined

For an examination which involves special report, 5s

These fees have long been held to be inadequate and the Council recommends

Recommendation That the remuneration of certifying factory surgeons should be increased as follows

(i) for a complete examination in each case and for certification of young persons under the Factory Acts, a fee of 7s 6d per case, and

(ii) for special examination and report on Form 190, Form 500, or Form 1830, a fee of £1 1s, subject to a reduction where a number of cases are reported upon at the same time

Appointment of Coroners under the L.C.C.

100 The Public Control Committee of the L.C.C. made a proposal in July last that, in view of the recommendation of the Departmental Committee on Coroners' Law, in future only solicitors or barristers should be appointed as coroners, and the L.C.C. should discontinue the requirement of dual qualification (*i.e.* medical and legal) for these appointments. The proposal was however, withdrawn as a result of the action of the medical members of the L.C.C., and a deputation from the Association has since been received by the Public Control Committee. The deputation urged that no steps should be taken by the L.C.C. to alter its present by law relating to the appointment of coroners until the Government had considered the report of the Departmental Committee and had announced its policy in regard to the Committee's recommendations. The decision of the L.C.C. in this matter has not yet been announced

Principles Governing Contract Practice Arrangements

101 As a result of information obtained through the Divisions and Branches the Council has made a survey of contract arrangements in England and Wales and consideration of this matter has led the Council to the conclusion that the time has arrived for some revision and extension of the Association's policy which at present is expressed in the following Minutes of the A.R.M.

Minute 109—Resolved That the Representative Body adopt the following principles as essential to the formation of any schemes for the provision of medical attendance and treatment of uninsured persons

(i) That in general in considering the necessity for obtaining the approval of the Council for schemes for the treatment of uninsured persons upon contract terms the following principles and conditions must be adhered to

(a) Free choice of doctor by patient and of patient by doctor

(b) Remuneration to be not less than that which is deemed by the Council to be equivalent to that paid in respect of insured persons

(c) Persons with a total income from all sources of £250 per annum or upwards or the dependants of any such person not to be treated under contract terms

(2) That the Representative Body realises that the circumstances of some areas justify a modification of the above conditions and in such circumstances the approval of the Council may be given provisionally to a scheme involving other payments, or different income limits when the local profession can show that the circumstances in the area demand it

(3) That one of the conditions necessary for the approval of schemes containing lower rates of payments shall be the inclusion amongst the rules in a prominent position of a statement that approval by the Association has been given to the rates only because of special economic conditions

The Council considers it to be desirable that a standard content of medical service should be defined as an ideal to be aimed at in all contract work and that for this purpose the content indicated in the Association's Model Scheme for Public Medical Service is desirable. This provides that a subscriber to a Public Medical Service so long as his subscriptions are not in arrears shall be entitled to receive from his medical attendant

(i) Medical and surgical treatment which general practitioners as a class may be reasonably expected to provide in the area concerned at the surgery of his medical attendant or dispensary of the Service within the hours mentioned on his card or when his condition requires it at his place of dwelling

(ii) All ordinary medicines * and dressings for such wounds and other injuries as are treated by the medical attendant

but that the subscriber by virtue of his payments to a Public Medical Service shall not be entitled to

(i) Medical service in respect of any of the following matters

(a) Confinements (that is to say attendance in labour resulting in the issue of a living child or attendance within ten days after labour in respect of any condition resulting therefrom)

(b) Vaccinations

(c) Administration of a general anaesthetic

(d) Certificates and reports (at the discretion of the area concerned)

(ii) Medical attendance in respect of

(a) Operations requiring general anaesthetics

(b) Operative dentistry

(iii) Bottles and other containers

(i) Examinations court attendances etc., under Common Law and Workmen's Compensation Employers' Liability, and other statutes

(i) Attendance beyond a mile radius from the house of the medical attendant

The Council also suggests that wherever practicable, forms of contract practice should be replaced or should be conducted through a public medical service or an organisation similarly constituted

The Council recommends

Recommendation (1) That it is desirable in all contract practice arrangements that the content of medical service to be provided should be that laid down by the Association in its Public Medical Scheme

(2) that wherever practicable private clubs should be replaced by Public Medical Services

(3) that if and when practicable works and colliery contract arrangements should be replaced by an organisation such as a Public Medical Service

(4) that in the case of adult and juvenile members of friendly societies the arrangements for the provision of medical service provided by these societies should be through a Public Medical Service or similarly constituted organisation

102 The Council is also of opinion that the profession should definitely decide that there should be no differentiation in the contract rates for medical attendance upon the

* Where such are available under the service

juveniles or adults. Some local units of the Association are now acting upon Min 95 of the A R M 1928 which permits Divisions and Branches to make local arrangements for the treatment of juvenile Oddfellows at the rate of 8s 8d per annum

The Council recommends

Recommendation That there should be no differentiation in the contract rates for medical attendance upon juveniles and adults and that the following minute of the A R M, 1928 be rescinded

Minute 95—That the Representative Body approve a standard rate of 8s 8d per head per year including drugs for the remuneration of medical practitioners for medical attendance and medicine for juvenile members of the Manchester Unity of the Independent Order of Oddfellows that the Council be authorised to approve a slightly lower rate than 8s 8d per head per year for a time to be definitely stated for application in any area in which it is satisfied that owing to economic conditions the standard rate of payment is not feasible and that it be an essential part of this arrangement that there must be free choice of doctor by patient and of patient by doctor

PUBLIC HEALTH

Remuneration of Medical Practitioners Employed Part-time by Local Authorities

103 The Council has considered the following Minute 119 of the A R M 1936

'Minute 119 Resolved That the following amendment be approved in principle it being referred to the Council to decide the form of words to be used in incorporating it in the Association's policy

79 Amendment by Cardiff That the first paragraph of Section 2 (a) Regular Sessions be amended by the insertion of on an average before 1 regular attendance and of an average of before 2 hours duration, and that Section 2 (b) Individual Sessional Fees be amended by the insertion of on an average before 2 hours duration

Section 2, to which the amendment by Cardiff refers reads as follows

(2) *Consultant and Specialist Work at Hospitals or Clinics*

For consultant and specialist work at hospitals or clinics (including the administration of anaesthetics treatment of venereal disease and x ray examination and treatment) remuneration on the following scale

Regular Sessions

(a) Where the method of payment is by salary then

	Not less than £
Where not more than 1 regular attendance or session per week is required or not more than 2 hours duration	125 p.a.
Where 2 regular attendances or sessions per week are required	200 p.a.
Where 3 regular attendances or sessions per week are required	275 p.a.
Where 4 regular attendances or sessions per week are required	350 p.a.
Where 5 regular attendances or sessions per week are required	425 p.a.
Where 6 regular attendances or sessions per week are required	500 p.a.

Individual Sessional Fees

(b) Where an individual additional or occasional consultative or specialist session of not more than two hours duration is required, the remuneration should be not less than £2 12s 6d per session

Emergencies

(c) If emergency attendances are required the fee should bear suitable relation to the ordinary fees of the area for the service given and should be arranged after consultation with the local profession

Mileage

(d) In every case an augmentation of salary or a suitable payment for mileage should be arranged except when the practitioner's residence or consulting room is within two miles of the institution where the attendance or services are rendered

Holidays

(e) Consultants employed at an annual salary should be allowed a reasonable annual holiday for which period of absence

from duty locumtenents should be provided at the expense of the local authority

The Council has inserted the following note in the Association's policy on this subject

The annual salary for an appointment under this scale which involves some variability in the weekly number of attendances should be based on the estimated average number of weekly attendances during a year. The arrangement of sessions should provide for reasonable uniformity of duration.

Midwives Act, 1936

104 On September 18 1936 the Ministry of Health issued a circular (No 1569) to local supervising authorities, drawing attention to the provisions of the Midwives Act, 1936 and urging the immediate formulation of schemes for establishing a service of salaried midwives so that as required by the Act, these might be submitted to the Ministry not later than January 30 1937 and be brought into operation not later than July 30, 1937. Every authority before submitting proposals to the Ministry was statutorily required to consult "such local organisation, if any, of registered medical practitioners as appears to the authority effectively to represent the opinion of such practitioners practising in that area on the question to be considered in formulating the proposals." The Council has advised Divisions and Branches as to the action to be taken by them for the purpose of consultation with local supervising authorities. Emphasis was laid upon the following points—(a) the necessity of securing arrangements which will enable the patient to have as free a choice of midwife as possible and to exercise that choice privately by direct communication with the midwife rather than through an officer of the authority, (b) nomination by the patient of the practitioner of her own choice to be called in by the midwife should medical assistance be necessary, (c) the desirability of the remuneration of midwives not being so standardised as to prevent individual skill judgment and personality from reaping due reward. Divisions and Branches were also requested to use every available opportunity of urging that local maternity services should be established in accordance with the Association's policy for a National Maternity Service.

In a number of cases attention has also been drawn to (a) the desirability of the provision of an adequacy not only of midwives qua midwives but also of midwives qua maternity nurses and (b) the necessity of separate scales of assessment for patients' contributions in respect of the services of (i) midwives, (ii) maternity nurses based on the assumption that a woman who books a doctor and midwife acting as maternity nurse is less able to pay than a woman of the same economic status who contents herself by booking a midwife only.

The Council is glad to note that many local units have taken appropriate steps on the lines indicated and from such information as is available it appears that the Association's policy has received a fair amount of recognition by local authorities. The consultations which have taken place have provided opportunities for closer co-operation between the general practitioner and the public health officers of local authorities. In a few instances where the local supervising authority failed to consult representatives of the profession as required by the Act representations have been made to the Ministry requesting that the schemes submitted by the local authorities concerned should be returned with an instruction that the statutory consultations should take place.

Ministry of Health Circular 1550 on Children under School Age

105 This Circular issued in May, 1936 appeared to imply that the success of maternity and child welfare work was primarily dependent upon an efficient health visiting service. The Circular urged that children under school age should be visited at regular intervals by a health visitor who should only refer them to a medical practitioner if she has grounds for suspecting disease or defect. This proposal appeared to the Council to overlook the medical practitioner as a primary factor in the prevention of illness and disease. The Council has called the attention of the Ministry of Health to this

matter, emphasising the desirability of regular supervision of infants and young children by a medical practitioner in order that progress may be noted and the mother advised as to the measures to be adopted for the maintenance of the health of the child.

Fees for Medical Practitioners called in by Midwives

106 A deputation from the Association has discussed with representatives of the Ministry of Health the scale of fees for doctors called in by midwives under the Midwives Acts, which was approved by Min 32 of the A.R.M., 1936. Following this discussion the scale adopted by the Representative Body has been reconsidered by the Council and certain amendments have been made. On October 26, 1936 the Minister, in pursuance of his powers under Sub-section (1) of Section 9 of the Midwives Act, 1936, issued the Medical Practitioners (Fees) Regulations, 1936 prescribing conditions governing the payment of such fees. It will be recalled that the conditions set out in the previous scale of fees had been declared ultra vires following the judgment given in the Court of Appeal in the case of Brown and Others v. Monmouthshire County Council. The Council has approved the following scale of fees, which has been transmitted to the Ministry with a memorandum embodying the reasons which have led the Association to suggest modifications of the scale approved by the A.R.M., 1936. For purposes of comparison the Association's revised scale is set out side by side with the scale now in operation under the 1936 Regulations, the variations being indicated in italics.

Scale of Fees prescribed by the Ministry of Health

- 1 Fee for all attendances of a medical practitioner at parturition (that is, from the commencement of labour until the child is born) whether operative assistance or not is involved including all subsequent visits during the first 10 days inclusive of the day of birth £2 2 0
- 2 Fee for attendance of a second medical practitioner to give an anaesthetic whether on account of abortion or miscarriage, at parturition or subsequently £1 1 0
- 3 Fee for suturing the perineum, for the removal of adherent or retained placenta for exploration of the uterus for the treatment of post partum haemorrhage or for any operative emergency arising directly from parturition including all subsequent necessary visits during the first ten days inclusive of the day of birth £1 1 0

This fee not to be payable when the fee under (1) is payable

- 4 Fee for attendance at or in connexion with an abortion or miscarriage, including all subsequent visits during the ten days from and including the first visit £1 1 0
- 5 Fee for visits to mother and/or child not included under (1) to (4)
Day (9 a.m. to 8 p.m.) 5s
Night (8 p.m. to 9 a.m.) 10s

Scale of Fees approved by Association

- 1 Fee for all attendances of a doctor at any time from the commencement of labour until the child is born whether or not operative assistance is involved in including all subsequent visits during the lying in period as defined in the Rules of the Central Midwives Board £3 3 0
- 2 Fee for attendance of a second doctor to give an anaesthetic, whether on account of abortion or miscarriage at parturition or subsequently £1 1 0
- 3 Fee for suturing the perineum for the removal of adherent or retained placenta for exploration of the uterus for the treatment of post partum haemorrhage, or for any operative emergency arising directly from parturition including all subsequent necessary visits during the lying in period as defined in the Rules of the Central Midwives Board £1 11 6

This fee not to be payable when the fee under (1) is payable

- 4 Fee for attendance at or in connexion with an abortion or miscarriage including all subsequent visits during the fourteen days from and including the first visit £2 2 0
- 5 Fee for visits to mother or child not included under (1) to (4)
Day (9 a.m. to 8 p.m.) 5s
Night (8 p.m. to 9 a.m.) 10s

- 6 The usual mileage fee of the district to be paid for all attendances under (1) to (5) of this scale
- 7 Fee for attendance on mother and/or child at the medical practitioner's residence or surgery 2s 6d
- 8 The conditions subject to which fees are to be payable to medical practitioners under the said subsection are
- (a) The medical practitioner shall not have agreed to attend the patient under arrangement made by or on behalf of the patient or by any Club, Medical Institute or other Association of which the patient or her husband is a member
- (b) The medical practitioner shall not be under obligation to give the treatment to the patient under the National Health Insurance Acts, 1924 to 1935
- (c) The medical practitioner shall not receive or agree to receive a fee from the patient or her representative
- (d) Fees shall not be payable (i) in respect of any services performed by the medical practitioner later than the tenth day after his first attendance, except where he has reported to the local supervising authority that he considers for reasons stated that his further attendance is necessary (ii) in respect of any services performed by the medical practitioner after the expiry of four weeks from the birth
- 6 The usual mileage fee of the district to be paid for all attendances under (1) to (5) of this scale
- 7 Fee for attendance on mother or child at the doctor's residence or surgery—not included in (4) 3s 6d Where this attendance includes a complete ante natal examination the fee shall be 5s
- 8 The conditions subject to which fees are to be payable to medical practitioners under the *Midwives Acts 1902-36* are
- (a) The medical practitioner shall not have agreed to attend the patient under arrangement made by or on behalf of the patient or by any Club Medical Institute or other Association of which the patient or her husband is a member
- (b) The medical practitioner shall not be under obligation to give treatment to the patient under the National Health Insurance Acts, 1924 to 1935
- (c) The medical practitioner shall not receive or agree to receive a fee from the patient or her representative
- (d) Fees shall not be payable (i) in respect of any services performed by the medical practitioner later than the *fourteenth* day after his first attendance, except where he has reported to the local supervising authority that he considers, for reasons stated that his further attendance is necessary (ii) in respect of any services performed by the medical practitioner after the expiry of four weeks from the birth

A further point of importance has been raised with the Ministry in connexion with Section (a) of the conditions subject to which these fees are payable. It will be agreed that it is desirable that the midwife on booking her patient should ascertain the name of the patient's doctor whom it is desired should be called in should subsequent events render this necessary. It is equally desirable that the doctor should intimate his willingness to attend if sent for in the proper way. The Association has asked the Minister for a ruling as to whether either or both of these steps would if taken, preclude the doctor from remuneration under the Regulations and has urged the Minister, if necessary, appropriately to amend the conditions so as not to preclude an arrangement or arrangements which are certainly in the interests of the mother.

Recommendation That the action taken by the Council in connexion with the scale of fees for medical practitioners called in by midwives be approved

Local Government Officers' Superannuation

107 In the speech from the Throne the King in opening Parliament on November 3, 1936 stated that legislation would be submitted to make further provision for the superannuation of local government officers. In the House of Commons on November 16 Mr Hudson (Parliamentary Secretary to the Ministry of Health) stated that the main object of the Bill would be to secure provision by all local

authorities for the superannuation of their administrative professional and clerical staff, in order to remove the bar to mobility to which the absence of a uniform superannuation system gives rise.

A deputation from the Association discussed the proposed Bill with representatives of the Ministry of Health on December 11, 1936, and stressed, *inter alia*, the following resolutions of the Association

(a) That all medical officers employed by local authorities should be entitled to added years of service not exceeding 10—with the consent of the Ministry of Health for the purpose of superannuation allowance

(b) That the superannuation schemes of local authorities should be uniform that the total service of a medical officer with local authorities should rank for computation of superannuation allowance and that provision should be made for interchangeability of superannuation of medical officers as between voluntary and council hospitals

Administration by Unqualified Persons of Light Treatment in Welfare Centres

108 The Chartered Society of Massage and Medical Gymnastics has enquired as to what extent the Association would be willing to co-operate with the Society in approaching the Ministry of Health with a view to the uniform adoption of a recommendation that only persons holding the Society's light and electrotherapy certificate should be regarded as qualified to give light treatment. The Council has informed the Chartered Society that it is of opinion that except where light treatment is given under medical supervision, only persons presenting evidence of adequate training and experience in the administration of light treatments should be employed for that purpose.

Shellfish and Public Health

109 A copy of the following resolution of the A R M 1936 was sent to the Ministry of Health

The time has now arrived when the Ministry of Health should be requested to make regulations prohibiting the sale for human consumption in this country of molluscan shellfish whether home produced or imported which are not certified to have been cleansed by the recognised method at a station approved for the purpose by the Ministry of Health

Salaries of Public Dental Officers

110 The British Dental Association has asked for the Association's assistance in connexion with the preparation of a scale of salaries for various grades of public dental officers on the lines of the Memorandum of Recommendations as to salaries of whole time public health medical officers. The Council has informed the British Dental Association that it will be glad to advise that body in the light of the experience gained in the application of the Memorandum of Recommendations

Milk (Special Designations) Order, 1936

111 A copy of the following resolution of the A R M 1936 has been forwarded to the Ministry of Health

That only milk complying with the conditions required for the designations Tuberculin Tested or Pasteurised or preferably both, can safely be consumed without boiling

The Council has considered and approved a scale of fees for the testing of designated milk in accordance with the requirements of the Milk (Special Designations) Order 1936. It recommends

Recommendation That the following scale of fees be adopted for the testing of designated milk in accordance with the requirements of the Milk (Special Designations) Order 1936

1 Tuberculin-tested milk and accredited milk	
Methylene blue Test	3s. 6d. singly or for batches of six or more
Coliform Test	2s. 6d. singly or for batches of six or more (3 tubes).
For contract work for public health authorities	3s. per sample

2. Tuberculin test of pasteurised milk, and pasteurised milk
 Phosphatase Test 7s. 6d. singly or
 6s. for batches of six or more
 Bacterial count 3s. singly or
 3s. for batches of six or more

Note—It should be understood that the Ministry of Health does not demand that every sample of milk shall be subjected to both the methylene-blue and the coliform tests. It is sufficient if the coliform test is applied to a proportion of samples.

Memorandum of Recommendations as to Salaries of Whole-time Public Health Medical Officers

112 The Association again acknowledges with gratitude the continued co-operation of the Society of Medical Officers of Health and of the proprietors of the *Lancet* and the *Medical Officer* in rejecting advertisements from authorities which have not applied the Memorandum of Recommendation scales to their whole time public health medical officers. The Advisory Committee set up under Section X of the Memorandum, has dealt with a number of cases during the year.

The attitude of local authorities to the Memorandum of Recommendations is in the main satisfactory and there are now few important authorities not applying this agreement.

Scottish Scale of Salaries for Whole-time Public Health Appointments

113 The Scottish scale of salaries for whole-time public health appointments which varies in some respects from the Memorandum of Recommendations as to the salaries of whole-time public health medical officers in England, Wales, and Northern Ireland, was first approved by the Representative Body in 1927 to operate for one year, and in 1928 its operation was extended for a further five years, since when its operation has been extended annually or biennially. The Council recommends

Recommendation That the Scottish scale of salaries for whole-time public health appointments be continued in operation for a further year.

Form of Report by Medical Practitioners under Ante-natal Schemes

114 The Council is proceeding with the preparation of a model form of report for completion by general practitioners in connexion with the examination of expectant mothers under ante natal schemes adopted by local authorities.

Maternity Services in Northern Ireland

115 The Ministry of Home Affairs for Northern Ireland has appointed a committee under the chairmanship of Professor Johnstone to examine the conditions under which the organisation of maternity services is carried on in Northern Ireland and to recommend such alterations in the existing system as may be desirable for securing adequate nursing and medical services for domiciliary maternity cases and improved efficiency in the services in general. The committee has been supplied with copies of the Association's memoranda and publications in relation to maternity services and has been informed of the Association's willingness to co-operate in every way and if necessary to give evidence before the committee.

Ascertainment of Mentally Defective Children

116 The Council has considered a recommendation of the National Union of Teachers that in all examinations for the ascertainment of mentally defective children provision should be made for the attendance of and consultation with the head teacher concerned. The National Union of Teachers has been informed that the Association while desirous of encouraging full co-operation between teachers and medical officers of health regards this suggestion as impracticable.

Diagnosis of Syphilis

117 The Council has considered a resolution passed by the Association of Clinical Pathologists that in view of the

importance of identifying syphilitic infection in pregnant women a blood Wassermann reaction should be carried out as early as possible as a routine test on all women attending ante natal clinics. The Association of Clinical Pathologists has been informed that the Council is not in favour of this recommendation.

NATIONAL HEALTH INSURANCE

Insurance Capitation Fee

118 For several years there has been a growing feeling that the capitation fee of 9s. awarded by a Court of Enquiry in 1924 has become inadequate for the services which an insurance practitioner is called upon to give to an insured person. During the past twelve years there has been a substantial increase in the volume of work and in the content of the service. The 1936 Annual Conference of Local Medical and Panel Committees instructed the Insurance Acts Committee to proceed in the matter and, when the preparation of the case to be submitted on behalf of insurance practitioners had reached an advanced stage, a formal application was submitted to the Ministry of Health. The Minister himself then met a deputation from the Committee. He intimated that, in his view, a flat rate substantially below the present figure could well be justified. At the same time he agreed that, both sides holding opposite views the question was one which could best be settled by arbitration and he undertook to make the necessary arrangements. It is understood that the arbitrators will be asked to say what in their opinion is the appropriate fee for medical attendance on all sections of the insured population, including those insured workers under 16 years of age shortly to be brought into National Health Insurance as the result of legislation promised by the Government.

Extension of Medical Benefit to Insured Workers under 16

119 In the original programme of legislation for the current parliamentary session mention was made of a measure to provide for employed juveniles between school leaving age and 16 years of age being brought within the scope of medical benefit under the National Health Insurance Acts. In the autumn of last year discussions were opened with the Ministry of Health in regard to the capitation fee to be paid to medical practitioners for this new group of insured persons. It was understood that the persons affected would be those males and females who had left school and entered insurable occupations, approximately one million at the outset and that the medical benefit to which they would be entitled would be identical to that available to other insured persons except that in the absence of sickness benefit, insurance practitioners would not be required to issue certificates of incapacity. The Ministry expressed the view that there was justification for a capitation fee lower than 9s. on the grounds that medical certificates would not be required and that the demand on the services of medical practitioners would be less than in respect of the existing insured population.

The Ministry was informed that there was no ground for differentiation of the standard capitation fee on account of the incidence of sickness amongst the new class of insured persons that any variation was opposed to the principle of insurance upon which National Health Insurance was based and that whilst certificates might not be required for National Health Insurance purposes some form of certification of incapacity would be necessary in practice thus making it desirable that certification should be included in the contract of the medical practitioner.

Eventually the Minister of Health made an official offer of a capitation fee of 7s. 6d. In making this offer he did not press the contention that persons within the new age group were likely to make fewer demands on the services of practitioners than persons of older ages but he maintained that the absence of the requirement to issue certificates of incapacity would result in a considerable reduction in the

time occupied in giving those certificates, including special visits by the insured person for that purpose

At a Special Conference of Local Medical and Panel Committees called for January 7, 1937 the following resolutions were passed unanimously, and subsequently transmitted to the Ministry of Health

That the offer of the Minister of Health of a capitation fee of 7s 6d for medical attendance on insured persons under 16 years of age be rejected

That this Conference recommends insurance practitioners to decline service for the provision of medical benefit for insured workers under 16 years of age at the terms offered by the Minister of Health

That in view of the inadequacy of the existing capitation fee and pending the result of negotiations for its increase, this Conference is not prepared to accept for attendance on insured workers under 16 years of age a capitation fee less than that which is paid for adult insured workers

That the Insurance Acts Committee be authorised to take action in the light of the decisions reached by the Conference.

There has been no further communication from the Ministry upon this matter but the position now is that the question will be settled by arbitration as part of the general question of the standard capitation fee

Fees for Domiciliary Attendance on Dependants of Insured Persons

120 In the Report of the Departmental Committee on Scottish Health Services it is suggested that 6s would be an appropriate fee for domiciliary attendance on the dependants of insured persons. The Annual Conference of Local Medical and Panel Committees expressed the opinion that such a fee is inadequate

OPHTHALMIC

National Eye Service

121 The National Eye Service, which is the popular name for the NOTB scheme, continues to make steady progress throughout the country. In 1936 no less than 23 per cent more cases were dealt with than in 1935. It is particularly gratifying to note that there was an increase of 41 per cent in the number of insured persons who exercised the right given them by statutory regulations to take their benefit through the Service rather than submit to an examination by a sight testing optician in accordance with their societies' instructions. Nevertheless, there is still ample room for expansion. The success of the scheme is very largely dependent upon the support given to it by the medical profession and the Council appeals to those who come in contact with the people for whom it is intended to make it more widely known. An explanatory circular was issued to every general practitioner in October last and a further copy will gladly be sent to anyone who may have mislaid it.

The Annual Representative Meeting last year (Minute 166) expressed the view that evening sessions attended by the ophthalmic surgeons concerned would greatly increase the success of the Service, and the Council will do its best to effect arrangements on the lines suggested in any area which desires to have evening sessions.

For the third successive year a number of ophthalmic surgeons have voluntarily kept statistics of the eye conditions of patients referred to them through the Service, and the following analyses of the three series of 10 000 cases show a remarkable consistency in the percentage of patients who require medical attention for conditions other than errors of refraction

	1934	1935	1936
	per cent.	per cent.	per cent.
Cases of error of refraction only	64.09	64.22	65.39
Cases of error of refraction plus one or more other eye conditions	29.15	27.88	25.83
Cases without an error of refraction but with one or more other eye conditions	5.75	7.36	7.93
Cases with no appreciable eye defect	1.00	0.54	0.85

These figures prove, if proof is needed, the advisability of recommending an ophthalmic medical examination in every case of suspected eye trouble

Ophthalmic Benefit New Regulations

122. In 1930, for the first time the Minister of Health made regulations governing the administration of additional benefits under the National Health Insurance Act. The Regulations gave a member the right to obtain ophthalmic benefit otherwise than in accordance with the arrangements made by his society for the general body of its members. This provision, which the Association had long advocated, enabled a member who wished to have an ophthalmic medical examination, but whose society favoured a sight-testing optician's examination to make use of the National Eye Service without forfeiting any part of the normal grant made by the society.

The 1930 Regulations further provided for (1) the adoption of a scale of charges for the supply of optical appliances of a standard quality which scale was to include as a separate item, any service rendered by an optician incidental to the provision of an appliance and (2) with certain exceptions, an optical appliance being obtained from any optician belonging to an organisation of opticians for the time being recognised by the society. The status of the optician was therefore a matter within the sole discretion of each society.

In December 1934 a body known as the Ophthalmic Benefit Joint Committee, consisting of representatives of groups of approved societies and optical organisations, issued a report which urged the desirability of statutory recognition being given to sight-testing opticians and the appointment of a statutory body on the lines of the Dental Benefit Council, to be charged with the responsibility of administering ophthalmic benefit, including the right to decide which opticians should be employed in connexion with that benefit. When the report of this committee was issued the Association at once took steps to acquaint the then Minister of Health through his advisors, of the undesirability of affording official recognition to the practice of sight-testing by persons other than qualified medical practitioners. A promise was given that the views put forward on behalf of the Association would receive careful consideration in the event of any action being taken arising out of the Ophthalmic Benefit Joint Committee's report.

Nothing more was heard until October 1936 when it was learned that the Minister proposed to provide by regulation for the establishment of a committee whose duties would include (1) the establishment of a register of opticians in connexion with Ophthalmic Benefit and (2) the compilation of a scale of charges for the supply of optical appliances. The Minister received a deputation on November 12 which consisted of the President of the Association, members of the Committee the Vice-Chancellor of London University and representatives of the Royal Colleges and the more important ophthalmological societies. The Minister said that he fully agreed that where any person had reason to think there was anything wrong with his eyes his best course undoubtedly was to be examined by a medically qualified eye specialist and he was in agreement with any action the Association might take to educate the public to this point of view. He undertook that in the Amending Regulations the proposed list of opticians should be expressly referred to as a list of opticians recognized for the purpose of supplying glasses to insured persons, and no more. Of no less importance however was the Minister's promise to give careful consideration to the possibility of excluding from the Amending Regulations any reference to an item in the scale of charges for optical appliances of a service rendered by an optician incidental to the provision of an appliance. A reference in the Regulations to such a service would imply official recognition by the Minister of sight testing by an approved optician.

When the draft amending regulation subsequently appeared there was nothing in it which gave official recognition,

explicit or implied to sight-testing by an optician. In other words, the official recognition which the Minister proposes to give to opticians approved by the Committee set up by him applies only to their ability as expert craftsmen. To do otherwise would create an undesirable precedent since there has not so far appeared in any Act of Parliament or Regulations anything signifying official approval of sight-testing by unregistered persons.

The Amending Regulation is still in "Draft" form, and it is understood that the Minister has been pressed to vary the provision relating to the compilation of a scale of charges so as to secure the re-inclusion of a reference to 'a service rendered by an optician incidental to the provision of an appliance'. Members of Parliament have also been urged by sight-testing opticians in their constituencies to give their support, when the amending regulation becomes substantive and is laid on the table of the House to the restoration of this provision. The Council hopes that the Minister will decline to put into the Regulation any form of words which will imply recognition of sight-testing by opticians.

HOSPITALS

Future Development of Council Hospitals

123 The Council has reviewed the question of the possible development of Council Hospitals under the Local Government Act, 1929 and has had the advantage of receiving a memorandum on this subject by the Medical Superintendents Society. The memorandum contained valuable suggestions regarding the type of hospital which should be developed, its staffing and the carrying out of the general and maternity work. After consideration of the whole question the Council came to the conclusion that there was no need at present to vary that section of the Hospital Policy relating to Council Hospitals.

Liabilities of Local Authorities in Respect of Institutions Maintained by Them

124 The judgment given in the House of Lords in the case of *Lindsey C.C. v. Marshall* raised important questions affecting hospitals, local authorities and the medical profession and the Council has given careful consideration to the issues arising. It will be recalled that this was a case in which the Court of Appeal awarded £750 damages against the Lindsey C.C. for its negligence in allowing a patient who was being treated in a nursing-home under its jurisdiction to contract puerperal fever. The County Council contended it was not liable for any negligence on the part of its medical staff in a matter of professional care or skill which it was not competent to supervise or regulate, but the Court found unanimously that the County Council was responsible for the error of its medical officers and matron in not warning the patient that there was infection in the home and that it was dangerous. The Council extended an invitation to the British Hospitals Association, the County Councils Association and the Association of Municipal Corporations to join in a conference to consider the implications involved. The joint conference decided to obtain the opinion of Counsel upon the important questions raised by the judgment of the House of Lords and the Council hopes to be in a position to deal further with this matter in its Supplementary Report.

Voluntary Hospitals (Paying Patients) Act, 1936

125 The Charity Commissioners have now drawn up draft Rules under Section 5 (1) of the above Act relating to applications by hospitals for Orders authorising the provision of pay-bed accommodation. The Council is satisfied that there is nothing in the Rules to which objection need be taken.

Central Co-ordinating Body of Provident Associations

126 During recent years the Council has taken an active interest in the development of Provident Associations which

have for their object the provision of institutional treatment for middle-class persons and it will be recalled that in 1934 the Representative Body approved a scheme outlining the principles on which such associations should be established. During the session under review the Council convened a conference of provident associations and other interested bodies, as a result of which it was decided to form a co-ordinating body to be known as the National Federation of Provident Associations. The Council has given financial assistance in connection with the preliminary expenses necessary to the formation of such a body, on condition that repayment will be made by the permanent co-ordinating body as soon as funds are available.

Consultants List for London

127 Some four years ago the Council decided to establish for the area of the King Edward Hospital Fund for London a list of practitioners willing to provide consultant and specialist services at a modified fee to persons entitled to medical benefit under the National Health Insurance Acts contributors to the Hospital Savings Association subscribers to approved Public Medical Services, and to others of a like economic status as guaranteed by membership of a recognised organisation. Experience of the working of this list has shown that it has meant the payment of a modified consultation fee by a number of persons who would otherwise have obtained gratuitous hospital services, and that the use which is being made of the list is gradually increasing. It is felt that when the facilities provided under the list are more widely known amongst that class of the population for which the list was established it will be used to a much greater extent.

The Council has given careful consideration to a suggestion that the area covered by the list should be varied and has had regard to the representations made. The Council has decided to vary the area of the list to an area corresponding with that of the Metropolitan Police Area.

The Council also considered a suggestion that the value of the list would be improved if detailed charges were made for x-ray examinations, but came to the conclusion that it would be undesirable to include in the Consultants List any such detailed schedule. The Council agreed, however, that the question raised could be met by modifying the fee payable for the service so as to allow in the case of radiologists a fee of £1 1s (plus the cost of material in all radiological cases).

A Model Contributory Scheme

128 The Council's attention has been drawn to the model contributory scheme prepared by the British Hospitals Contributory Schemes Association as this model differed in certain important respects from the principles laid down by the Association regarding the formation of contributory schemes. The Council has made representations on the matter to the British Hospitals Contributory Schemes Association.

Pay-beds and Private Practice

129 The Council has considered the position of honorary directors of radiotherapy departments in voluntary hospitals where there is a whole-time assistant radiological staff. There is an increasing tendency to appoint whole-time radiologists and it appears that in a number of instances paying patients are referred to the whole-time assistant radiological staff rather than to the honorary director of the radiological department. In many cases such patients would ordinarily have been dealt with by the honorary director in the course of his private practice.

The Council is of opinion that in voluntary hospitals where the radiotherapy department is staffed by an honorary director assisted by whole-time assistant radiologists the honorary director should have the opportunity of attending the patients in private wards and that in cases where he personally undertakes treatment he should receive not less than two-thirds of the fee payable by the patient the remainder of the fee being allocated towards hospital costs.

In cases where the honorary director decides not to undertake such work personally but retains responsibility for the report issued the fees should be a matter for arrangement between the honorary director and the hospital in relation to the extent of the radiological services rendered by the honorary director

Insurance Schemes for Members of Honorary Medical Staffs of Hospitals

130 The Council has considered a suggestion from the United Kingdom Temperance and General Provident Institution for Mutual Life Assurance that the principle of endowment assurances by hospitals on the lives of members of honorary medical staffs should be generally applied throughout the country the assurance so effected enabling hospitals to make a gift of the policy monies to each individual on reaching the normal retiring age. A similar proposal was considered by the Council in June 1935 when no objection was offered to the arrangement provided it is clearly stated in the scheme that such an insurance scheme is not accepted as a substitute for payment of the medical staff of the hospital. The Council has replied accordingly to the United Kingdom Temperance and General Provident Institution for Mutual Life Assurance

NAVAL AND MILITARY

Terms for Recruitment for Officers of I M S

131 The Council has drawn the attention of the India Office to the anomalous position whereunder an Indian candidate for the I M S is required to show that at the date of birth his father was a British subject domiciled in India or a subject of a State of India. This requirement appeared to render ineligible for entry into the Service any Indian candidate whose father though formerly a British subject domiciled in India, had come to reside in this country previous to the birth of the candidate and it was suggested to the India Office that the mere fact of non retention of the Indian domicile should not be allowed to constitute a bar to eligibility for the Service. The Secretary of State for India agreed that this anomaly might arise under the existing rule and stated that consideration would be given to the revision of the rules in this respect. Any cases arising in the meantime will be considered on their merits for exception from the existing rule

Developments in the Indian Medical Service

132 The Council has considered the new rates of pay and terms for recruitment in the Indian Medical Service. These new rates show a greater discrimination between the pay of European and Indian officers. This is caused by a reduction—ranging from 50 to 150 rupees per month—in the basic rate of pay and an increase in the amount of over-seas pay. Thus while the position of European officers remains practically unchanged the new rates represent an appreciable lowering of the pay of the Indian personnel of the Service.

A communication has been sent to the India Office expressing regret that it has been found necessary to reduce the basic rate of pay and to increase the over seas rate of pay, and inquiring the reasons which have been advanced for the increased differentiation in the rates of pay for European and Indian officers of the Indian Medical Service

Rates of Pay of Retired Officers Re-employed in the Defence Forces

133 The Council has made representations to the Admiralty the War Office and the Air Ministry in accordance with Minute 168 of the Annual Representative Meeting, 1936

Minute 168—Resolved That the retired pay of medical officers of the defence forces should be regarded as deferred pay and should not be taken into consideration in determining the pay of those medical officers on voluntary re-employment by the defence departments

The Departments have replied that it is a general custom in determining the remuneration payable on the re-employment of all retired officers to take into consideration the retired pay which the officer is receiving and that no departure from this general principle could be contemplated in the case of medical men

Remuneration of Part-time Civilian Medical Practitioners Employed by Air Ministry

134 The Council represented to the Air Ministry that the fees payable to civilian medical practitioners attending regular and reserve personnel under training at Civil Flying Schools were inadequate and compared unfavourably with the rates paid to practitioners employed on a sessional basis by other departments or by local authorities. Representations were accordingly made to the Air Ministry, and the Council is pleased to be able to report that the Ministry has intimated that the amendments shown below to the paragraph in question have been approved and that steps are being taken to have all the relevant contracts amended

Original Scale	Suggested Amendment	Air Ministry's Decision
(ii) For attending a medical board a fee of 10s 6d for each attendance up to a maximum fee of £1 1s for any one sitting	10s 6d per case or £1 1s per session provided that not more than 4 cases are dealt with at one time	Accepted
(iii) For a special medical examination after an accident, when the pilot is apparently uninjured in order to certify whether there is any injury to the base of the skull, concussion of the brain, or other injury likely to interfere with the officer's or airman pilot's future career, a fee of 10s 6d per examination with a maximum of £1 1s should the personnel involved be any number more than one	10s 6d for each examination or £2 12s 6d for a session of not more than 8 cases	Accepted
(iv) For the annual medical examination of officers (Classes 'A' and 'A A') and airman pilots of the R A F Reserve and for such occasional medical examinations of pupil pilots which may be necessary before training can commence at a fee of 5s per examination together with mileage at 1s a mile for each visit where the examination is carried out at the Flying School	9s 6d for each case up to a maximum of £2 7s 6d for the first 8 cases and 9s 6d for each case beyond 8 per diem together with mileage allowance of 1s a mile (in one direction) for each visit where the examination is carried out at a Flying School not under one mile away	

Representation of Medical Personnel of Territorial Army and Royal Naval Volunteer Reserve on Committee

135 The Council considers that provision should be made to secure the co-option to the Naval and Military Committee of representatives of the Royal Army Medical Corps Territorial Army and the medical personnel of the Royal Naval Volunteer Reserve. A recommendation to this effect is embodied in para 48 of this Report

Representation of R.A.F. Medical Service on the Council

136 The term of office of Wing Commander H M Stanley Turner, the representative on the Council of the

Royal Air Force Medical Service expires at the termination of the Annual Representative Meeting, 1937. The Council recommends

Recommendation That Air Commodore Hardy V Wells be elected to represent the Royal Air Force Medical Service on the Council for the period 1937-40

CONSULTANTS AND SPECIALISTS

Provision of Consultant and Specialist Services at a Modified Fee

137 The question of the provision of consultant and specialist services at a modified fee to persons of defined income limits was considered by each annual regional meeting of the Consultants and Specialists Group. For the most part regional meetings expressed opposition to the extension to their areas of the London consultants list arrangements although they did not oppose the inclusion of consultative services in the National Health Insurance service. The Council has recorded the view that it favours the principle of the extension of the National Health Insurance Acts benefit to include consultant and specialist services, provided the conditions are satisfactory to the members participating therein such conditions to include a fee of not less than one guinea for a consultation at the rooms of the consultant or specialist involving such examination as can be given at a single consultation, together with a report when necessary, for the information of the private practitioner.

Constitution of Group

138 At the request of the Nottingham Division the Council has amended the scheme adopted for Specialists and Consultants Groups by dividing the existing Region 5, consisting of Sheffield, Rotherham, Doncaster, and the Counties of Derby, Nottingham, Rutland and Lincoln into two new Regions

- (i) Consisting of Sheffield, Rotherham, Doncaster, and Rutland, and
 - (ii) Consisting of Derby, Nottingham and Lincoln,
- each Region to elect one member of the Group Committee

OVERSEA BRANCHES

Conference of Oversea Members

139 A conference of oversea members will be held during the Annual Meeting, 1937, at Belfast, and all oversea members who are present at the Meeting are invited to attend. The Council will welcome any suggestion from Oversea Branches or Divisions for subjects for discussion.

Promotion in the Colonial Medical Service

140 The Council reported last year (Supplementary Report, para 198) that dissatisfaction had been caused in the Colonial Medical Service by the promotion to a senior post of an officer whose length of continuous service was relatively short in preference to a considerable number of Senior Medical Officers and Deputy or Assistant Directors of Medical Services of greater length of service. Representations on the subject were accordingly addressed to the Secretary of State for the Colonies. He has replied that in the selection of the officer concerned full account was taken of the experience and general capabilities of other members of the Colonial Medical Service who were considered with him for the appointment and that his decision was based on the fundamental principle that, for any vacant post that candidate should be selected whose appointment the Secretary of State judged in all the circumstances of the particular case to be in the best interests of the public service. This reply has been sent for observations to the Branches which raised the matter.

Deputation to the Colonial Office

141 A number of important questions affecting the Colonial Medical Service have arisen during the year, and the Council appointed a deputation, consisting of the Chairman of the Dominions Committee (Dr W Paterson), the Deputy Chairman (Dr J L Gilks), Colonel A H Proctor, and the Deputy Medical Secretary, to seek an interview with representatives of the Colonial Office. The Colonial Office expressed its willingness to receive the deputation, and on January 6, 1937, a discussion took place at the Colonial Office with Sir George Tomlinson, Assistant Under-Secretary, Sir Thomas Stanton, Chief Medical Adviser and other representatives of the Colonial Office. The subjects discussed were

- 1 Conditions of service for medical officers in West Africa
- 2 Medical practice in Hong Kong
- 3 Tonga Medical Service
- 4 Windward Islands Medical Service
- 5 Restoration of temporary deductions from salaries
- 6 Ante dating of appointments in the Colonial Medical Service
- 7 Short service appointments in the Colonial Medical Service

For the purpose of assisting on the subject of the Hong Kong Medical Service, Dr J C Macgown, who has recently returned from Hong Kong, accompanied the deputation.

European Medical Officers in West Africa

142 The Council reported last year (Annual Report, para 145 and Supplementary Report, para 196) that members of the Colonial Medical Service serving in West Africa were dissatisfied with the recently revised scale of salaries and that they had addressed a memorial to the Secretary of State for the Colonies. The principal causes of dissatisfaction were

- 1 The grading of a Senior Specialist below a Senior Resident
- 2 The excessive reduction of the salaries of Assistant Directors of Medical and Health Services and Junior Specialists
- 3 The inadequate maximum salary for Medical Officers
- 4 The alteration of salary scales and prospects of promotion from those which medical officers were offered when entering the service

The medical officers in Nigeria were of the opinion that the operation of the new scale would reduce their status in the West African Colonial Service, and that the future of the Service would be jeopardised if entrants could not depend upon the maintenance of the salary scales and the prospects of promotion which they were offered when accepting appointment. In consequence of the memorial, certain revisions have been made in the new scale, including the increase of a Senior Specialist's salary from £1,400 to £1,500 but these amendments have not removed the grievances of the medical officers.

The views of the medical officers were supported by the deputation to the Colonial Office mentioned above in para 141, and the deputation submitted that the rights of medical officers in relation to prospects of promotion should be preserved. The representatives of the Colonial Office replied that it was not suggested that the medical officers in West Africa had no claim to fair prospects of promotion. The reductions effected in higher establishments of Government Departments in the Colonies in recent years had necessarily been governed by considerations of finance. The Secretary of State's advisers, however, were of opinion that an increase in the number of senior medical posts open to the medical staffs in West Africa was justifiable, and it was proposed to examine the question of effecting an improvement in this respect when the observations of the Governor of Nigeria were received.

The representatives of the Colonial Office maintained that the salaries of senior medical officers could not be con-

sidered in relation to the salaries of political posts only, or to salaries in Nigeria only. In rapidly developing countries, political or economic changes were apt to affect the responsibilities of senior administrative officers more quickly and more directly than those of officers in the medical and other branches of the Government service.

The representatives of the Colonial Office promised, however, that the situation to which the deputation had drawn attention should be further reviewed, and that the question of making some adjustments in the salaries of the appointments which they had mentioned should be carefully considered in the light of the discussion.

The report of the discussion has been sent to the medical officers concerned in Nigeria for their comments.

Medical Practice in Hong Kong

143 The Council has been asked by the Hong Kong Branch for its assistance in preventing encroachment by the Government on private practice. It will be remembered that in 1927 the Council was instrumental in obtaining from the Hong Kong Government a promise to the profession that fees would be charged both for the maintenance and for the treatment of persons admitted to Government hospitals. In practice, however, the promise was not fulfilled, because no scheme for collecting the fees was arranged.

The question of encroachment has now been revived in a more acute form, for the Government is adopting responsibility for the maintenance of a medical service for the whole community, and is proposing to provide institutional treatment not only for those persons who are unable to pay, but also for those who can afford to pay reasonable charges. Persons in the latter class are charged fees for maintenance and treatment in public hospitals which bear no relation to the charges which they would have to pay in private nursing homes. The result is that the private practitioner and the private nursing home, which can provide fully for the normal requirements of that part of the population able to pay reasonable charges are being driven out of business.

The representatives of the Colonial Office stated that, so far as could be ascertained, there was nothing on record in recent correspondence received by the Secretary of State from the Governor of Hong Kong which suggested that there had been any change of policy in the matter on the part of the local Government or that any encroachment on private practice by the Government medical service, such as was mentioned by the deputation, had occurred.

It was finally arranged that the Association should ask the Branch again to submit representations to the Governor with a request that, if the Governor should feel unable to meet them, he would forward the correspondence, together with his observations thereon, to the Secretary of State. The Branch has accordingly been asked to take this action.

Tonga Medical Service

144. A practitioner who has recently vacated the appointment of Chief Medical Officer in the Tonga Islands Medical Service has reported the deplorable conditions which exist in the Dependency for the administration of the medical service. The information he gave was submitted to the Colonial Office by the deputation. The representatives of the Colonial Office pointed out that the relationship between the British and the Tongan Governments was such that the Secretary of State could bring pressure to bear on the Tonga Government only to a limited extent, but they promised that the Colonial Office should consider whether any action could usefully be taken, and that the deputation's suggestion that Tonga might be brought within the scope of a Western Pacific Medical Service should not be lost sight of.

Windward Islands Medical Service

145 The deputation asked the representatives of the Colonial Office to what extent the recommendations made by Dr Kelly, a member of the Colonial Advisory Medical Committee in his report on the medical service in the Wind-

ward Islands, were being implemented, and it submitted the views of the profession in Grenada on Dr Kelly's recommendations. The criticisms of the Grenada Branch include a suggestion that the commencing salary of a Government Medical Officer should be £400 rising after four years' service by increments of £20 to £500, and that officers who had completed 12 years' service should proceed to £600. Dr Kelly had recommended a salary scale of £300 to £400 and then, for selected officers, of £400 to £500. The representatives of the Colonial Office replied that the various recommendations made by Dr Kelly were being substantially carried out. Each Island had agreed to the appointment of a whole time officer at the head of its Medical Department, while, as regards special departments, attention was being given to the setting up of dental clinics, and the acquisition of x-ray apparatus, the improvement of the existing bacteriological laboratories and the extension of the venereal diseases services were receiving close attention. The view was expressed that the salary scale recommended by Dr Kelly might be regarded, on the whole as reasonable, and that suitably qualified local candidates should be attracted to fill medical appointments in the Islands under the new scheme. This scale had not yet been adopted in St. Vincent, but it was hoped that it would be accepted there also before long. It was thought that the position in the Windward Islands as regard to medical matters could generally be regarded as much improved as the result of Dr Kelly's report.

It was mentioned that a suggestion that the three medical Departments in the Windward Group should be combined into a single department had been considered but that it was not regarded as practicable for political reasons. It was only possible to attempt to secure equal conditions of service as between the different Islands, and this had in large measure been achieved.

The substance of the discussion has been communicated to the Grenada Branch, which has been asked for its observations on the progress of the reorganisation.

Restoration of Temporary Deductions from Salaries

146 In consequence of the economic crisis of 1931 and immediately afterwards, most Colonial Governments imposed, as a means of reducing expenditure, a levy on official salaries or reduced or withheld allowances which had been awarded to officers for special duties or in special circumstances. The medical profession accepted these deductions as their contribution towards assisting financial recovery but it was understood that the deductions were temporary, and that full salaries and allowances would be restored as soon as financial conditions permitted. Although it is generally admitted that economic and financial conditions have considerably improved during the last year or two, most of the Colonial Governments have not followed the lead of the Home Government in restoring the deductions.

The Council has been asked by two East African Branches and the Malaya Branch to assist them in securing restoration, but the Council decided to approach the Secretary of State for the Colonies on the general question, and to suggest that the time had come for the restoration of all deductions which were imposed as a temporary measure. The matter was accordingly raised by the deputation which was informed that in all except two Colonies the levies on salaries had now been withdrawn, although suspension of travelling and other allowances was still in force in certain Colonies.

The deputation drew attention to the specific cases of East Africa where the Branches were seeking the restoration of post-mortem fees and fees for giving expert evidence in court, and of Malaya, where the question of the cost of living allowance had been raised. The Colonial Office replied that in Tanganyika payment of post-mortem fees had been restored from January 1 1937 but fees for expert medical evidence given in law courts could not be restored this year. The question would receive consideration, however, in connection with the estimates for 1938. In Kenya the payment of post-mortem fees had also been resumed in the case of officers whose conditions of employment provided for them, and the Governor was being asked what was the

position in relation to the fees for giving expert evidence in law courts. With regard to Malaya, the deputation was informed that the views of Government officers in Malaya were appreciated by the Secretary of State but that no further statement on the matter could at present be made.

Date of Commencement of Service in the Colonial Medical Service

147 The deputation suggested that, for purposes of seniority, salary, and pension of officers in the Colonial Medical Service account should be taken of employment in a hospital immediately preceding appointment. The principle of recognising hospital experience in this way was already adopted in the defence forces, it had there produced beneficial results by encouraging intending applicants to obtain hospital experience, the value of which in the Colonial Medical Service could hardly be overrated, and it would enable intending applicants to qualify themselves in this way without prejudicing their position in relation to officers not so qualified who might be appointed to the Colonial Medical Service at an earlier date.

The representatives of the Colonial Office replied that in the normal course of events applications from persons who had not held hospital appointments were not considered. In particular cases officers might be appointed without such experience but in such cases it would be found that they had obtained compensating or equivalent qualifications or experience in some other way. The Colonial Office believed that the arrangements already in force substantially met the principle underlying the deputation's proposal, namely, that the possession of special qualifications should be reflected in conditions of service.

In spite of the views of the Colonial Office, the Council considers that its proposal would be of great advantage to medical officers and to the Colonial Medical Service as a whole, and it is therefore pursuing the matter further.

Short Service Appointments

148 Medical officers appointed to certain Colonies have the option of retiring on the conclusion of 9 years' service with a gratuity of £1,000, and on the conclusion of 12 years' service with a gratuity of £1,250. A discussion took place with the Colonial Office on the extension of this system to all Colonies.

The representatives of the Colonial Office said that the short service system was foreign to the conception of the Civil Service as one which is intended to provide a life career. The privilege of retiring with a gratuity, where it existed, was peculiar to medical men and was adopted solely as a recruiting attraction. From this point of view the conditions and amounts were less favourable than those offered in the defence services and the Indian Medical Service and the value of the arrangement was doubtful. Experience had not suggested that there was any need to supplement the methods already provided for dispensing with the services of inefficient officers.

British Guiana Medical Service

149 The Government of British Guiana appointed in 1934 a committee to enquire into the administration and general organisation of the medical service of the Colony and to advise on what steps should be taken to improve it. The Committee has recently issued its report, which includes recommendations for the reorganisation of the public health medical staffs, the staffing of the public hospitals and other medical services. It has submitted for the decision of the Government the future method of employment of district medical officers as it is equally divided on the question of whether district medical officers should be subsidised private practitioners or pensionable public officers. The British Guiana Branch has submitted to the Council a memorandum criticising in detail many of the Committee's recommendations and has passed a resolution, for submission to the Secretary of State in which it expresses its opinion that these recommendations if carried out, will be detrimental to the future of the medical service.

Sudan Medical Service

150 New regulations have been issued for the Sudan Medical Service. Although the maximum salaries of the senior appointments have been reduced the Council believes that the new scheme which includes the creation of a number of new senior appointments will offer good prospects to practitioners entering the Service.

Egyptian Medical Service

151 The Council has considered a case submitted by the Egyptian Branch in which a medical officer in the service of the Egyptian Government at Alexandria complains that owing to an amendment of by-laws by the Municipality he is unable to reach the maximum salary which he was promised on appointment. The terms of the appointment contained the statement that the holder would be required to comply with the regulations and by-laws of the Municipality, but the officer did not expect that the clause would relate to his salary scale. The Council considers that it is undesirable that the salaries of medical officers should be governed by by-laws and regulations of the type associated with by-laws and it therefore communicated with the Egyptian Legation in London.

The Council has been unsuccessful in obtaining any modification in favour of the individual officer concerned, or any alteration in the general procedure, but it is pressing for an agreement that, in order to prevent further misunderstandings, future advertisements of medical appointments shall state clearly that an officer's terms of service, including salary, are subject to alteration in accordance with the Municipality's regulations and by-laws.

Order of Precedence of Medical Officers and Right to Wear Uniform

152 Two Branches in East Africa have complained that the newly issued table of precedence and classes, for the wearing of uniform places medical officers in a lower position than that to which they should be entitled and reduces their status in relation to officers in administrative departments. The Council therefore obtained tables of precedence and uniform classes in operation in a number of other Colonies, and has considered them very carefully. It appears to it that the principles adopted in the creation of tables of precedence and of uniform lists have no connexion with such considerations as salaries, length of service, and the number of staff directed, and that these tables and lists should not, in themselves, affect the status of medical officers. The detailed opinion of the Council on the subject has been sent to the East African Branches for their observations.

SCOTLAND

Death of Member of Scottish Committee

153 The Scottish Committee regrets the loss sustained by the death of Dr J. E. Skinner Skene, Aberdeen, who had been a member of the Committee for eleven years.

Report of Departmental Committee on Scottish Health Services

154 A joint meeting of the Scottish Committee and the Insurance Acts Subcommittee (Scotland) was held on October 20, 1937, to consider the action to be taken regarding the report of the above committee.

Five special subcommittees were appointed to prepare a critical digest of the various sections of the report. The findings of the subcommittees are to be submitted to a special joint meeting of the parent committees. The Council will deal with this question in its Supplementary Report.

Scottish Scale of Salaries for Whole-time Public Health Appointments

155 Following upon a request by the Public Health Committee the Scottish Committee has had under consideration the operation of the Scottish Scale. An analysis of the appointments made during the years 1929-36 has been prepared for consideration by the Scottish Committee.

Consultants List for Scotland

156 The scheme prepared by the Consultants and Specialists Group Committee for Scotland for providing consultations at reduced fees to insured persons, their dependants, subscribers to approved public medical services and their dependants and members of approved contributory schemes was submitted to a meeting of the members of the Group held in the Scottish House in January, 1937. It had previously been given general approval by the Representative Body. The Group approved of the scheme, and at the meeting of the Council held on January 20, 1937, the scheme was finally approved. Invitations have been sent to the medical corporations in Scotland to co-operate in the appointment of the supervisory Board.

Sir Charles Hastings Lecture

157 The first Sir Charles Hastings Lecture to be organised in Scotland was delivered by Professor E. P. Cathcart Regius Professor of Physiology, University of Glasgow in the McLellan Galleries, Glasgow on February 3, 1937. The subject of the lecture was 'Food and Nutrition'. The Secretary of State for Scotland presided and there was an attendance of over 700, including representatives of the University of Glasgow, the Royal Faculty of Physicians and Surgeons of Glasgow, the Corporation of Glasgow, the voluntary hospitals and other public bodies. The vote of thanks to the Chairman was proposed by the Chairman of the Scottish Committee.

Air Raid Precautions

158 With the co-operation of the Honorary Secretaries of Branches courses of instruction in anti gas methods have been arranged for in all areas of Scotland.

Organization of the Association in Scotland

159 Steps have to be taken to secure the more effective organisation of the Dumfries and Galloway Division and the formation of a Division for the Outer Islands is at present under consideration.

PARLIAMENTARY ELECTIONS

160 The A.R.M., 1936, directed that steps be taken to make preliminary inquiries for the selection of a medical practitioner intimately acquainted with the aims and policy of the Association, with a view to his election to Parliament through one of the University seats. As a vacancy arose in the Parliamentary representation of the Combined English Universities Sir Henry Brackenbury was invited to stand as a candidate for the by-election. Sir Henry accepted the invitation and stood as an Independent candidate. Sir Henry Brackenbury's election expenses were defrayed from the Representation in Parliament Fund and the Association's machinery was used to further the candidature. The result of the election was particularly disappointing, and the Council feels that the whole position of the Representation in Parliament Fund needs reconsideration. The Council hopes to deal with this matter further in its Supplementary Report.

PHYSICAL EDUCATION

161 The publication of the Report of the Physical Education Committee last year gave an impetus to the desire of various bodies to improve the facilities for physical education for all sections of the community, and the Government itself has prepared an extensive scheme for the promotion of physical education. The Council therefore considered it desirable that the Physical Education Committee should be reappointed with a small personnel, in order that it might keep in touch with the development of physical education, with special reference to the medical aspect.

In February 1937 the Government issued its proposals for the development and extension of the facilities available for physical education for persons no longer attending school. The proposals follow to a considerable extent the recommendations of the Committee, but they differ from

them in one important respect, in that they delegate the requisite advisory duties to a Government body and not to a voluntary body such as the Committee recommended. The Council is doubtful, however, whether any one of the existing organisations is at the present time equipped to fulfil these duties, and the appointment of a Government body seems to it to be the best solution in the circumstances. Two National Advisory Councils have been appointed, one for England and Wales and one for Scotland. They are representative of all types of organisations concerned with physical education, but the Council regrets to observe that the personnel of the English National Advisory Council includes only two medical men, Lord Dawson of Penn and Sir Kaye Le Fleming. It appears therefore that the importance of the medical and scientific aspects of the subject is not yet fully appreciated, and the Council proposes to make its main object the adequate recognition of these aspects.

E. K. LE FLEMING,

Chairman of Council

APPENDIX I

RETURN OF ATTENDANCES

At Council Meetings, from the termination of Annual Representative Meeting, 1936 up to and including April 7th, 1937

COUNCIL

Chairman SIR KAYE LE FLEMING

NAME	ATTENDANCES	
	Actual	Possible
Chairman of Council Sir Kaye Le Fleming, Wimborne	4	4
President Sir Farquhar Buzzard Oxford	3	4
Chairman of Representative Body H. S. Soutar London	4	4
Treasurer N. Bishop Harman, London	4	4
President Elect R. J. Johnstone, Belfast	4	4
Past President Sir James Barrett Melbourne		
Deputy Chairman of Representative Body H. G. Dain Birmingham	4	4
Armstrong J. Ballymena	4	4
Berry R. J. A. Bristol	4	4
Berry J. W. Luton	4	4
Brackenbury Sir Henry London	4	4
Burgess, A. H. Cheshire	4	4
Comrie J. D. Edinburgh	4	4
Dunhill, Sir Thomas, London	0	2
Eccles, W. McAdam London	4	4
English Sir Crisp London	3	4
Flemming, C. E. S., Bradford-on-Avon	4	4
Fothergill E. R., Hove	3	4
Fraser T. Aberdeen	3	4
Gilks, J. L., Petersfield	4	4
Giuseppe, P. L., Feltham	2	4
Glover L. G. London	4	4
Goodbody F. W., London	4	4
Gordon R. G. Limpley Stoke near Bath	4	4
Harold, C. H. H. London	3	4
Hawthorne C. O., London	4	4
Henderson, J., Glasgow	3	4
Hudson J., Newcastle upon Tyne	4	4
Hunter J. Edinburgh	2	4
Jones, H. C., Barnstable	1	4
Jones, I. London	1	4
Langdon Down, R. Teddington	2	4
Lilley E. Lewis Leicester	3	4
Loughridge J. C., Belfast	3	4
Macdonald P., York	4	4
Maclean, Sir Ewen, Cardiff	4	4
Manson J. S., Warrington	3	4
Marmott, O. Haywards Heath	3	3
Matthews, J. C., Downton	4	4
Miller J. B., Bishopbriggs	4	4
Miligan H. J. Reading	2	4
Needham Sir Richard London	3	4
Newell R. L. Cheshire	3	4
Parry L. A., Hove	4	4
Paterson, W., London	4	4
Picken R. M. F. Cardiff	4	4
Pooler H. W. Ashover	4	4
Proctor A. H. London	4	4
Prytherch, J. R., Llangefni	3	4
Robinson, H. London	0	4
Shanley J. P., Dublin	4	4
Snell E. H. Coventry	4	4
Spurgin, P. B. London	4	4
Stevenson, D. Lyon, Larkhall	1	4
Thomas, A. R. Southsea	3	4
Thomas, W. E. Ystrad Rhondda	4	4
Trotter G. Clark, London	3	4
Turner H. M. Stanley Ashted	4	4
Ward S. Birmingham	4	4
Waterfield, N. E., Great Bookham	4	4
Watkins-Pitchford, W. Bridgnorth	2	4
West Watson, W. N., Bradford	4	4
Willoughby, W. G., Eastbourne	4	4
Wood F. T. H. Liverpool	3	4

APPENDIX II

PROPOSED AMENDMENTS TO ARTICLES AND BY-LAWS WITH RELATION TO "ASSOCIATES" AND "ASSOCIATESHIPS"

(I) ARTICLES

Page 9, Article 3 *Headings to be amended to read as follows*

II—MEMBERSHIP AND ASSOCIATESHIP

Eligibility for Membership

Page 10, after Article 4 *Insert following new Article*
‘ ASSOCIATES

Each Branch shall have power to elect as Associates such persons and in such manner as the By laws may provide and to admit Associates so elected to such privileges (not being inconsistent with the provisions of the Regulations and of the By laws) as may from time to time be conferred on them by or under the By-laws

An Associate shall not be a member of the Association or of any Division or Branch thereof for any purpose and no Associate shall act as a Member of the Council representative or officer of the Association or of any Branch or Division or be entitled to receive notice of or to be present or to vote at any General Meeting of the Association

Ditto Article 5 Line 2

After Member insert ‘ and Associate ’

Line 6

After ‘ Members ’ insert or Associates

Page 10 after Article 6 *Insert following new paragraph* —

Each year's subscription shall entitle the Associate to the privileges (not being inconsistent with the provisions of the Regulations and of the By laws) which may for the time being be conferred by or under the By-laws on Associates of that Division and of that Branch of which he is an Associate

Ditto Article 7 Line 1

After Member insert ‘ or Associate

Line 5

After membership insert or his former associateship (as the case may be)

Line 6

After membership insert or associateship ”

Ditto Article 8 Heading to be amended to read as follows
Duration of Membership and Associateship

Line 1 *To be amended as follows (new wording underlined)*

8 Every Member and Associate shall remain a Member or Associate (as the case may be) until his

Line 2

After membership ’ insert or associateship (as the case may be)

Page 11 Article 9 *Heading to be amended as follows*

Termination of Membership and Associateship

Line 1

After ‘ membership insert “ or associateship ’

Ditto Article 9 (a) Line 1

After who is a Member insert or Associate ’

Ditto Article 9 (c) Line 13

After (iv) insert in the case of a Member ”

Ditto, Article 9 (c) At end add

or (v) in the case of an Associate if he ceases to be entitled to legal recognition as a member of the medical profession in the country in which he is permanently resident

Ditto Article 9 (d) Line 3

After Member insert ‘ or Associate

Ditto Article 9 (d) Line 7

After Member “ insert or Associate

Ditto Article 9 (d) At end add
or Associate (as the case may be)

Ditto Article 9 (e) Line 1 To be amended as follows (new wording underlined)

(e) In the case of a Member or Associate who is a Member or Associate of a

Ditto, Article 9 (e) Line 3

After ‘ Member ’ insert “ or Associate (as the case may be) ”

Page 12, after Article 9 (e) *Insert*

‘ (f) *Ipso facto* in the case of an Associate, if he shall become eligible as an ordinary member of the Association

Ditto Article 10 (a) Line 6

After Member insert “ or Associate

Line 7 of 10 (o)

After ‘ membership ’ insert “ or associateship (as the case may be)

Line 8 of 10 (o)

After ‘ Member insert ‘ or Associate ’

Page 13, Article 10 (c) (ii) *Line 14 of page*

After Member insert ‘ or Associate

Line 15 of page

After ‘ membership ’ insert ‘ or associateship (as the case may be) ’

Line 16 of page

After ‘ Member insert “ or Associate ’

Page 13, Article 10 (e) *Line 1*

After Member insert “ or Associate ”

Line 2 of 10 (e)

After ‘ Member insert “ or Associate (as the case may be) ”

Ditto, Article 10 (f) Line 1

After Member insert ‘ or Associate ’

Page 14 Article 10 (f) (Continued) *Line 5 of page*

After ‘ membership insert ‘ or associateship (as the case may be) ’

Ditto Article 10 (f) Line 6 of page

After ‘ membership insert ‘ or associateship

Page 15 Article 12 (3) *At end of line 4*

After Association insert and the Associateship of the Corporate Branch and Corporate Group (save as aforesaid) shall be strictly confined by its Articles of Association to Associates of the Association

Line 5 of (3)

After Member ’ insert ‘ or Associate

Line 7 of (3)

After Member insert or Associate ”

Last line of (3)

After Member insert ‘ or Associate (as the case may be) ”

Page 18 after Article 17 *Insert following*

Every Associate whose address as registered for the time being in the List of Associates of the Association is at a place situate within the area of any Division Corporate Branch or Corporate Group shall, *ipso facto* be an Associate of that Division, Corporate Branch or Corporate Group and of no other and every Associate of a Division shall *ipso facto*, be an Associate of the Branch which comprises that Division and of no other

Ditto Article 18 Line 4

After Members insert “ and/or Associates ’

Line 7 *To be amended as follows (new wording underlined)*

“ Members and Associates of a Corporate Branch or of Members and Associates of a

Ditto Article 19 (b) Line 2

After Members insert and Associates

Page 21, Article 29 *Line 1 of page*

After Member insert and Associate ’

Page 30 Article 51 *Line 4*

After thereof insert ‘ and of every Associate thereof ’

Ditto, Article 52 (1) Line 2

After Member insert or Associate

Line 5 of 52 (1)

After Members insert or to such Associate at his last known address

Line 7 of 52 (1)

After Member insert ‘ or Associate (as the case may be) ”

(II) BY-LAWS

Page 34 By law 4 *Heading to be amended to read as follows*

II—MEMBERSHIP AND ASSOCIATESHIP

Line 1

After membership “ insert or associateship ”

Line 5

After belong insert or with which he may at any time be associated (as the case may be)

Ditto By-law 5 (1) Line 2

After 'Members' insert 'and Associates'

Line 10 of 5 (1)

After 'Member' insert 'or Associate (as the case may be)'

Page 35 By-law 5 (3) Line 1

After 'Member' insert 'or Associate'

Ditto By-law 6 Line 1

After 'candidate' insert 'for membership'

Last line of By-law 6

After 'thereof' insert 'a candidate for associateship who does not reside within the area of any Branch shall not be capable of election as an Associate.'

Ditto By-law 7 Line 6

After 'election' insert 'as members of the Association'

Page 37, By-law 12. Heading to be amended to read as follows 'Extraordinary Members—Visiting, Complimentary' Lines 1 and 3

For 'Associate' substitute 'Visiting'

Ditto, at end of By-law 12. Insert

' ASSOCIATES

Any person who is entitled to legal recognition as a member of the medical profession in the country in which he is resident and who is not eligible for ordinary membership of the Association shall be qualified for election as an Associate. No person who is a member of the Association shall in any circumstances whatsoever be qualified for election as an Associate.

Associates shall have such privileges (not inconsistent with the provisions of the Regulations and these By-laws) as may be conferred on them by the local Rules of the Divisions or Branches with which they are associated subject always except as otherwise provided to the sanction of the Council. In particular a Division or Branch may either generally or in any special case authorize Associates to receive notice of attend and speak (but not to vote) at meetings of such Division or Branch and a Branch may similarly authorize Associates to receive the *Journal* but unless so authorized an Associate shall not be entitled to receive notice of attend or speak at any such meeting or to receive the *Journal*.

Page 37 By-law 13 Heading to be amended to read as follows Register of Members and List of Associates

Ditto Delete following sub-paragraph (1)

(1) In the month of May in each year a List of Members of the Association (hereinafter referred to as the Annual List) shall be prepared and published, stating the names and addresses of the Ordinary Members of each Division and Branch as shown by the Register (to be kept by the Association at the Head Office) of Members of the Association on April 30th of that year and distinguishing the names of such of the Members as are Public Health Service Members

Ditto Renumber sub-paragraph (2) to read (1)

Page 38 At the end of By-law 13 (2) Insert

(2) For all purposes of the Regulations and the By-laws the persons named in the List of Associates as Associates of any Division or Branch and no others shall be deemed to be the Associates of such Division and Branch

Ditto By-law 14 (1) Line 2

After 'shall' insert 'in the case of Members'

Page 39 At end of By-law 14 (2) Insert

The Annual Subscription to the Association of an Associate shall be such sum as may from time to time with the approval of the Council be fixed by the Branch of which he is an Associate having regard to the privileges accorded to Associates by that Branch

Ditto By-law 15 (1) Line 2

After 'Members' insert 'and Associates'

Last line

After 'Members' insert 'and Associates'

Page 40 By-law 15 (2) Lines 2 and 5

After 'Member' insert 'or Associate'

Ditto By-law 16 (1) Line 1

After 'Member' insert 'or Associate'

Line 6

After 'Member' insert 'or Associate (as the case may be)'

Last line

After 'membership' insert 'or associateship (as the case may be)'

Page 40 By-law 16 (2) Line 1

After 'Member' insert 'or Associate'

Lines 2 and 4

After 'Member' insert 'or Associate (as the case may be)'

Ditto By-law 17 Lines 2 and 3

After 'Members' insert 'and/or Associates'

Line 7

After 'Ordinary Member' insert 'or Associate'

Page 41, By-law 17 (cont) Line 2 of page

After 'membership' insert 'or associateship (as the case may be)'

Ditto By-law 18 (1) Line 4

After 'Members' insert 'and/or Associates'

Ditto By-law 18 (2) Line 4

After 'Member' insert 'and/or Associate'

Page 45, By-law 25 (1) Line 5 to be amended as follows (new wording underlined)

"Members and/or Associates and for the benefit of such Members and/or Associates or for the benefit of the local

Page 46 By-law 25 (2) Lines 2 and 3 Delete following words (except as regards Ireland as stated in Clause (vi) below)

Line 8

After 'Members' insert 'and Associates'

By-law 25 (2) (ii) Line 1

After 'Members' insert 'and/or Associates'

By-law 25 (2) (iii) Line 2

After of the Branch' insert (who must be Members of the Association)

By-law 25 (2) (vi) Delete

(vi) In the case of Branches not in Great Britain or Ireland the eligibility of practitioners not registered in Great Britain or Ireland for election by the Branch as Members of the Association

Page 47 By-law 25 (2) (vii) Substitute (vii) for (i)(i)

Ditto By-law 25 (2) Insert following new sub-para (vi)

(vi) The privileges of associateship of the Branch such privileges not being inconsistent with the Regulations and the By-laws

Ditto At the end of By-law 25 (2) (vi) Insert following new para (3)

(3) A Branch not in Great Britain or Ireland shall be competent from time to time to adopt by the vote of a General Meeting of the Branch Rules dealing with the eligibility of practitioners not registered in Great Britain or Ireland for election by the Branch as ordinary Members and/or as Associates of the Association. Provided that no such Rule adopted on or after the day 1937 shall have any force or effect unless and until the same shall have been approved by the Council and Provided Further that no such Rule adopted prior to the day of 1937 shall have any force or effect after that date unless and until the same shall have been approved by the Council but so that this last mentioned provision shall not operate to determine or in any manner affect the membership of a Member elected pursuant to any such Rule prior to the day of 1937

Page 49 By-law 30 Line 9

After 'Members' insert 'and Associate'

Ditto By-law 30 (i) Line 2

After 'Division' insert '(who must be members of the Association)

Page 50 After By-law 31 (1) Insert following new sub-para

(2) The Treasurer of the Association shall annually pay or allow out of the funds of the Association to the Treasurer of each Branch such sum as the Council shall order to be paid in respect of each person whose name appears as an Associate of that Branch in the List of Associates as at 30th April then last past. Provided that if at any time the Council (in circumstances appearing to it to be exceptional) shall so determine the Treasurer shall pay direct to any Division or Divisions of a Branch such proportion of the sum payable hereunder to the Branch as may be specified in such direction

Ditto By-law 31 (2) Sub-para to be renumbered 31 (3) and Any" substituted for the first word A"

Page 51 By-law 35 Lines 4 and 9

After numbers insert showing Members and Associates separately

Page 52, By-law 37 Last line

After provided" insert "No person who is not a Member of the Association shall be qualified to act as a Member of the Representative Body"

Page 61 By law 52 Line 2

After Members" insert 'of the Association'

Page 73 Schedule to By laws Organisation Committee Column 6
Line 4

After membership' insert and associateship

Page 75 Schedule to By-laws Central Ethical Committee Column
6 Line 8

After Members insert or Associates

Page 76 Schedule to By-laws Central Ethical Committee (cont)
Column 6 Line 15

After Members insert and Associates

APPENDIX III

MEMORANDUM OF EVIDENCE BEFORE SELECT COMMITTEE ON MEDICINE STAMP DUTIES

The British Medical Association is a company formed for scientific and other useful purposes and not for profit, and is incorporated under the Companies Acts. Its main objects are the promotion of the medical and allied sciences and the maintenance of the honour and interests of the medical profession. It has a membership of over 36,000, which includes the great majority of the practising members of the profession in this country.

The Association undertakes a considerable amount of work which is directly in the public interest, and for many years it has attempted to secure such improvements in the law as would protect the public from the harmful activities of manufacturers and vendors of patent medicines. Although it has directed most of its attention to the question of the advertisement of patent medicines rather than to the Stamp Duties levied on them, it welcomes the opportunity afforded it to submit evidence to the present Select Committee, for it believes that the Committee cannot ignore entirely in its deliberations the general question of the effect on public health of the indiscriminate sale of patent medicines.

The Association's endeavours to combat the danger to public health arising from the unrestricted advertisement and sale of patent medicines began in the early years of the present century, when its activities included the publication of a series of analyses of popular remedies with the object of showing the worthless nature and the trivial cost of preparations for which the makers made grossly exaggerated claims and which were sold at exorbitant prices. Its experience of the subject and the conclusions it reached were embodied in the written and oral evidence which it submitted to the Select Committee on Patent Medicines appointed in 1912. In this evidence it advised the publication on each package of medicine of the name and quantity of each of the constituents, the recognition of the label as a warranty, the application of the Food and Drugs Act to proprietary medicines, the conferment on a Government authority of power to institute legal proceedings against offenders and the amendment of the Indecent Advertisements Act.

The Association warmly welcomed the scheme of control recommended by the Select Committee and it has helped to promote legislation which would introduce such a scheme either wholly or in part. Three Bills in the drafting of two of which the Association assisted have been submitted to Parliament since 1920 but all have been unsuccessful. The reception of these Bills has afforded evidence that Parliament is not yet prepared to authorise the removal of even the worst abuses. That there are no insuperable difficulties inherent in a scheme of control is shown by the efficacy of legislation abroad and the attention of the Select Committee is drawn especially to the success of the Canadian Proprietary or Patent Medicine Act, which for many years has provided a scheme of control very much of the type which the Association would like to see in operation in this country.

Pending the recognition by the Government of the fact that a scheme of control would be in the interests of the public the Association has performed with success a considerable amount of educational work by encouraging the

more responsible newspapers and periodicals to reject objectionable or misleading advertisements. The influence of such voluntary control is, of course, limited, only by some system of close control, under the authority of an Act of Parliament, such as was recommended by the Select Committee can the very real danger to public health be eliminated.

The objections of the Association to the uncontrolled advertisement and sale of patent medicines rest mainly on the dangers which it believes must arise from the encouragement of self diagnosis and self-treatment. The lay person has not the knowledge to enable him to evaluate his symptoms and to diagnose his complaint, neither can he know whether the remedy offered in the advertisement is what is required to cure his individual condition. It is one of the great evils of patent medicine advertising that, while a qualified medical practitioner takes into account the individual characteristics and symptoms of the particular patient, the patent medicine advertiser presumes to offer a stock treatment for all sorts of patients, regardless of individual peculiarities. He also offers the same stock remedy for a host of quite dissimilar conditions. By relying on the plausible claims of the patent medicine advertiser, the patient runs the risk of receiving wrong treatment which may be definitely harmful to him. Moreover, the proper treatment of disease requires not only correct but also early diagnosis. While the patient is resorting to ineffective advertised patent medicines he is losing valuable time, and when eventually he is obliged to consult a medical practitioner he may find that his condition, which might have been easily and quickly cured at an early date, has now reached a stage where treatment is difficult and protracted. This delay is especially serious in certain diseases, and the Association has therefore endeavoured to secure the complete prohibition of the sale, in the absence of a prescription from a medical practitioner, of remedies alleged to relieve or cure the following conditions: Bright's disease, cancer, consumption, diabetes, epilepsy, fits, locomotor ataxy, lupus or paralysis, amenorrhoea, hernia, blindness, and any structural or organic ailment of the auditory system.

Apart from the dangers of self-medication, objection may be raised to the uncontrolled advertisement and sale of patent medicines on the ground that many ignorant or credulous persons are thereby induced to spend to no good purpose, sums of money that they can ill afford. There is no doubt that a considerable proportion of the income of the vendors of these medicines—and of the revenue collected under the Medicine Stamp Duty Acts—is derived from the savings of members of the poorer classes who have been misled as to the properties of the remedies they buy by the exaggerated statements made in the manufacturers' advertisements.

On the subject of revenue, the Association would submit only the observation that the appearance of a Government stamp on a package of medicine tends to create the impression that the remedy itself has received some sort of official approval. It therefore supports the recommendations of the Select Committee on Patent Medicines that references to the Government stamp in advertising matter and the printing on the stamp of the name of a proprietor or firm should be prohibited.

APPENDIX IV

DUTIES OF AND ETHICAL RULES FOR INDUSTRIAL MEDICAL OFFICERS

I Duties

The duties which form the basis of the industrial medical officer's work vary considerably according to the needs of the individual industry or commercial organisation. In the following paragraphs are set out the duties which may properly be undertaken by industrial medical officers when so required.

(i) Examination of applicants for employment and advice as to their selection.

(ii) Immediate treatment of medical and surgical emergencies occurring at the place of employment.

(iii) Examination of persons returning to work after illness or incapacity

(iv) Periodical examination of persons exposed to special hazards

(v) Responsibility for the efficiency of the nursing and first-aid personnel and equipment.

(vi) Advice to the management regarding

(a) The hygiene of the factory

(b) The health conditions of the workers

(c) The occurrence and risk of dangerous hazards

(d) The accident prevention arrangements

(e) Factory legislation concerning health and safety and the special diseases to which the particular industry exposes any worker

(vii) Maintenance of close touch with the management with a view to ensuring that conditions are such as to produce the highest degree of mental and physical welfare of the workers

(viii) Continued observation of all young persons with a recommendation where necessary for the provision of free meals or milk

(ix) Continued observation of all persons returning to work after prolonged illness

(x) The medical supervision of canteens to ensure the cleanliness, good quality and physiological adequacy of the food

(xi) Advice to the works councils welfare departments benevolent fund committees, etc., on any matter affecting the health of the workers

(xii) The arranging and carrying out of such educational work in respect of the health and fitness of the workers as may be desirable and practicable

(xiii) Ready accessibility to employees for medical advice upon matters relating to their work.

(xiv) Encouragement of supervisors to report signs of ill health in any of their workers

(xv) Advice to the management regarding fire and air raid precautions

II Ethical Rules

Subject to statutory requirements these rules shall, where existing ethical rules or custom fail to cover the circumstances, govern the professional relationships between medical officers attached to industrial and commercial concerns their colleagues in general practice, and the workers and staff under their professional care and charge. The rules apply not only to whole time officers but to those employed part-time or in a casual consultative capacity

1 In carrying out their duties industrial medical officers shall be guided generally by the following ethical code

(i) The industrial medical officer shall render such emergency or first aid treatment as is required at the place of employment and shall inform the worker's own doctor of any treatment given. Where further treatment is deemed necessary the worker shall be instructed to consult his own practitioner

(ii) Where there are special facilities or equipment and suitable transport arrangements are available, if it is in the interests of the patient, continuing treatment may be given at the factory clinic with the consent of and in consultation with the worker's own practitioner. In these cases some such form as the following should be used

Dear Sir

Re

Address

This patient has been sent home and advised to consult you. Should you consider that the special facilities of this clinic would be useful for the purpose of applying dressings or carrying out such treatment as you desire, I shall be pleased to arrange for this if you will instruct the patient to report to me

Yours faithfully

Medical Officer

Remarks by patient's own doctor

This note may be handed back to the patient.

(iii) In cases where the industrial medical officer considers that by attending at the factory clinic for dressings or special treatment instead of obtaining such treatment elsewhere the worker might be saved loss of time and/or employment he shall communicate with the worker's own practitioner and offer the facilities of his clinic.

(iv) The industrial medical officer shall not provide treatment in cases of disability, save in such instances as may be covered by an understanding with a committee representative of the local medical profession or where there is an *ad hoc* agreement with the worker's own practitioner. Such treatment shall be given only with the consent of the worker

(v) The industrial medical officer shall consider and advise upon the occupation of any worker whose duties appear to be too heavy or otherwise unsuitable, and where necessary he shall consult the worker's own doctor

(vi) The industrial medical officer shall after communication with the worker's medical attendant (a) examine and advise concerning those workers engaged in hazardous or arduous occupations also those about to be transferred to heavy or dangerous occupations and (b) examine and report to the works management upon those workers who appear suitable for early pension or retirement or in regard to the continuance of invalidity payments

(vii) The industrial medical officer shall not carry out domiciliary treatment.

(viii) A whole time industrial medical officer shall not treat any member of the worker's family who is not employed at the factory

(ix) A part time industrial medical officer shall not utilise his position to influence the worker to choose him as medical attendant or family doctor

(x) The industrial medical officer shall not, except in an emergency, or where a prior understanding with the local practitioners is in operation send any employee direct to hospital. Where he considers attendance at hospital to be necessary or advisable he shall refer the employee to his own medical attendant and may make a suggestion to this effect to the latter

Where, in an emergency the industrial medical officer sends a worker to hospital he shall advise (a) the relatives (if the patient is detained), and (b) the worker's medical attendant

(xi) Where an industrial medical officer has occasion to examine and to report to the management concerning the condition of any worker who is absent from his employment on account of illness and is being treated by his own medical attendant, he shall conform to the Ethical Rules for Medical Inspectors laid down by the Association. In this connexion an industrial medical officer shall, with the consent of his employer place his special knowledge at the disposal of the attending practitioner

(xii) The industrial medical officer should where possible respond to any invitation to meet the worker's practitioner in consultation

(xiii) Except in emergency the industrial medical officer shall not carry out any individual preventive measure without the individual consent of the worker and prior agreement with the worker's medical attendant. He shall in no way associate himself with experiments which involve the active participation of the workers without their consent and the prior notification of the worker's doctor

(xiv) The medical records of the workers maintained by the industrial medical officer are confidential documents. They must remain in the custody of the industrial medical officer or of his deputy. Access to them must not be allowed to any other person save only to another registered medical practitioner and then only at the request or with the consent of the worker

(xv) The industrial medical officer shall at all times be responsible for the safe custody of his medical records. On terminating his appointment he shall make arrangements for the safe custody of his records until such time as it is possible to hand them over to his successor

2. Where nurses are employed by the management the industrial medical officer shall instruct them to maintain the proper ethical code for nurses. Any professional matter must be treated as confidential and disclosed only to the industrial medical officer or the worker's own medical attendant

3 The term 'consultation' in these rules shall be understood to include a written or telephonic communication addressed by the industrial medical officer to the medical attendant. In the absence of a reply within a reasonable time the industrial medical officer shall be at liberty to assume the other doctor's agreement

4 The industrial medical officer shall not hold the position of Certifying Factory Surgeon in the same area as that in which the factory concerned is situate

PUBLIC HEALTH NOTES

Infective Hepatic Jaundice

In his annual report for the year 1936 as school medical officer of the Leicester County Council Education Committee Dr J A Fairer refers to an outbreak of epidemic jaundice which affected a number of villages in the county, twenty six cases occurring among the school population in one village seven four two, and one in others. The incidence among the sexes of the school children was almost equal and twenty-nine out of the forty cases were in children of 6 to 10 years. The chief symptoms were lassitude loss of appetite vomiting abdominal pain, and jaundice, with the passing of pale faeces and dark urine.

Investigations into the milk and water supplies ruled these out as being the means of conveying the infection. It was ascertained, however, 'that a number of cases occurred in young adults working in factories not situated in these villages. It was apparent therefore, that the infection was not of local origin, but was imported by these workers from some outside source and spread from one child to another by direct contact. More commonly, however outbreaks of this type of epidemic jaundice, which fortunately rarely give rise to serious illness, are largely confined to children of school age, the infection being assumed to be one of direct contact, with an incubation period of some twenty-eight days, so that cases most commonly occur in crops at, roughly monthly intervals with no fresh cases in the intervening periods. Bacteriological findings as in this case are negative. A useful summary of present knowledge of these cases appeared in the *British Medical Journal* of January 9 1937 (p 67), this being an account of an address delivered by Dr Hugh Barber on 'Infective Hepatic Jaundice'.

Municipal Midwives in Manchester

The Manchester Public Health Committee is inviting applications from certified midwives with post certificate experience of midwifery for the city's municipal midwifery service, at a commencing salary of £215 per annum, rising to £295. Seventy posts are available, and the midwives are to work in groups of four to six in different areas of the city, an arrangement which will permit some choice of midwives by the mother. The usual fees charged by midwives in private practice (£2 for a first confinement and £1 15s for a subsequent one) have been adopted as the standard and only if a midwife's services are asked for at a lower rate will the applicant's income be investigated. With the approval of the city's public health authorities the Manchester and District Midwifery Teachers Group, a voluntary organization has arranged an eight-week post graduate course to be taken at St Mary's Crumpsall, and Withington Hospitals. The fee is £8 8s., and the course provides for six weeks study in a maternity hospital one week in an isolation hospital and one week at municipal clinics. The aim of the course is to give domiciliary midwives particularly those in rural areas and midwives in small maternity homes an opportunity to see the work that is being done in the large centres and to study modern methods.

Pathological Laboratories

In connexion with the survey which is being made of the laboratory provision for public health work through out the country the Minister of Health has issued a questionnaire to all county councils and local authorities. The medical officer of these authorities is asked (1) to

describe the laboratories provided by the council giving the size of the staff, (2) to give the addresses of laboratories used by the council and the names of the pathologists, and (3) to state whether there are any premises in the authority's area—for example, school or industrial laboratories—which could in an emergency be adapted at short notice.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

The Press and the Panel Service

The medical service procedure for dealing with complaints is sometimes regarded by those whose opinion commands respect as a vexatious and perhaps undignified procedure. But it has long been accepted as inevitable in a system where every registered medical practitioner has the right to enter the service. It is of course clear that where an authority has the right of selecting those who shall engage in the service such elaborate machinery for dealing with disciplinary questions would be entirely out of place. It may fairly be said that the medical service procedure, troublesome though it is, is designed for the doctor's protection, and in particular a case can always be dismissed as frivolous or vexatious without a hearing or even a formal investigation on the papers where this appears to be warranted.

With these considerations in mind we may note the appearance of an unusual crop of reports presented at the last meeting of the Middlesex Insurance Committee. In four cases which were heard the recommendation—some what unusual in form—is simply that 'the case be dismissed'. In the first of these cases there is evidence of difficulty with the insured person's mother. 'The subcommittee think that it is to be regretted that possibly owing to a misunderstanding Dr B considered it necessary to ask the mother to leave the consulting room.' In the second case we read of a complaint by the son of a deceased insured person regarding the indifferent and offhand treatment given to his father by the insurance practitioner upon whose list his name appeared (For example, Dr A said to his father who was ill in bed, 'Sit up—the practitioner's explanation of this remark being that sitting up was the proper position for a patient in this condition').

The third case was the always difficult question (so unsuitable for this sort of tribunal) of dealing with a complaint that the doctor failed to make a correct diagnosis. The somewhat lengthy account of the visits and the treatment given leads the subcommittee to the conclusion that the doctor was careful and assiduous in his attention. In the fourth case there are the usual telephone misunderstandings, and conflicting evidence as to the doctor ringing the bell and getting no reply.

Perhaps in all these four cases there may be some reasonable impatience on the part of the respondent practitioner with the medical service procedure. The remaining case is one which has attracted unusual notice in the Press and merits rather fuller comment. The evidence of the doctor in this was accepted in substance as a fair recital of the whole of the facts and may be set out in full for the better appreciation of the notes which follow.

Dr A (a woman practitioner) stated in writing and in evidence before the subcommittee that on December 19 1936 a message was received at her house between 6 and 7 p.m. that at the time the message was left she was out at an urgent operation and did not get back to her surgery until 8 p.m. that the message which was received by her door attendant was to the effect that the insured person had been in bed all day had a tight cough and requested a visit that the messenger also stated that she thought that the insured person would be all right in the morning that the messenger was informed that she was out at an urgent operation but that on her return she would leave a prescription for a cough

mixture but that the messenger was to return before 8 o'clock that on returning from the operation she felt ill and was very tired but she wrote out a prescription that no one had called for the prescription by 9.30 p.m. that about 10 p.m. a messenger called again, but was not seen by her that the messenger was asked why she had not called before 8 o'clock, and stated that she had been to Dr B. that the messenger was given the prescription and told to take it to the chemist's side door and ask him to make it up that this was not done that at 10.30 p.m. the insured person's mother called and stated that the insured person's breathing was tight and her cough troublesome that she made up a bottle of medicine provided some tablets and a bottle of liniment that she told the insured person's mother that the insured person was to have a dose of medicine and take one of the tablets and that if she were not better in a couple of hours to send for her and she would come immediately but that in any event she would visit in the morning that the insured person's mother then said that she thought her daughter would be all right in the morning that she told the insured person's mother that in any case she would make it her first visit in the morning that she did not remember the insured person's mother requesting her to make a visit then that she told the insured person's mother that if her daughter fell asleep she was not to waken her for treatment that she heard nothing more that night, that at 9.30 the next morning Sunday December 20 she was just leaving her house in order to visit the insured person when a messenger came asking her to call that she went immediately that he made a careful examination of the insured person took her temperature which was 100° her pulse which was 120 and respirations (34) that she also carefully examined the back and front of the chest and found no dullness in the bases of the lungs that she came to the conclusion that the insured person was suffering from extreme capillary bronchitis that she advised the insured person's mother to send the insured person to hospital that both the mother and the insured person expressed a wish to stay at home that she thereupon wrote a note to the district nurse asking her to call twice a day that on leaving the house she told the mother that she would come again at any time if she or the nurse desired her to do so that about 12 o'clock another message came asking her to visit the patient, as she had become suddenly worse that she went immediately that she did not examine the patient on this occasion, as she saw that she had become suddenly worse that she advised that the insured person should be removed immediately to hospital to which the insured person's mother agreed that she made arrangements for a bed at the Hospital as she knew the local hospital was full up that she also made arrangements for an ambulance and that the insured person was removed in a very short time that on her first visit on Sunday December 20, there were no signs of pneumonia.

It is very interesting to note the views of the subcommittee which made the investigation the insurance committee which received the report, and the Press which, to put it mildly imports prejudice into the case. The subcommittee found as facts

1 That the insured person was taken ill on Friday evening, December 18 1936 and Dr A. was sent for on Saturday December 19 1936 at about 6.40 p.m.

2. That Dr A. was out but on her return received a message that the insured person had sent for her

3 That Dr A. wrote a prescription and herself feeling ill went to bed

4 That later in the evening when the insured person's mother called Dr A. came down and made up some medicine for the insured person and stated she would come in two hours if it was urgent.

The subcommittee was of opinion (a) that Dr A. committed an error of judgement in not attending the insured person on Saturday December 19 1936 (b) that Dr A. committed an error of judgement in not allowing Dr B. to visit the insured person on Saturday December 19 1936 (c) that the errors of judgement mentioned in (a) and (b) were due to Dr A.'s physical condition

The insurance committee after discussion, decided against the error of judgement and recommended that the Minister should withhold £5 from the doctor's remuneration

By the time the report reaches the Press it appears with the following headline 'Woman Doctor Left Note on Window-sill Girl was Dying' and the following editorial comment

"We don't like this. A woman doctor is called to a panel patient not once but twice and does not go. Another doctor being sought he likewise refuses saying, quite properly that the patient is not on his list, and advises the family to go back to the woman doctor. The woman doctor again does not go but graciously consents to leave a prescription. The patient is later taken to hospital and dies. I was very tired says the doctor. Quite so but the patient is very dead. We are not allowed to publish that doctor's name or we would.

When one reads a comment of this sort, in which anything that could be said in the doctor's favour is suppressed one can at least reflect with satisfaction that cases of this kind receive a full and impartial investigation by the carefully balanced tribunal set up under the regulations

The Insurance Obligation and a Private Grievance

The following extracts from a report of the Birmingham Medical Service Subcommittee may be quoted as a reminder that the practitioner should not allow any private matters to come into conflict with his responsibilities under the insurance terms of service

The doctor stated that the complainant had been owing money to the practice for several years, and that was the cause of the trouble. Shortly before this question arose he had been ill with influenza and his locumtenent had been attending a patient at the complainant's house in a private capacity and this still further increased the complainant's indebtedness to him. On the morning in question a small child came to the surgery with a message asking the doctor to visit her sister. He concluded at the time that it referred to the patient for whom his locumtenent had been providing treatment privately and thought it would be a good opportunity to raise the question of the bill. He therefore sent back a request that the complainant should see him. A few minutes later the complainant called and he then learned for the first time that it was an insured person he had to visit and he certainly remembered thinking to himself that he would have to visit her. He then referred to the question of the outstanding bill whereupon the complainant became very annoyed and said that she would fetch another doctor and before he had an opportunity of replying she walked out of the surgery leaving him under the impression that another practitioner would be summoned. He heard nothing further until the receipt of the committee's communication. There was no question of a refusal to visit the insured person but he did not visit as the complainant stated that she would call in another doctor

The subcommittee was satisfied that the doctor was requested to visit and treat the insured person that the insured person's condition required treatment and that the doctor did not visit and treat the insured person as required by the terms of service for insurance practitioners

Certifying Incapacity of a Hospital In-patient

The particular pitfall in the case of an insured person in hospital whose relatives ask the insurance practitioner for certificates of incapacity has been referred to in these notes on a previous occasion. It is unfortunate that a hurried reading of Rule 18 may leave a practitioner with the impression that while he is under no obligation to give certificates in such a case he may do so if he wishes. A moment's reflection however should be sufficient to ensure that the practitioner cannot possibly fill up the official form of certificate in such a case. The following extract from a report presented to an insurance committee this week is worthy of reproduction as it makes the position abundantly clear

"The practitioner admitted frankly that he had issued the two certificates at a time when he knew that the insured person had been admitted to hospital but he said that he did this because he understood from the insured person's wife that the family were considerably embarrassed financially and he explained to her when issuing the certificate on December 20 1936 that any further certificates should be obtained from the hospital. On December 28 1936 the wife again approached him, and said that her husband had omitted to obtain the hospital certificate, and that without a certificate it would not be possible for sickness benefit to be obtained

It is a matter for surprise that an insurance practitioner whose name has been included in the Medical List for some fourteen years should have issued certificates of incapacity in the circumstances indicated above. It should be known to all insurance practitioners that adequate arrangements exist for obtaining certificates from a hospital in respect of in-patients and the mere fact that an insured person has failed to obtain such a certificate cannot be regarded as justifying an insurance practitioner in signing a statement which he knows is not true—that is that he has examined the insured person. It would appear that the practitioner has failed to appreciate the wording of the certificate or his duties under the Medical Certification Rules. Rule No 9 provides that a practitioner having issued a certificate under the rules shall not issue a further certificate without again examining the insured person. In other words it is clearly indicated that an examination of the patient must be made before the issue of each certificate. For the convenience of all concerned in the administration of the Act and of practitioners particularly an arrangement has been made for printed forms (as provided by the Minister of Health) to be supplied to practitioners. The certificate contains a statement of fact—namely that the person in respect of whom it is issued was examined on a particular date. If a practitioner certifies that he has made an examination of a patient on a particular date when in fact, no such examination has taken place the certificate is misleading and we are bound to take serious notice of his action.

NATIONAL REGISTER OF MEDICAL AUXILIARIES

A useful piece of work has been brought to completion in the *National Register of Medical Auxiliaries* replacing and amplifying the Roll of Biophysical Assistants which has been published from time to time in special issues of the *Supplement*. The *Register* contains the names of over 4,000 auxiliaries who are described comprehensively as 'physiotherapists, and, on a separate list, the names of about 230 dispensing opticians'. The names of those practising in London are arranged according to postal districts, and in the country according to counties, with separate headings for the towns in each county. There is also a list with all the names arranged alphabetically. It is indicated where the person registered is a medical auxiliary in private practice or a State registered nurse, and the qualifications are shown by initials—M for massage, MG for medical gymnastics, ME for medical electricity, LET for light and electrotherapy, HT for hydrotherapy (all these being qualifications under the Chartered Society of Massage and Medical Gymnastics), M.S.R. and F.S.R. for the membership and fellowship respectively of the Society of Radiographers, and B.P.A. meaning biophysical assistant. This last category refers to the qualification formerly given by the Society of Apothecaries of London but which is given no longer, its place having been taken by one of the qualifications of the Chartered Society.

A glance through the geographical list shows that the medical auxiliaries are by no means uniformly distributed. In London for example they flourish in the Hampstead district to the number of not far short of a hundred, while some of the east and south-east districts have none at all. The W1 district, which includes the consultants' quarter, has the services of just over eighty. In the country the number of auxiliaries is particularly large in Lancashire and Cheshire which have about twice as many as Yorkshire, Nottinghamshire and Lincolnshire combined. There are seventy in Hertfordshire but in the neighbouring Bedfordshire only sixteen, and in Huntingdonshire only two.

Origin of the Register

The genesis of this *Register* may be briefly recalled. In 1928 the Annual Representative Meeting of the British Medical Association adopted a resolution calling for suit-

able courses of training for persons who wished to administer electricity and radiation, the names of the persons who had satisfactorily followed such a course to be entered on a roll. It was laid down as a condition of inclusion that an undertaking must be given to abstain from the treatment of any patient except on the responsibility and under the general supervision of a medical practitioner. An arrangement was thereupon made with the Society of Apothecaries, whose action in the matter cannot be too highly appreciated, whereby a register of such persons was instituted under the none too happy name of biophysical assistants. It was soon realized however, that this was not comprehensive enough, and in 1933 the Representative Body approved a proposal for the establishment of a national register on a wider basis. The Society of Apothecaries again co-operated with the British Medical Association in this effort, as did the Chartered Society of Massage and Medical Gymnastics, the Society of Radiographers, and the Association of Dispensing Opticians. A Board of Registration was formed, which was incorporated in 1936, the council of the Board consisting of representatives of these five bodies under the presidency of Mr H. S. Souttar, one of the representatives of the British Medical Association.

Disciplinary Rules

Those admitted to the *Register* give the undertaking already mentioned, not to practise medical auxiliary work except under the direction and control of a medical practitioner, and also agree not to advertise their services except through certain specified channels and not to sell goods to patients in a professional capacity or accept commission on the sale of goods. These last requirements are varied in the case of dispensing opticians, whose scope of work differs materially from that of the physiotherapists. The disciplinary rules of the Board are set out in the preliminary part of the *Register*. An endeavour has been made to follow, with suitable modifications, the practice of the General Medical Council, the Dental Board, and other bodies which regulate professions, although of course, these are statutory bodies and the Board of Registration is not. The grounds for compulsory removal include action derogatory to the honour of the profession, disgraceful or discreditable conduct, whether in connexion with the profession or not, and a breach of the undertakings which have been given. The medical auxiliary may have his name removed from the *Register* on a conviction for a felony or misdemeanour, the words 'after due inquiry' are not used in this case as they are in connexion with other grounds for removal, and the discipline as it stands seems rather wide when there are so many convictions for technical offences which convey no imputation against moral or professional character.

The *National Register of Medical Auxiliaries* will serve the excellent purpose of maintaining contact between practitioners and qualified assistants in these ancillary fields, it will encourage the employment of qualified persons, and will provide information on the subject not only to the medical profession but to local authorities and other official bodies. It is suggested that sectional *Registers* may be compiled on a geographical basis corresponding with Branches and Divisions of the British Medical Association.

ABERDEENSHIRE PANEL COMMITTEE HONOURS DR ROBERT BRUCE

Dr Robert Bruce DSO of Culis near Aberdeen has completed twenty five years as secretary to the Aberdeenshire Panel Committee and to mark the occasion and also his election as chairman of that committee he was entertained to dinner by his colleagues on March 25 and presented with a gold wristlet watch. Thirty five representatives of the profession in Aberdeenshire including local consultants sat down to dinner over which Dr John Findlay of Peterhead presided. Dr A. V. Webster (Fraserburgh) in making the presentation paid tribute to Dr Bruce. He said that as the only medical

man to have commanded an infantry battalion in France Dr Bruce had served his country faithfully in war. In peace time he had done yeoman service as chairman of the Aberdeenshire Territorial Association and as honorary colonel of his old battalion the 5th-7th Gordon Highlanders. His interests and activities were many. But above all he was the perfect family doctor, and it was in that capacity and as secretary of the Panel Committee a laborious and thankless service which he had carried on for so many years that he was being honoured that night. Dr Bruce in thanking those present for the honour accorded him said that in anything he had done he had been actuated by a lifelong desire to promote friendship within the ranks of the profession.

Dr Bruce is a most active member of the British Medical Association. He was chairman of the Aberdeen Division from January 1930 and from November of that year to August 1932 chairman of the Aberdeen and Kincardine Counties Division. He has also been president of the Aberdeen Branch.

FREE CHOICE OF DOCTOR IN ESSEX

In Essex the county council inaugurated the free choice of doctor scheme as an experiment for a period of twelve months from January 1, 1936, in the following medical relief districts

	Estimated Population	Number of Approved Medical Practitioners participating on December 31, 1936
Walthamstow	134,490	42
Chingford	29,690	16
Clacton	21,030	3

In Walthamstow the services of a full-time nurse are also available for assisting in the patients' homes.

In reviewing the scheme after a period of twelve months the county medical officer, Dr W. A. Bullough, makes the following observations:

1. All approved medical practitioners have been visited and it was found that the records of patients have been reasonably well kept by the doctors, and the patients would appear to be getting satisfactory treatment.

2. The most noteworthy point is the higher percentage of women and children over men—roughly about 10 per cent were men. The high percentage of children might be explained by the fact that last year there was a prevalence of measles in the district of Walthamstow and Chingford.

3. No excessive prescribing has been noted.

4. The relations between the approved medical practitioners and the relieving officers and chemists have been excellent throughout the year.

5. The approved medical practitioners have no complaints against the scheme and so far as I am aware very few complaints have been received from patients. After inquiry and visits to the doctors concerned any troubles have been adjusted.

From the estimated figures available as to the cost of the scheme to the county council, there is, of course, some increase as compared with that of the district medical officer services in the areas prior to the operation of the scheme. Nevertheless the county council has agreed to continue the scheme for a further period ending March 31, 1938, after which time it is hoped that the data available will permit of a more detailed report being drawn up.

The West Riding Public Health Committee has prepared a scheme for a municipal midwifery service which provides for the appointment of two inspectors of midwives, 56 Grade II midwives and 133 Grade I midwives and for co-operation with the West Riding County Nursing Associations and 124 District Nursing Associations. The fees charged for the services of municipal midwives will be £1 10s for confinements in which the midwife takes full charge of the case, and £1 when she acts as maternity nurse only. If the total family income after deducting 5s for each child under 14 years of age does not exceed 30s a week the county council will pay two thirds of the fee for a midwifery case and half of it for a maternity nursing case.

Correspondence

THE VOLUNTARY HOSPITAL AND CONTRIBUTORY SCHEMES

SIR—In commenting on Lavman's letter in the *Supplement* of April 3 (p. 167) I would like to draw attention to a serious fallacy in his argument.

He assumes that contributory schemes are not capable of paying more than 70 per cent of the cost of hospital maintenance—that they often do not is unfortunately the case. In my opinion the hospitals are actually losing money on a transaction in which they have converted the services of their honorary staffs to the benefit of a class of patient which used to pay sufficient in fees to provide for the support of a few of the younger consultants. Owing to the no questions asked clause it is impossible to obtain exact information but my own impression is that the contributory schemes are mainly used not by the indigent or by those who would ordinarily pay nothing to the hospital for their keep but by those who could afford to pay at least maintenance charges and often some kind of professional fee as well. To suggest that people cannot afford more than the cost of five cigarettes or half a tumbler of small beer a week to insure against a risk valued at from £8 to £30 a year in the open market is ridiculous. Unfortunately the contributory schemes are only anxious to increase their membership without regard to the quality of the service given or the remuneration of the people who do the work and the least troublesome way of doing this is to keep the subscription as low as possible and not to inquire too closely into the circumstances of their members.

The honorary staffs were persuaded to accept the contributory scheme principle by a promise of a fair share of the proceeds to compensate them for loss of fees and for such improvement in the equipment and facilities of the hospital in which they worked as would give them the conditions requisite for the satisfactory performance of their function.

Lavman and others should know that despite the strong bias in favour of traditional institutions natural in a conservative profession the voluntary hospital system no longer enjoys the unqualified favour of the younger generation of consultants the majority of whom would even welcome a State service.

The present system in that it is satisfactory to nobody but the retired folk who take their recreation on boards of management is moribund and an organized refusal by the profession to work the contributory schemes as they stand would result in an efficient medical service for everybody—I am etc.

Hove April 9

J. H. TWISTON DAVIES.

THE COUNTRY DOCTOR AND THE HOLIDAY SEASON

SIR—There is one aspect of the position of certain country doctors as compared with that of their town brethren which does not seem to have been considered sufficiently either by the Ministry of Health or by the British Medical Association. Doubtless owing to the more healthy and less strenuous conditions under which our work is usually performed we do not stand in quite so much need of holidays as our urban friends but it is becoming more and more difficult for us to arrange for any change at all. Here for instance the population is so thinly distributed over wide areas that we find it impossible to undertake a neighbour's work even in normal times for more than a few days and when the influx of summer visitors descends upon me I am more tied down than ever. Times being what they are the expense of a locum tenent makes a proper holiday almost out of the question.

Many of the visitors who more than double our local population for three months of the year are insured. I consider that if one is to be responsible for attendance upon probably an addition of at least 100 extra panel patients for a quarter of the year some recompense should be made. The pious hope that temporary residents of this type will either bring their medical cards with them or produce them when requiring attention is never realized. And I have never

received any extra payment at all owing to some peculiar circumstance which I have never understood. In any case even if temporary resident payment were made the extra inconvenience due to lack of attention to rules on the part of these visitors ignorance of surgery hours, etc. makes claims hardly worth rendering and the extra load very heavy. If an equal number of our local people went off for holidays or the fishermen left for other ports some compensation might be made, but the failure of the herring fishing trade has reduced the number of large boats to three so that very few of that class ever go away now. I seem to spend the summer and autumn months in a haze of hard work compared with the rest of the year—no time for sharing the recreation of my family, no time to "play" with my friends. And no chance of even a holiday at the wrong time unless a quite unreasonable amount of money is spent.—I am, etc.,

Berwickshire April 14

COUNTRY DOCTOR.

BOOKS ADDED TO THE LIBRARY

The following books were added to the Library of the British Medical Association during March

- Anderson A K Laboratory Experiments in Physiological Chemistry 1936
Blair, V P and Ivy, R H Essentials of Oral Surgery Second edition 1936
Boyd, M F Preventive Medicine. Fifth edition 1936
Bridges M A Dietetics for the Clinician Third edition 1937
Charterhouse Rheumatism Clinic Original Papers Vol 1 1937
Cruckshank D B Tuberculosis Cancer, and Zinc 1936
De Pomerai R Future of Sex Relationships 1936
Dognon A, Biancani E and Biancani, H Ultra Sons et Biologie 1937
Doxtater L W Full and Partial Denture Prosthesis 1936
Dutton, W F and Lake G B Parenteral Therapy 1936
Fediaevsky V, and Hill P S Nursery School and Parent Education in Soviet Russia 1936
Gabbell's Prosthetic Dentistry Second edition, revised by A G Allen 1936
Geschickter C F and Copeland M M Tumours of Bone Second edition 1936
Gibson C S Essential Principles of Organic Chemistry 1936
Gifford S R Handbook of Ocular Therapeutics Second edition 1937
Goodfellow, J Lymphatic Glands, Jointing of Carcasses and Animal Anatomy Second edition 1937
Gurney R W Ions in Solution 1936
Hackett L W Malana in Europe 1937
von Haller A Dissertation on the Sensible and Irritable Parts of Animals (London J Nourse, 1755) 1936
Halliburton W D and McDowall R J S Handbook of Physiology and Biochemistry Thirty fifth edition 1937
Harns, L Vitamins Second edition 1937
Hedley G W and Murray, G W Physical Education for Boys 1936
Hickinbottom W J Reactions of Organic Compounds 1936
Hollender A R Physical Therapeutic Methods in Otolaryngology 1937
Irving F C Textbook of Obstetrics 1936
Jewesbury E. C O Life and Works of Charles Barrett Lockwood (1856-1914) 1936
Lund F B Greek Medicine 1936
Marseillier E Les Dents Humaines Morphologie 1937
Massie G Surgical Anatomy Third edition 1937
Maxwell J L Leprosy 1937
Mitchiner P H Shattock C E Slesinger E G and Wakeley, C P G Surgery for Dental Students 1936
Morgan Sir G T and Burstall F H Inorganic Chemistry 1936
Murray D S Science Fights Death 1936
Petersen W F Patient and the Weather Vol 1 Parts 1 and 2. 1935-6
Read J Prelude to Chemistry 1936
Regnault, J Fille ou Garçon? 1936
Savy P Traité de Thérapeutique Clinique Three volumes 1936
Sheehan J E Plastic Surgery of the Nose 1936
Shields, C Hay Fever 1937
Shryock R H Development of Modern Medicine 1936
Sollmann T Manual of Pharmacology Fifth edition 1936
Stroganoff B Traitement de l'Eclampsie 1937
Tchaperoff I C C Manual of Radiological Diagnosis 1937
Termen F., Veil P., and Dollfuss, M A La Décollement de la Rétine 1936
Wallis C J Practical Biology for Medical Students 1936
Widdowson T W and Widdowson E. V B Dental Surgery and Pathology Third edition 1937
Wiggers C J Physiology in Health and Disease Second edition. 1937

Naval, Military, and Air Force Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon-Captain P L Gibson to the *President* for course
Surgeon Commanders L S Goss O.B.E. and J S Elliot have retired at their own requests with the rank of Surgeon Captain
Surgeon Commander R L G Proctor to *President* for course
Surgeon Lieutenant Commanders T W Froggatt to *St Angelo*, for Royal Naval Hospital Malta, J J Keevil to the *Leander* and lent to New Zealand Division for three years E J Mockler to the *Ganges* D R F Bertram to the *St Angelo* for Royal Naval Hospital Malta, F Dolan to the *Drake* for Royal Naval Barracks J L Malone to the *Pembroke* for Royal Naval Barracks
Surgeon Lieutenants W W Simkins to the *Furlough* T McCarthy to the *Drake* for Royal Naval Barracks April 15, and to the *Centurion* on commissioning, C J Roberts to the *Halejon* F Bush to the *Pembroke* for Royal Naval Barracks I C Macdonald to the *Pembroke* for Royal Marine Infirmary Deal, H O Connor to the *Arrow* W H C M Hamilton to the *Falcon* T A M Maunsell to the *President* for course (May 3) and to the *Drake* for Royal Naval Barracks (May 25), F A Crossill to the *London* R V Jones to the *Challenger* R L Norsworthy and G R Rhodes to the *Drake* for Royal Naval Barracks, B O Neil to the *Pembroke* for Royal Naval Barracks P G Stainton to the *Victory* for Royal Naval Hospital, Haslar F P Ellis to the *Pembroke* for Royal Naval Hospital Chatham W S Miller to the *Shropshire* A J Glazebrook to the *Excellent* (May 13) and to the *Tedworth* on commissioning
The seniority of Surgeon Lieutenants N M McArthur I McN A Drysdale T A Turnbull and C J Roberts have been antedated to October 10 1935 April 16 1936 August 16, 1936 and October 16 1936 respectively
The seniorities of Surgeon Lieutenants C J P Pearson F W Baskerville, I C Macdonald P G Burgess and W H C M Hamilton have been antedated to October 16 1935
G L Hardman J F Meynell, W S Parker, and W B Teasey to be Surgeon Lieutenants

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Captain L S Ashcroft to the *President*
Surgeon Lieutenant Commanders E F St. J Lyburn to the *Resolution* S B Borthwick F E Stabler and T C Larkworthy to the *President* C Seeley to the *Royal Sovereign*
Surgeon Lieutenant F T Land to be Surgeon Lieutenant Commander
Surgeon Lieutenants G C Martin have been transferred from List 1 of the Mersey Division to List 2 of the London Division G L Foss to the *President* D R Maitland (probationary) to the *Victory* for Royal Naval Hospital, Haslar
Surgeon Sublieutenant L Foster to be Surgeon Lieutenant

ARMY MEDICAL SERVICES

Major-General FitzG G Fitzgerald, C.B., D.S.O. late R.A.M.C., has retired on retired pay
Col G G Tabuteau D.S.O. late R.A.M.C. to be Major General and to continue in his present appointment as Deputy Director of Medical Services Northern Command
Col J W L Scott, D.S.O. late R.A.M.C. has relinquished his appointment as Deputy Director-General Army Medical Services War Office, and has been promoted Major-General
Col H H A Emerson D.S.O. late R.A.M.C., to be Major General (superannuated) and retains his appointment
Col F Casement, D.S.O., late R.A.M.C. from Assistant Director-General, to be Deputy Director-General, Army Medical Services War Office
Cols A Dawson O.B.E. and A E S Irvine, D.S.O. late R.A.M.C. have retired on retired pay
Lieut-Col S W Kyle from R.A.M.C. has been appointed Assistant Director-General, Army Medical Services War Office and to be Colonel with seniority July 1 1936
Lieut-Cols A N R McNeill, D.S.O., and H Gall from R.A.M.C. to be Colonels

ROYAL ARMY MEDICAL CORPS

Majors R. H. Alexander R W Galloway F G Flood and W Frier to be Lieutenant-Colonels

ROYAL AIR FORCE MEDICAL SERVICES

Wing Commanders B F Haythornthwaite to R.A.F. Station, Calshot for duty as Medical Officer H S C Starkey O.B.E., to No 3 Flying Training School Grantham, for duty as Medical Officer
Squadron Leaders C G J Nicolls to R.A.F. Station Gosport for duty as Medical Officer P D Barling to R.A.F. Station Feltwell for duty as Medical Officer
Flight Lieutenants O S M Williams to Princess Mary's R.A.F. Hospital Halton G H J Williams to Home Aircraft Depot Henlow
Flying Officers R F Courtin to R.A.F. Depot Uxbridge N P R Clyde to R.A.F. Station Waddington D F Shaw to R.A.F. Station Harwell

REGULAR ARMY RESERVE OF OFFICERS

ROYAL ARMY MEDICAL CORPS

Major C M Rugby, having attained the age limit of liability to recall has ceased to belong to the Reserve of Officers

SUPPLEMENTARY RESERVE OF OFFICERS ROYAL ARMY
MEDICAL CORPS

Lieutenant R. L. Walmsley to be Captain

TERRITORIAL ARMY

Col A P Watson O.B.E. having attained the age limit retires and retains his rank with permission to wear the prescribed uniform

ROYAL ARMY MEDICAL CORPS

Lieutenant T W Preston to be Captain
J L Murray (late Officer Cadet Durham University Contingent Medical Unit, Senior Division O.T.C.) and A. D. Kelly (late Cadet C.S.M. Durham School Contingent Junior Division, O.T.C.), to be Lieutenants

TERRITORIAL ARMY RESERVE OF OFFICERS ROYAL ARMY
MEDICAL CORPS

Captain H W A. Post from Active List to be Captain

INDIAN MEDICAL SERVICE

Major-Generals Sir Cuthbert Allan Sprawson, Kt., C.I.E., and A W M Harvey have retired from the Service

Major-General E W C Bradfield C.I.E., O.B.E., Officiating Director General, Indian Medical Service has been confirmed in his appointment as from March 1

Major-General W H Hamilton C.I.E. C.B.E. D.S.O., has been appointed to be Deputy Director of Medical Services, Northern Command from February 9 vice Major General A. W M Harvey C.B., retired

Colonel W H Hamilton, C.I.E. C.B.E. D.S.O., to be Major-General

Lieut.-Col A F Babonau C.I.E., O.B.E., to be Colonel with seniority February 2, 1937

Lieut.-Cols J J Harper Nelson, C.I.E., O.B.E., M.C. and F W Hay have retired from the Service

Lieut.-Col R H Candy Civil Surgeon and Superintendent B.J. Medical School Poona, has been appointed to officiate as Surgeon-General with the Government of Bombay as from February 10 pending assumption of charge by Colonel H C Buckley

Lieut.-Col D H Rai M.C., has been appointed to officiate as Inspector-General of Civil Hospitals Punjab as from March 12 or the date on which he may assume charge vice Col C H Reinhold granted leave

Lieut.-Col W E R Dimond Assistant Director of Public Health North West Frontier Province has been appointed to officiate as Inspector-General of Civil Hospitals and Inspector-General of Prisons of that Province as from January 14 till further orders

Lieut.-Col J M R Henoessy Civil Surgeon, Jubbulpore has been appointed to officiate as Inspector-General of Civil Hospitals Central Provinces vice Col N M Wilson granted leave as from February 17 till further orders

Lieut.-Col T D Murison Director of Public Health Assam, has been appointed to officiate as Inspector-General of Civil Hospitals and Prisons Assam as from March 31 till further orders
The services of Lieut.-Col R C Clifford M.C. D.S.O. have been placed at the disposal of the Chief Commissioner Delhi for appointment as Civil Surgeon New Delhi as from February 15

Lieut.-Col H E Shortt Officiating Director King Institute, Guindy, has been confirmed in that appointment as from August 13 1936 vice Lieut.-Col H H King retired

Majors D Sanyal S M A Faruki B B Gadgil D P McDonald A N Sharma P N Basu J J Rooney S L Patney, D N Bhaduri B Basu O.B.E. M A Jafaray G Verghese and A D Loganadan to be Lieutenant-Colonels

Major G C Maitra an officer of the Medical Research Department at present officiating as Director Pasteur Institute Rangoon has been confirmed as Director Pasteur Institute Kasauli as from August 13 1936 vice Lieut.-Col H E. Shortt He will continue to be employed as Officiating Director Pasteur Institute Rangoon, until further orders

The services of Captain Said Ahmad have been placed temporarily at the disposal of the Government of the United Provinces with effect from the forenoon of February 4 1937

COLONIAL MEDICAL SERVICE

The following appointments are announced B S Jones F.R.C.S., Medical Officer West Africa Miss Marjorie J Lyon F.R.C.S., Medical Officer Malaya G E McVie M.B. Ch.B., Medical Officer West Africa Sir Robert G Archibald C.M.G. D.S.O. M.D. Medical Superintendent Chacabacare Lepers Settlement Trinidad G E Craig M.B. Ch.B. Deputy Director of Medical Service Gold Coast R M Dannatt, F.R.C.S., Resident Surgeon Colonial Hospital Grenada L G W Ulrich M.R.C.S., L.R.C.P. D.P.H. Medical Officer of Health Trinidad K U A Inniss, M.B. B.S. Senior Medical Officer Colonial Hospital Port of Spain Trinidad

British Medical Association

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B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumshugh Gardens, Edinburgh (Telegrams Associate Edinburgh Tel 24361 Edinburgh)

Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street Dublin (Telegrams Bacillus Dublin. Tel 62550 Dublin)

Diary of Central Meetings

APRIL

- 23 Fri Journal Committee Exchange and Free List Subcommittee 11.30 a.m.
Joint Subcommittee re Provident Schemes and Payments to General Practitioners for Treatment 2 p.m.
Police Surgeons Subcommittee 4 p.m.
27 Tues Interim Committee re Provident Schemes 3 p.m.
28 Wed Insurance Acts Committee, Prescribing Subcommittee 11.30 a.m. (corrected date and time)
29 Thurs Charities Committee, 2 p.m.
30 Fri Organization Committee Grants Subcommittee 2.30 p.m.

MAY

- 4 Tues Central Ethical Committee 2 p.m.
7 Fri Journal Board 10.15 a.m.
14 Fri Journal Committee, Epitome Subcommittee 11.30 a.m.
Journal Committee 2 p.m.
Public Health Committee 2 p.m.
18 Tues Organization Committee 2 p.m.
20 Thurs Committee re Organization of the Medical Profession in India 2.15 p.m.
21 Fri Naval and Military Committee 2.30 p.m.
24 Mon Dominions Committee 2.15 p.m.

JUNE

- 11 Fri Journal Committee Foods and Drugs (Advertisements) Subcommittee 11.30 a.m.

Alteration of Areas of Brighton, Eastbourne,
and Hastings Division

With reference to the preliminary announcement as to the above which appeared in the *Supplement* of March 20 (p. 144), notice is hereby given by the Council of the Association to all concerned that as from the date of this notice the areas of the Brighton, Eastbourne and Hastings Divisions will be as follows

Brighton Division County borough of Brighton municipal boroughs of Hove and Lewes urban districts of Burgess Hill, Cuckfield, East Grinstead Newhaven, Portslade-by-Sea and Seaford and rural districts of Chailey, Cuckfield and Uckfield

Eastbourne Division County borough of Eastbourne and rural district of Hailsham.

Hastings Division County borough of Hastings municipal boroughs of Bexhill and Rye and rural district of Battle

G C ANDERSON

Medical Secretary

April 24 1937

Branch and Division Meetings to be Held

ABERDEEN BRANCH CITY OF ABERDEEN DIVISION—At Aberdeen Royal Infirmary Foresterhill Thursday April 29 8.30 p.m. Visit to new X Ray Department Demonstration of a ray films and treatment cases by Dr Blewett and staff

BIRMINGHAM BRANCH WEST BROMWICH AND SMITHWICK DIVISION—At West Bromwich and District General Hospital Thursday April 29 8.30 p.m. Dr A V Neale Clinical Demonstration

BORDER COUNTIES BRANCH—At Cumberland Infirmary Carlisle Thursday May 6 3.15 p.m. Dr Robert Gow McInnes Mental Health

DERBYSHIRE BRANCH BUXTON DIVISION—At Devon Fire Poul Hospital Buxton Tuesday April 27 8.15 p.m. Film "Modern Treatment of Fractures"

DORSET AND WEST HANTS BRANCH BOURNEMOUTH DIVISION—At Boscombe Hospital Bournemouth Wednesday April 28, 8.15 p.m. Dr Margaret Vivian Auto-serum Treatment in Drug Addiction Dr Stephen Horsley Treatment of Acute Delirium

FIFE BRANCH—At Station Hotel Kirkcaldy, Thursday April 29 3 p.m. Annual General Meeting Election of officers etc

KENT BRANCH—At Royal Star Hotel Maidstone Wednesday April 28 2.45 p.m. Discussion The Doctor and the Milk Supply To be opened by Dr Constant Ponder

KENT BRANCH EAST KENT DIVISION—At Grand Hotel, Cliftonville, Thursday April 29 8.45 p.m. Dr R. W. Durand (Assistant Medical Secretary) Public Medical Services—their influence on the Future of General Practice

LANCASHIRE AND CHESHIRE BRANCH BURY DIVISION—At Jersey Hall Bury Friday May 14 Coronation dinner and dance

LANCASHIRE AND CHESHIRE BRANCH SOUTHPORT DIVISION—At 52 Hulton Street, Southport Friday, April 30 8.30 p.m. Meeting to discuss recommendations re Annual Report of Council

METROPOLITAN COUNTIES BRANCH HENDON DIVISION—Tuesday, April 27 Annual meeting

METROPOLITAN COUNTIES BRANCH LEWISHAM DIVISION—At St John's Hospital Lewisham S.E. Tuesday April 27, 8.45 p.m. Clinical meeting

METROPOLITAN COUNTIES BRANCH WILLESDEN DIVISION—At Central Middlesex County Hospital Acton Lane Harlesden, N.W. Tuesday April 27 3 p.m. Dr H. Carter Demonstration of Cases

NYASALAND BRANCH—At King Edward VII Memorial Hall, Blantyre, Saturday June 5 10 a.m. Scientific meeting

SOUTH WALES AND MONMOUTHSHIRE BRANCH SOUTH WEST WALES DIVISION—At Carmarthenshire Infirmary, Carmarthen Wednesday, April 28, 3 p.m. B.M.A. Lecture by Dr Daniel T. Davies Influence of the Mind on Organic Structural Disease

SUSSEX BRANCH BRIGHTON DIVISION—At Lady Chichester Hospital New Church Road Hove Tuesday April 27 3.45 p.m. Clinical meeting Preceded by a special meeting to consider a motion for the Annual Meeting at Belfast

YORKSHIRE BRANCH GOOLE AND SELBY DIVISION—At Londonborough Arms Hotel Selby Tuesday April 27 8.30 p.m. Dr H. G. Garland (Leeds) After-effects of Head Injuries Preceded by supper at 7.45 p.m.

YORKSHIRE BRANCH HUDDERSFIELD DIVISION—At George Hotel, Huddersfield Wednesday April 28 8.45 p.m. Mr L. Dougal Callender Round the World in Fifty Minutes Preceded by dinner at 7.30 p.m.

TABLE OF OFFICIAL DATES

May 8 Sat.	Publication in <i>B.M.J. Supplement</i> of list of Nominations for Election of (i) 22 Members of Council by grouped Branches in Great Britain and Northern Ireland (ii) 2 Public Health Service Members of Council and 4 representatives of Public Health Service in Representative Body Voting Papers posted from Head Office where there are contests in above elections Applications for B.M.A. Research Scholarships and Grants must be received at Head Office by this date
May 10 Mon.	Motions by Divisions and Branches for A.R.M. Agenda on matters of which two months notice must be given must be received at Head Office by this date
May 15 Sat.	Publication in <i>B.M.J. Supplement</i> of Motions and Amendments by Divisions and Branches for A.R.M. on matters of which two months notice must be given Representatives and Deputy Representatives must be elected by this date Last day for receipt at Head Office of Voting Papers for election where there are contests, of (i) 22 Members of Council by grouped Branches in Great Britain and Northern Ireland (ii) 2 Public Health Service Members of Council and 4 representatives of Public Health Service in Representative Body
May 29 Sat.	Publication in <i>B.M.J. Supplement</i> of result of election of Members of Council and result of above elections Nomination Papers available (on application at Head Office) for election of 11 Members of Council by grouped Representatives
June 2, Wed.	Council.
June 3 Thurs.	Names of Representatives and Deputy Representatives must be received at Head Office by this date
June 19 Sat.	Publication of Supplementary Report of Council in <i>B.M.J. Supplement</i>

June 29 Tues.	Other items for inclusion in A.R.M. printed Agenda must be received at Head Office by this date
July 16 Fri.	Annual Representative Meeting Belfast
July 17, Sat.	Annual Representative Meeting, Belfast
July 19 Mon.	Annual Representative Meeting Belfast Council Belfast
July 20 Tues.	Annual Representative Meeting Belfast Annual General Meeting Belfast Presidents Address
July 21 Wed.	Council Belfast Conference of Honorary Secretaries Overseas Conference Belfast Meetings of Sections etc Belfast
July 22, Thurs.	Meetings of Sections etc Belfast Annual Dinner of the Association, Belfast.
July 23 Fri.	Meetings of Sections etc Belfast

Meetings of Branches and Divisions

LINCOLNSHIRE BRANCH KESTIVEN DIVISION

At a meeting of the Kesteven Division held at Grantham on March 23 with Dr W. H. WILKIE in the chair, the following officers were elected for the ensuing year

Chairman Dr R. H. Hudson Honorary Secretary Mr F. Joselyn Jauch

Dr A. MACRAE (Assistant Medical Secretary) gave an address on Some Intraprofessional Relationships. Dr Macrae said that it was in order for the specialist including a pathologist to notify general practitioners that he was prepared to accept work from them, and for a change of partnership including an amalgamation, to be notified to patients. When giving lectures the use of handbills should be avoided. A locum tenens attended in confidence, and it was wise to get a written agreement in the interests of both sides. Nevertheless there might be circumstances in which it would be considered unfair for a locum tenens to be debarred for all time from practising in the same district. The practice of dichotomy was to be regarded as reprehensible. A dentist was entitled like any other surgeon to choose his own anaesthetist who need not be the patient's own doctor. Though a doctor's dependants are usually treated free of charge this was a courtesy and the matter was not one of obligation or ethics. A practitioner asked in consultation is debarred from attending a patient during the existing illness. Above all the guiding principles in intraprofessional relationships were the freedom of the patient to choose his own doctor and the co-operation in the interests of the patient of the doctors concerned with the case. A consultant should be made aware of the attendant doctor's views and treatment particularly if the general practitioner is unable to attend during the consultation itself as otherwise the consultant might pass a remark which might be held to reflect upon the general practitioners treatment. A consultant should say nothing which might undermine the patient's confidence in his medical attendant.

At the conclusion of his address Dr Macrae was accorded a hearty vote of thanks. He was previously asked to convey to the Editor of the *British Medical Journal* the Division's appreciation of the considerable general improvement of the *Journal*.

MALTA BRANCH

At a clinical meeting of the Malta Branch held at the University on January 15 Dr WALTER GANADO opened a discussion on Infant Care in Malta. Dr Ganado opened with some remarks on the comparatively high infant mortality in Malta. Most of the responsible factors he said were at present beyond control and although much was being done under great difficulties arising out of the limited economic resources there was scope for more work to improve existing conditions. The housing problem called for urgent solution. The ignorance prevailing among mothers might also be remedied though the problem of education was admittedly a difficult one. Much might be gained by adequate teaching and organized propaganda in which teachers, nurses, district nurses and medical practitioners could co-operate. Mothers might be made aware of the dangers arising from comforters, dirty bottles, prolonged lactation, overclothing, inadequate ventilation and improper handling of babies. Irregular feeding was the commonest cause of dyspepsia in infants and the whole scheme of proper feeding should be patiently explained to the mother.

Discussing some points in infant feeding that called for special attention in Malta Dr Ganado said that the baby

should be fed at fixed intervals and as a rule no feed should be given at night if through lack of appetite the infant did not take the usual amount no more food should be given before the next feeding time. The merits of breast feeding were well recognized nevertheless advertisements on artificial milks were exerting a pernicious influence and were leading certain mothers to wean their babies too early. A common pretext was that the breast milk was getting deficient in quality or in quantity. If a breast fed baby was not thriving satisfactorily it was wise to look for such common causes as abnormal shape of the nipples, bad habits during nursing, or irregular feeding. Defects in the composition of the milk should next be considered. The poor quality of the milk might be due to the poor health of the mother. If a baby developed symptoms of undernutrition mixed complementary feeding should be started and an attempt made to improve the health of the mother. Vomiting and colic which were usually attributed to the large globules of fat in breast milk, were more often due to overfeeding and aerophagy.

Deficiency in quantity was a more common cause of trouble. In obtaining a good and steady flow much depended on the attention given in the first few days following childbirth. The common galactagogues such as beer were very unreliable. Prolactin as prepared at present was of doubtful value and its price was prohibitive. Good results were often obtained by giving an abundant quantity of fresh milk increasing the protein foods regulating the intake of fluids and avoiding overfatigue and excessive perspiration. The nipples should be stimulated by giving both breasts at each feed and by making the interval between feeds as short as possible. A night feed might be allowed and if the child did not empty the breast completely a breast pump should be used after each feed.

Dr Ganado said that if mixed feeding was not started a definite clinical picture due to underfeeding would develop, leading to wasting. Under feeding was the commonest cause of constipation in breast fed infants and was often the presenting symptom. The chief danger of mixed feeding was that the child refused the breast for the bottle and this led to disappearance of milk if the mother was not persistent. Dr Ganado proceeded to describe the technique of complementary feeding, which ought to be regulated in terms of calories, according to the weight and age of the child.

Though statistics were not available as to the incidence of infantile nutritional anaemias in Malta Dr Ganado thought that they were very common in the large families of the lower classes. The chief danger of these anaemias lay in the fact that they caused dyspepsias and a lower resistance to infection. There were two main causes of these anaemias (1) deficient iron storage in the liver as in twins premature infants, and those born from anaemic mothers, and (2) delayed iron supply when the congenital liver storage was exhausted. They could be prevented in three ways (1) By the energetic treatment of anaemia in mothers with adequate doses of iron (2) By adequate diets during pregnancy which should contain a minimum of 15 mg of available iron a day when this was not feasible medicinal iron should be given (3) By the adequate supply of iron-containing foods to the baby when it reached the proper age this should start in the fifth month by adding the yolk of an egg in small increasing doses. In the treatment of infantile nutritional anaemia iron was best given directly added to the bottle or as a sweetened mixture. Dried milks containing iron were available. The dose recommended by Mehuvar varied from 4 to 9 grains of iron and ammonium citrate a day. Dilute solutions of copper sulphate manganese and vitamin B extracts had also been suggested.

In the discussion that followed most of the members present took part.

Another clinical meeting was held on March 12 also at the University. The meeting was well attended. Dr J E H GATT opened a discussion on "The Indications for Venesection" in which several of the members present took part.

Dr Gatt was elected delegate to the Annual Meeting at Belfast.

METROPOLITAN COUNTIES BRANCH CHelsea DIVISION

At a general meeting of the Chelsea Division held on March 25 with Dr E. FAIRFIELD THOMAS in the chair Dr S D MITCHELL opened a discussion on child guidance from the private practitioner's point of view. He emphasized the necessity of treating the child as well as its home and school environment and cited two illustrative cases. In one severe epigastric pains and other symptoms were found to be associated with a repugnance to mathematics due to interference with education consequent on repeated accidents and illnesses

as well as to home troubles. In the second stealing and wandering propensities were traced to a repressed desire to go to sea and to hostility to a bad home environment. Both cases responded very successfully to psychiatry associated with environmental changes. Dr Mitchell discussed the co-operation between the child guidance clinic and the private practitioner illustrating his remarks with the case of a girl who required polyglandular therapy as well as psychiatry. He had had no difficulty he said in arranging for these cases to receive the necessary physical treatment from private practitioners or hospitals but there was still much to be done to promote closer co-operation. A brisk and practical discussion followed relating mainly to the lines of treatment advisable in different types of case.

A cinematograph demonstration was given of the preparation of antitoxins prophylactics and vaccine lymph by Messrs Evans Sons Lescher and Webb Ltd.

METROPOLITAN COUNTIES BRANCH HENDON DIVISION

At a meeting of the Hendon Division held at the Metropolitan Police Laboratory on March 9 Dr JOHN C THOMAS read a paper on Blood Groups and Paternity. After discussing the constitution of the four main groups A B AB and O together with the subgroups A₁ and A₂ and the types M and N Dr Thomas went on to explain the mechanism of the heredity of the group substances pointing out that they were not solely the property of the red cells but of all the body tissues and fluids and in most cases of the body secretions as well. The properties A and B were inherited as Mendelian dominants the recessive allelomorph R occurring in Group O. In explaining the method of transmission of these factors he pointed out the two laws of heredity of the blood groups: first that the factors A and B could never be present in the child unless they were present in one or other of the parents non-conformity to this law being absolute incontestable proof of illegitimacy secondly that the combinations AB parent and O child and vice versa were genetic impossibilities. In view of the fact that one exception to this law had been demonstrated (the child was malformed and suffered from a severe anaemia so that this case was probably one of non-development of the specific factors) non-conformity to this rule should be considered as strong circumstantial though not absolute evidence of illegitimacy.

After working out the possible parent-child combinations, Dr Thomas went on to show how a man's chances of proving his innocence in a paternity case vary with the group to which he belongs being worst in Group AMN (1 in 13) and best in Group ABN (2 in 3) the average chance for all men being about 1 in 3. The reported exclusions from many different countries were analysed and in 11 per cent. of all paternity cases innocence was proved by the use of the blood group test (using M and N) the test proved the innocence of one man in three, which meant that about 33 per cent. of all the paternity applications were made against innocent men. In England and Wales there have been for the last ten years an average of 7,200 affiliation applications in from 700 to 800 of which innocence could be proved by the blood group test.

Dr Thomas then discussed the draft legislation which had been prepared in collaboration with legal authorities and which was proposed for this country. The draft is as follows.

Draft Legislation Relating to the Application of the Blood Grouping Test in Cases of Disputed Paternity

Whenever it shall be relevant in any action to determine the parentage or identity of any person or body the court may direct any party to the action and the child of any such party and any other person involved to submit to one or more blood grouping tests to determine whether or not the defendant can be excluded as being the father of the child the specimens for the purpose to be taken and the tests to be made by one or more registered medical practitioners as the court shall direct who are specially qualified by training and experience in the making of blood group classifications and under such directions as the court shall deem proper.

Whenever such tests are ordered to be made the results thereof shall be admissible in evidence but only in those cases where exclusion is established.

The order for such blood grouping tests may also with the consent of all parties direct that a certified copy of the evidence of such experts may be admissible as evidence without the attendance of such experts at court.

The court shall determine how and by whom the costs of such examinations shall be paid.

Whenever the court orders such blood grouping tests to be made and one or more of the parties shall refuse to submit

to such tests such fact shall be disclosed at the trial unless good cause is shown to the contrary

Explaining the various points in this draft Dr Thomas emphasized that it was essential that the court should order the test and that non submission should be treated in the same way as non submission to an order for a medical examination in a nullity suit or to a writ of *de ventre inspiciendo*—that is, as a reasonable implication of guilt in the absence of good cause to the contrary. There was no reason why the man should refuse, and a woman who was certain of her case should likewise submit to the test. The purpose of the test was defined in the draft and in order to exclude the drawing of false inferences in those cases in which exclusion had not been possible it was proposed only to admit the evidence in cases in which definite exclusion had been established. It was essential that the test should be performed by a specially trained expert, this being the opinion of the authorities in all countries. Although the test was simple in principle there were possibilities of error which if not excluded would lead the test into disrepute. It was desirable although not essential, that the evidence of such experts should be able to be taken on paper without the necessity of their attendance at court.

METROPOLITAN COUNTIES BRANCH WILLESDEN DIVISION

At a meeting of the Willesden Division held at Willesden General Hospital on March 17 Dr LEVI SIMPSON spoke on The Menopause.

Dr Levi Simpson said that it was helpful and justifiable to regard the menopause as a physiological castration, from which there resulted a series of endocrine changes spread over a period of years (the climacteric). Experimental castration was followed by hyperplasia and hyperactivity of the pituitary gland with an increase in the number of basophil cells many of which lost their granules and became vacuolated (castration cells). There was a corresponding increase in the gonadotropic potency of the pituitary gland and in the female a measurable increase in the amount of gonadotropic hormone excreted chiefly prolactin A. Another major sequel of experimental castration was hyperplasia of the adrenal cortex. In the female the latter together with basophil changes in the pituitary gland constituted the pathological basis of Cushing's basophilism syndrome and its four major features—adiposity, hypertension, virilism and impaired carbohydrate tolerance—were also frequent manifestations of the climacteric. The overactivity of the pituitary spread to its other hormones. Thus excess of the thyrotropic hormone would explain menopausal hyperthyroidism, the diabetogenic hormone—diabetes, the growth hormone—mild acromegaly, the lactogenic hormone—persistent lactation in menopausal pregnancy etc. Physiological castration was not a complete explanation of climacteric symptoms because a woman completely ovariectomized at 30 would nevertheless suffer an exacerbation of menopausal symptoms at 45 or 50.

The giving of oestrin was a logical method of suppressing pituitary hyperactivity. In the ovariectomized rat it would cause disappearance of the pituitary castration cells and in woman (apart from the relief of many symptoms) the disappearance of prolactin A from the urine, a return of the carbohydrate tolerance to normal and a change in the vaginal smear to an oestrous type were methods of measuring its effects. Sometimes large doses were necessary to abolish symptoms, and these might cause a tense feeling in the breasts. Other non-endocrine therapeutics should be exploited in order that the dose of oestrin should be minimal. Experimental evidence suggested that prolonged and continuous administration of maximum doses of oestrin might lead to cystic hyperplasia of the breasts but the consensus of opinion was against the likelihood of malignant changes supervening.

Dr Simpson was accorded a very hearty vote of thanks for his address on the motion of Dr C F T SCOTT.

NORTH OF ENGLAND BRANCH NORTH NORTHUMBERLAND DIVISION

At a meeting of the North Northumberland Division held at Belford on February 17, Dr ALAN BOLAM (Newcastle-upon-Tyne) gave an address on "Common Skin Diseases and their Treatment."

At a further meeting of the Division held at Alnwick Infirmary on March 17 Mr T A HINDMARSH (Newcastle-upon-Tyne) delivered an interesting lecture on "The Surgical Treatment of Toxic Goitre." Mr Hindmarsh illustrated his remarks by lantern slides and gave a cinematograph demonstration of partial thyroidectomy.

It was agreed that meetings of the Division should be held during the summer and autumn months, it being felt that the attendance at meetings would be improved by this procedure. A programme for the summer and autumn will be prepared at a meeting of the Division at Belford on April 21.

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses: dermatology at St John's Hospital, May 3 to 29, thoracic surgery at Brompton Hospital, May 24 to 29, urology at St Peter's Hospital, May 31 to June 12, gynaecology at Chelsea Hospital for Women, June 14 to 26, chest diseases at Brompton Hospital, May 8 and 9, physical medicine at St John's Clinic and Institute of Physical Medicine, May 22 and 23, children's diseases at Princess Elizabeth of York Hospital, May 29 and 30, general medicine at Prince of Wales General Hospital, June 5 and 6, obstetrics at City of London Maternity Hospital, June 12 and 13. The following courses will be held for M.R.C.P. candidates: clinical and pathological at National Temperance Hospital, Tuesdays and Thursdays, at 8 p.m. June 1 to 17, chest diseases at Brompton Hospital, twice weekly, at 5 p.m., June 7 to July 3, heart and lung diseases at Victoria Park Hospital, Wednesdays and Fridays, at 6 p.m., June 9 to July 3, neurology at West End Hospital for Nervous Diseases, June 21 to July 3. The annual dinner-dance of the Fellowship will take place at Claridge's Hotel on Friday, May 28. Tickets can be obtained from the secretary of the Fellowship of Medicine, 1, Wimpole Street W., or from any member of the Ladies Committee. All members of the medical profession and their friends will be welcome.

A course of lectures on pathological research in its relation to medicine has been arranged for the summer session at the Institute of Pathology and Research, St Mary's Hospital W., on Tuesdays at 5 p.m., from April 27 to June 22 (except May 11). The lectures will be given in the lecture theatre of the bacteriological department of the Institute and they are open to all members of the medical profession and to all students in medical schools without fee. Abstracts of the lectures will be embodied in the weekly advertisements in the *British Medical Journal* prior to the lecture concerned and details will also be published in the post graduate diary column of the *Supplement* week by week.

The London School of Dermatology has arranged a course of lectures at St John's Hospital for Diseases of the Skin, 5, Lisle Street, Leicester Square, W.C., from May 3 to June 4. The fee for the course is £2 2s, which includes attendance at the practice of the hospital, payable in advance to the secretary of the hospital or to the Fellowship of Medicine, 1, Wimpole Street W. Registered medical students will be admitted free to the lectures only details of which will be published in the post graduate diary column of the *Supplement* week by week. A course of twelve lessons in practical pathology of the skin will also be given at a fee of £4 4s.

The Joint Tuberculosis Council announces that Dr Peter W. Edwards will hold a short intensive post graduate course of a practical nature on modern methods of therapy in tuberculosis of the respiratory system, with special reference to collapse therapy at the Cheshire Joint Sanatorium (where there is abundant material for the demonstration of artificial pneumothorax and allied procedures) from May 25 to 27. Methods of sanatorium administration will also be demonstrated. The fee for the course is £2 7s, which includes lunch and tea at the sanatorium. All inquiries to be addressed to Dr William Brand, honorary secretary for post graduate courses, Joint Tuberculosis Council, 8, Christ Church Place, Epsom, Surrey.

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL, DUCANE ROAD, W.—Daily 10 a.m. to 4 p.m. Medical Clinics, Surgical Clinics and Operations, Obstetrical and Gynaecological Clinics and Operations, Refresher Course for General Practitioners. Mon. 2.30 p.m. Dr C. W. Buckley, Arthritis. Wed. 12 noon, Clinical and Pathological Conference (Medical). 2 p.m. Dr Miles, Agglutination Tests as Aids to Diagnosis. 3 p.m. Clinical and Pathological Conference (Surgical). 4 p.m. Mr J. F. H. Roberts, Surgery of the Chest. 4.30 p.m. Dr W. F. Gye, Experimental Cancer Research. Thurs. 2.30 p.m. Dr Duncan White, Radiological Demonstration. 3.30 p.m. Mr A. K. Henry, Demonstrations on the Cadaver of Surgical Exposures. 3.40 p.m. Colonel L. W. Harrison, Gonorrhoea in Women. Fri. 2 p.m. Operative Obstetrics. 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology).

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION 1 Wimpole Street, W—Gordon Hospital Vauxhall Bridge Road S.W. All-day Course in Proctology *Maudsley Hospital Denmark Hill S.E.* Afternoon Course in Psychological Medicine

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road, W.C.—Daily Clinical Course

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—Thurs 2 p.m., Clinical Lecture Dr Donald Paterson Enlargement of the Lymph Glands 3 p.m. Clinico Pathological Lecture Dr R. T. Brain Investigation of Skin Diseases in Children Out patient Clinics mornings 10 a.m. to 12 noon Ward Visits afternoons, 2 p.m. to 3.30 p.m.

INSTITUTE OF BRITISH SURGICAL TECHNICIANS—At Welbeck Hotel, Welbeck Street, W. Fri 8 p.m. Sir Weldon Dalrymple Champneys Sterilization of Surgical Ligatures. Members of the medical profession can obtain free tickets from the secretary, 6 Holborn Viaduct E.C.

INSTITUTE OF PATHOLOGY AND RESEARCH St Mary's Hospital, W.—Tues 5 p.m. Sir Altmouth Wright, F.R.S., Fallacy of the Statistical Method as Applied to Clinical Medicine

NATIONAL HOSPITAL FOR DISEASES OF THE HEART Westminster Palace Street, W.—Tues 5.30 p.m., Dr D. Evan Bedford, Congenital Heart Disease

TAVISTOCK CLINIC Inlet Place W.C.—Mon 5.45 p.m. Dr Emanuel Miller The Meaning of Psychotherapy Thurs 3 p.m. Dr H. Crichton Miller Asthma 4.30 p.m. Dr Cedric Shaw The Allergic Diseases Theories 5.45 p.m., Dr Crichton Miller The Self Expression Inferiority Ethical Considerations The Ideal of Mental Health

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE Hammersmith, W.—Daily 2 p.m. Operations, Medical and Surgical Clinics Mon 10 a.m. Dr Post, 1 Ray Film Demonstration Skin Clinic, 11 a.m. Surgical Wards 2 p.m. Surgical and Gynaecological Wards Eye and Gynaecological Clinics 4.15 p.m. Mr Arnold Wilker Obstructed Labour Tues 10 a.m. Medical Wards 11 a.m., Surgical Wards 2 p.m., Throat Clinic 4.15 p.m. Mr Woodd Walker, Obstruction of the Colon Wed 10 a.m. Children's Ward and Clinic 11 a.m. Medical Wards 2 p.m. Eye Clinic Gynaecological Operations. Thurs 10 a.m. Neurological and Gynaecological Clinics 12 noon Fracture Clinic 2 p.m. Eye and Genito-Urinary Clinics Fri 10 a.m. Medical Wards Skin Clinic 12 noon Lecture on Treatment 2 p.m. Throat Clinic 4.15 p.m. Mr Grant Bachelor Sat 10 a.m. Children's and Surgical Clinics, 11 a.m., Medical Wards The lectures at 4.15 p.m. are open to all medical practitioners without fee

ABERDEEN MEDICAL SCHOOL—At Aberdeen Royal Infirmary Tues and Thurs 3.15 p.m. Dr A. G. Anderson, Diagnosis of Pyrexia of Unknown Origin

BIRMINGHAM UNIVERSITY—At Medical Faculty Buildings Edmund Street Thurs 4 p.m. William Withering Lecture by Prof J. C. Drummond Chemistry and Physiological Significance of Vitamin A

GLASGOW POST GRADUATE MEDICAL ASSOCIATION—At Western Infirmary Wed 4.15 p.m., Dr Hugh Morton Peptic Ulcer

GLASGOW UNIVERSITY—At Tennent Memorial Building Church Street Tues 5 p.m., Dr John Marshall Defects in the Visual Fields

MANCHESTER ROYAL INFIRMARY—Tues 4.15 p.m. Mr H. H. Rayner Cancer of the Rectum. Fri 4.15 p.m., Mr F. G. Wingley Demonstration of Ear, Nose, and Throat Cases

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

Section of Odontology—Mon., 8 p.m. Dr David Stewart and Dr W. Lewinsky Comparative Study of the Innervation of the Periodontal Membrane

Section of Medicine—Tues 5 p.m. (Cases at 4 p.m.) Clinical Meeting at London Hospital Cases will be shown

Section of Anaesthetics—Fri., 8.30 p.m. Annual General Meeting Election of Officers and Council for 1937-8. Film by Mr W. H. Ogilvie Anterior Splanchnic Block Clinical reports of cases will be given by Drs Ashley Daley T. A. B. Harris G. H. W. Keats W. S. McConnell E. H. Rink E. S. Rowbotham and Mr H. W. S. Wright

BIOCHEMICAL SOCIETY—At Department of Biochemistry Oxford Sat 2.45 p.m. Communications and Demonstrations

ST JOHN'S HOSPITAL DERMATOLOGICAL SOCIETY 5 Lisle Street W.C.—Wed 4.30 p.m., Clinical Cases 5 p.m. Dr Godfrey W. Bamber Common Skin Diseases in Children and their Treatment

VACANCIES

All advertisements should be addressed to the Financial Secretary and Business Manager and NOT to the Editor

ALDERLEY EDGE ANCOATS HOSPITAL CONVALESCENT HOME Great Warford—Hon Visiting M.O. Honorarium £50 p.a.

ASHFORD GROSVENOR SANATORIUM—R.H.P. (male) Salary £100 p.a.

AYLESBURY ROYAL BUCKINGHAMSHIRE HOSPITAL—Second R.M.O. (male) Salary £150 p.a.

BANGOR CAERNARVONSHIRE AND ANGLESEY INFIRMARY—(1) Senior H.S. (2) J.H.S. Salaries £140 p.a. and £100 p.a. respectively

BARKING BOROUGH—Assistant M.O.H. and Assistant School M.O. Salary £500 £25 £700 p.a.

BATH ROYAL UNITED HOSPITAL—H.S. (male unmarried) for the Ear, Nose and Throat Department. Salary £150 p.a.

BECKENHAM BETHLEM ROYAL HOSPITAL—(1) Consulting S. (2) Radiologist Honorarium £157 10s. p.a.

BECKENHAM BOROUGH—Assistant M.O.H. and School M.O.

BEDFORD COUNTY HOSPITAL—(1) First H.S. (2) Second H.S. Males unmarried Salaries £155 p.a. and £150 p.a. respectively

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL—Assistant Hon. S. BIRMINGHAM CITY—R.A.M.O. (male unmarried) for the Tuberculosis Section Salary £400-£25 £450 p.a.

BLACKBURN ROYAL INFIRMARY—R.H.S. (male) Salary £175 p.a.

BOSTON GENERAL HOSPITAL—R.M.O. (male) Salary £150 p.a.

BRIGWATER GENERAL HOSPITAL—H.S. Salary £130

BRIGHTON NEW SUSSEX HOSPITAL FOR WOMEN—H.S. (female) Salary £100 p.a.

BRISTOL GENERAL HOSPITAL—Third H.S. Salary £80 p.a.

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road W.—Three Part-time Demonstrators in Clinical Medicine Honorarium £100 p.a.

BURY INFIRMARY—(1) Third H.S. (2) C.O. Males Salaries £140 p.a. each

BURY ST EDMUNDS WEST SUFFOLK GENERAL HOSPITAL—H.S. Salary £180 p.a.

CARDIFF ROYAL INFIRMARY—H.S. to the Ophthalmic Department Salary £80 p.a.

CARDIFF WELSH NATIONAL SCHOOL OF MEDICINE—Temporary full time Junior Assistant in the Medical Unit Salary £240 p.a.

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL—H.S. (male) to the Ophthalmic and Ear, Nose and Throat Departments Salary £150 p.a.

COVENTRY CITY—A.M.O. (female) Salary £500-£25 £700 p.a.

CROYDON COUNTY BOROUGH—Assistant M.O.H. and Assistant School M.O. (male) Salary £500-£25 £700 p.a.

DARLINGTON MEMORIAL HOSPITAL—H.S. (male) Salary £140 p.a.

DONCASTER ROYAL INFIRMARY AND DISPENSARY—Casualty H.S. (male) Salary £175 p.a.

EDINBURGH PRINCESS MARGARET ROSE HOSPITAL FOR CRIPPLED CHILDREN—Junior R.S.O. Salary £50 p.a.

ELIZABETH GARRETT ANDERSON HOSPITAL Euston Road N.W.—(1) Staff Appointment of Part-time Pathologist in charge of the Department of Morbid Anatomy and Bacteriology Salary £350 p.a. (2) Part-time Radiologist Honorarium £200 p.a.

(3) Hon. Assistant S. to the Throat, Nose and Ear Department (4) Hon. P. to the Children's Department Females

ENNISKILLEN FERMANAGH COUNTY HOSPITAL—Surgeon Superintendent. Salary £750 p.a.

EXETER ROYAL DEVON AND EXETER HOSPITAL—(1) H.P. (2) H.S. to the Ear, Nose, and Throat Department (males) Salaries £140 p.a. each.

FINCHLEY MEMORIAL HOSPITAL Granville Road N.—R.M.O. Salary £140-£200 p.a.

GENERAL LYING-IN HOSPITAL York Road Lambeth S.E.—J.R.M.O. and Anaesthetist Salary £100 p.a.

HORNSLEY CENTRAL HOSPITAL Park Road N.—(1) Hon. P. to Children's Ward (2) Hon. Genito-Urinary S. (3) Hon. Anaesthetist

HULL ROYAL INFIRMARY—(1) H.P. to the Sutton Branch (2) Second H.P. to the Main Hospital (3) Second C.O. to the Main Hospital Males Salaries £160 p.a., £140 p.a. and £140 p.a. respectively

HULL VICTORIA HOSPITAL FOR SICK CHILDREN—R.H.P. (female) Salary £120

HUNTINGDON COUNTY HOSPITAL—H.S. Salary £120 p.a.

ILFORD KING GEORGE HOSPITAL—(1) Hon. Chief Clinical Assistant to the Orthopaedic and Fracture Department (2) F.S.O. Salary £250 p.a. (3) Medical Registrar Salary £140 p.a. (4) Two H.S.s. Salaries £100 p.a. each Males

KETERING AND DISTRICT GENERAL HOSPITAL—(1) R.M.O. (2) Second R.M.O. (male) Salaries £160 p.a. and £140 p.a. respectively

KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL.—(1) Hon Consulting P (2) Pathologist Honorarium £100 p.a.

LANCASHIRE MENTAL HOSPITALS BOARD.—Whole-time Deputy Medical Superintendent for Calderstones Certified Institution for Mental Defectives Whalley Salary £750-£25-£850 p.a.

LEEDS GENERAL INFIRMARY.—R.M.O. (male) Salary £200 p.a.

LEICESTER CITY.—R.M.O. (male) for the City Isolation Hospital and Sanatorium Salary £300 p.a.

LEICESTER CITY MENTAL HOSPITAL Hummerstone.—Locumtenens A.M.O. (male) Salary £10 10s per week

LINCOLN COUNTY PARTS OF LINDSEY.—A.M.O. (female unmarried) Salary £500-£25-£700 p.a.

LINDSEY COUNTY OF THE PARTS OF.—Assistant County M.O. and District M.O.H. (male) Salary £800 p.a.

LIVERPOOL AND DISTRICT HOSPITAL FOR DISEASES OF THE HEART.—H.P. Salary £100 p.a.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—H.S. to the Orthopaedic Department. Salary £60 p.a.

LONDON COUNTY COUNCIL.—(1) A.M.O.s (Grade I) to (a) St James Hospital Balham S.W. (b) St Stephen's Hospital Fulham Road, S.W. Salaries £350-£25-£425 p.a. each (2) A.M.O.s (Grade II) to (c) Bethnal Green Hospital, E. (d) Dulwich Hospital S.E. (e) St Alfege's Hospital Greenwich S.E. (f) St Francis Hospital East Dulwich S.E. (g) St Giles Hospital, Brunswick Square S.E. (h) St Nicholas Hospital Plumstead S.E. (i) Archway Hospital Highgate N. (j) Mile End Hospital E. (k) St Andrew's Hospital Bow E. (l) St Luke's Hospital Sydney Street S.W. Salaries £250 p.a. each Unmarried (b) (c), (d), (f) (g), (h) (i) (j) (k) and (l) are male appointments only

LONDON LOCK HOSPITAL Hatfield Road W.—R.M.O. to the Male Departments

MAIDSTONE WEST KENT GENERAL HOSPITAL.—H.S. (male) Salary £175 p.a.

MANCHESTER CITY.—(1) Assistant to the R.S.O. (Grade II) and (2) Assistant to the Resident Obstetric Officer (Grade II) to Withington Hospital Salaries £250 p.a. each (3) Two A.M.O.s (Grade III) to Withington Hospital Salaries £200 p.a. each (4) M.O. (female) for Maternity and Child Welfare Salary £600-£25-£700 p.a. R.A.M.O. for Crumpsall Hospital Salary £200 p.a.

MANCHESTER ROYAL INFIRMARY.—Whole time J.A.M.O. (non resident) to the Radiological Department Salary £350 p.a.

MARGATE ROYAL SEA BATHING HOSPITAL.—H.S. (male) Salary £200 p.a.

MIDDLESEX COUNTY COUNCIL.—J.R.A.M.O. for North Middlesex County Hospital Edmondton Salary £250 p.a.

NORTHAMPTON MANFIELD ORTHOPAEDIC HOSPITAL.—J.R.M.O. (male) Salary £150 p.a.

NORWICH NORFOLK AND NORWICH HOSPITAL.—R.S.O. Salary £250 p.a.

NOTTINGHAM GENERAL DISPENSARY.—Resident S. (unmarried) Salary £300-£25-£350 p.a.

NOTTINGHAM GENERAL HOSPITAL.—H.S. for Ear Nose and Throat Department Salary £150 p.a.

PENDLEBURY ROYAL MANCHESTER CHILDREN'S HOSPITAL.—R.S.O. (unmarried) Salary £150 p.a.

PLYMOUTH PRINCE OF WALES'S HOSPITAL Greenhank Road.—H.S. Salary £120 p.a.

POOLE CORNELIA AND EAST DORSET HOSPITAL.—H.P. (male unmarried) Salary £150 p.a.

PRESTON COUNTY BOROUGH.—A.M.O. (male, unmarried) for Croydon Mental Hospital Upper Warrington Salary £350-£25-£450 p.a.

PRESTON COUNTY MENTAL HOSPITAL Whittingham.—R.J.A.M.O. Salary £500-£25-£600 p.a.

PRINCE OF WALES'S GENERAL HOSPITAL N.—Hon Clinical Assistant

PRINCESS BEATRICE HOSPITAL Earl's Court S.W.—Medical Registrar Honorarium £52 10s p.a.

PRINCESS LUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue W.—Hon Ophthalmic S.

QUEEN MARY'S HOSPITAL FOR THE EAST END Stratford E.—Hon Assistant Ophthalmic S.

RADIUM INSTITUTE, Riding House Street W.—R.M.O. (male unmarried) Salary £250 p.a.

ROYAL CANCER HOSPITAL (FREE) Fulham Road S.W.—(1) Non resident H.S. to the Radium Department (2) H.S. Salaries £200 p.a. and £100 p.a. respectively

ROYAL CHEST HOSPITAL City Road E.C.—(1) R.M.O. Salary £150 p.a. (2) H.P. Salary £100 p.a.

ROYAL FREE HOSPITAL Gray's Inn Road W.C.—Part time First Assistant (non resident) to the Children's Department Honorarium £100 p.a.

ROYAL LONDON OPHTHALMIC HOSPITAL City Road E.C.—Out patient Officer Salary £100 p.a.

ST BARTHOLOMEW'S HOSPITAL E.C.—Assistant Aural S.

ST HELENS COUNTY BOROUGH.—Assistant M.O.H. (female) Salary £500-£25-£700 p.a.

ST THOMAS'S HOSPITAL S.E.—Assistant Pathologist Salary £-50 p.a.

SALFORD CITY.—Part time Assistant Maternity and Child Welfare M.O. Salary £250 p.a.

SALISBURY GENERAL INFIRMARY.—(1) R.M.O. (male) Salary £250 p.a. (2) H.P. (male unmarried) Salary £125 p.a.

SALVATION ARMY MOTHERS HOSPITAL Lower Clapton Road E.—J.R.M.O. (female) Salary £80 p.a.

SIMLA MEDICAL COUNCIL OF INDIA.—Secretary Salary Rs 1,200-75 1,500 per mensem

SOUTH LONDON HOSPITAL FOR WOMEN Clapham Common S.W.—Clinical Assistants (females) for Gynaecological Out patients.

SOUTHAMPTON FREE EYE HOSPITAL.—H.S. Salary £150 p.a.

STAFFORDSHIRE COUNTY COUNCIL.—R.A.M.O. (male unmarried) for Wordsley Hospital Salary £250 p.a.

STOCKPORT INFIRMARY.—H.S. (male unmarried) Salary £150 p.a.

STOCKTON-ON-TEES STOCKTON AND THORNABY HOSPITAL.—H.P. (male unmarried) Salary £150 p.a.

STOURBRIDGE CORBETT HOSPITAL.—H.S. Salary £100 p.a.

SWANSEA CEFN COED HOSPITAL.—A.M.O. Salary £350-£25-£450 p.a.

SWANSEA GENERAL AND EYE HOSPITAL.—C.O. (male unmarried) Salary £150-£175 p.a.

SWINDON AND NORTH WILTS VICTORIA HOSPITAL.—(1) H.P. (2) H.S. Males Salaries £150 p.a. and £125 p.a. respectively

WALLASEY VICTORIA CENTRAL HOSPITAL.—J.H.S. (male) Salary £150 p.a.

WALSALL GENERAL HOSPITAL.—H.P. and Resident Assistant Pathologist Salary £150 p.a.

WEYMOUTH AND DISTRICT HOSPITAL.—H.S. (male) Salary £180 p.a.

WINCHESTER ROYAL HAMPSHIRE COUNTY HOSPITAL.—H.S. (male) Salary £125 p.a.

WOLVERHAMPTON ROYAL HOSPITAL.—H.S.s (unmarried) Salaries £100 p.a. each

YORK CITY COUNCIL.—District M.O. Salary £130 p.a.

YORK COUNTY HOSPITAL.—H.S. to the Eye Ear Nose and Throat Department Salary £150 p.a.

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 48 49 50 51 52 53 54 and 55 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 56 and 57

APPOINTMENTS

BRODY M. B. MB, Ch B, Assistant Resident Physician Runwell Hospital for Nervous and Mental Disorders, near Wickford, Essex

LEECH WILKINSON A, B.M. B.Ch. F.R.C.S. Ed. Honorary Assistant Gynaecologist and Obstetrician Royal United Hospital Bath

MARKBY C. E. Puckle B.Chir. F.R.C.S. Honorary Assistant Surgeon, Royal Victoria and West Hants Hospital Bournemouth

SHELLEY Ursula M.D. M.R.C.P. Honorary Assistant Physician to the Children's Department Royal Free Hospital Gray's Inn Road W.C.

LONDON COUNTY COUNCIL.—The following appointments have been made at the hospital and institution indicated in parentheses
First Assistant Medical Officer Harry A. Steadman M.B. B.S., D.P.M. (Long Grove Hospital) Second Assistant Medical Officer Bernard Matheson M.B. Ch B D.P.M. (Leytonstone House)

MANCHESTER ROYAL INFIRMARY.—Honorary Dental Surgeon J. C. Smith M.B. Ch B, L.D.S. R.C.S. Honorary Prosthetic Dental Surgeon E. Matthews Ph.D. M.Sc. L.D.S. R.C.S.

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

BIRTHS

CUNNINGHAM.—On April 10 1937 at Miss McCabe's Nursing Home Londonderry to Dr and Mrs Ronald Cunningham (John and Molly) a son

HOLLINGSWORTH.—On April 17 at The Lawn Axminster Devon to Molly wife of Anthony Hollingsworth M.B., B.S. a son

DEATH

JAMES.—On April 16 after a long illness Dr Alfred Herbert James M.R.C.S. L.R.C.P. aged 51 at 3 Hill Top Green Lane Morden Surrey son of the late Dr Alfred James M.R.C.S., L.S.A.

times of development are given in parentheses. In the treated animals the teeth erupted at birth (9 days), hair appeared at 1 to 2 days (14 days), the eyes opened at 1 to 2 days (14 days), the testes descended at 3 to 4 days (35 days), and the vagina opened at 16 days (60 days). At 60 days the average weight of the seventh generation was 180 grammes against the control weight of 100 grammes. This excessive rate of growth is, however, not maintained, and slackens off from the end of the second month, and although the animals remain larger than the controls they do not become giant rats. The serum calcium and phosphate are raised, and there is an increase in the dimensions of the bones. Stress is particularly laid on the fact that these animals tend to have no increased susceptibility to sudden death from shock. The adrenals are found to be small, and there is lymphatic hyperplasia, especially in the intestine. Rowntree's work suggests that thymus extracts can stimulate physical, sexual, and psychical development, at any rate during the early months of life, in the rat. But it must be remembered that so far these results have not yet been confirmed.

Pineal Gland

Even less is known about the physiology of the pineal gland than about the thymus. Rolleston has admirably summarized the older views on the subject which are distinguished by an entire lack of support of either clinical or experimental facts. The pineal is a small red oval body which projects from the roof of the third ventricle just above the posterior commissure and close to the Sylvian aqueduct. According to Keith the human pineal develops as an evagination of the ependymal lining of the posterior part of the forebrain. The pineal is proportionately much larger in the foetus than in the adult, and is very well supplied with blood. It contains calcareous concretions (corpora amylacea), which consist of chalky deposits on whorls of connective tissue and on the neuroglia. They appear first in childhood, and according to Harris are a prominent feature in radiographs of the skull in middle life. The histology of the gland undergoes considerable modification from the middle of foetal life to childhood but finally it consists of blocks of large faintly staining cells separated by a good deal of connective tissue and large sinus-like blood vessels. Calvet regards all the pineal cells as neuro-epithelial in origin and states that all stages of transition can be traced between the pineal cells and neuroglia. Some workers claim that involution begins before puberty and others insist that the gland is structurally identical in childhood and old age.

Excision of the pineal is difficult and the results obtained are conflicting. Rowntree removed the pineal in a small series of rats in four successive generations but obtained no evidence of altered development or rate of growth.

Tumours of the pineal besides giving rise to neighbourhood symptoms are sometimes associated with precocious puberty and precocious growth of the body. According to Warburg pineal lesions in early life give rise to three endocrine pictures: (1) premature genital development, (2) cachexia and (3) universal adiposity. Some of these changes may be due to involvement of the hypothalamus. In the rare so-called pineal syndrome or macrogenitosomia praecox (which usually affects boys) rapid skeletal growth takes place in the first six years and is then followed by the early union of the epiphyses.

Pineal Extracts

The injection of pineal extracts has yielded inconclusive results. Engel claims that it inhibits the action of the growth hormone of the anterior pituitary. Hanson has prepared extracts of pineal, the most potent of which is a relatively non-toxic acid derivative which is somewhat irritating locally. The extract contains 0.6 per cent citric acid, but control experiments show that injections of citric acid in similar amounts are without effect. The extracts have been injected into successive generations of rats and the results obtained are roughly the opposite of those described for thymus extracts. In the first generation no effect was noted other than moderate loss of weight. In the second generation there was definite retardation of growth, with precocity in gonadal development. In subsequent generations these features were accentuated producing a picture of precocious dwarfism with relatively large genitals. The animals are physically weak and irritable and the dwarfism is permanent, though it becomes less striking as the animals get older.

It is exceedingly doubtful whether the evidence available at the moment is sufficient to warrant the inclusion of the pineal or the thymus among the ductless glands which secrete specific hormones.

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PEOPLE'S LEAGUE OF HEALTH

GUILDHALL BANQUET IN AID OF APPEAL

A banquet was held at the London Guildhall on April 15 in support of the national appeal of the People's League of Health. The appeal is for £50,000 to place the work of the League on a secure financial basis. Hitherto it has engaged in much effective enterprise including the carrying out of special investigations and health propaganda on surprisingly small and uncertain resources. The League is concerned with the prevention of disease and dispersal of its causes by the education of the public and such means as offer working through medical, veterinary and science councils which are very representative and include many distinguished persons.

The LORD MAYOR (Sir George Broadbridge) who was accompanied by the Lady Mayoress and attended by the Sheriffs presided over the banquet. He was supported by Viscount Leverhulme the chairman of the Appeal, Sir Robert Kindersley the treasurer and Miss Olga Aether sole the founder and honorary organizer of the League. The company present which also included the Belgian ambassador was widely representative of the Church, medicine, industry, social services and other sides of the national life. Mr. H. S. Souttar was present for the British Medical Association. During the evening nurses from the hospitals which are co-operating with the League in an investigation into maternal nutrition took a collection at the tables which resulted in £5,000 in cash and promises.

The health of the City hosts having been proposed by Sir ERNEST BURN and acknowledged by the Lord Mayor the toast of the evening that of the League was proposed by the BISHOP OF LONDON who proffered himself as an example of abounding health doing at least twenty-

none the same things as he did at twenty-nine, and rather better. He ascribed his health to four simple rules: no alcohol, no tobacco, moderation in eating, and regular exercise. Lord HORDER who responded said that he must not be tempted from the toast to say much about health in general, but he did wish that people would not speak of health as if it were something artificial, something that could be put on or taken off like a garment; it was actually a state of body and mind. The Prime Minister speaking recently on nervous strain in industry said that we knew little or nothing about it. Lord Horder was uncertain as to the meaning of the pronoun. If it meant the Cabinet although he was surprised he accepted the modest avowal, but if Mr Baldwin was speaking for doctors he contended that they knew a great deal about nervous strain. People were no longer mown down in large swathes by epidemic fevers, but they were caught in the machine in a number of ways and it was to help to extract them from the machine so that they might enjoy the benefits which medical science gave them in other directions that the League existed and worked. He himself was proud to be one of the League's panel of medical advisers. Experts did not run the League, but it made full use of experts.

Mr Baldwin told us in the same speech that he dreaded the mass mind. So do I. But I am not sure that I do not dread more than the mass mind the untrained mind that is too knowledgeable and gets into the saddle, and I think we are troubled with this both in our public and private lives. Lord Horder also brought the good wishes of the Royal College of Physicians of London in the absence of its President, Lord Dawson.

Sir WALTER LANGDON-BROWN who also replied to the toast said that in this country it generally happened that the necessity and advantages of an enterprise had first to be established by voluntary agency and then the State stepped in and expanded it. By the inauguration of the physical fitness campaign, and also by the establishment of the Advisory Committee on Nutrition the Government was really in effect following out the policy which the League had been setting forward during the last eighteen years. He paid a warm tribute of gratitude and admiration to the League and to its founder, Miss Nethersole, who was a skilled campaigner and had chosen the right moment to sound an advance. There was a new spirit of optimism abroad. The winter of our discontent seemed to be passing in spite of blizzards on the Continent. We have got out of the Slough of Despond and are well set on the journey to the Delectable Mountains, but the House of the Interpreter lay between those two points on the journey, and there the League intends to reserve very roomy accommodation to interpret the lessons of medicine and science in everyday life.

The National Council for the Unmarried Mother and her Child (117 Piccadilly W 1) has published a pamphlet reprinted from *Mother and Child* entitled *The Unmarried Mother: A Few Notes for Student Health Visitors*. The author is Miss Susan Fass, general secretary of the Council. After explaining the legal aspect of illegitimacy Miss Fass points out the desirability of collaboration between statutory bodies which are in a position to provide the more material benefits of maintenance and medical care and the social worker who can act as guide, philosopher and friend. The question of voluntary homes for unmarried mothers is discussed and also the difficult problem presented by mothers who are mentally deficient. Since it is usually far from easy to secure admission for illegitimate children to children's homes the usual arrangement is for the mother to place the child with a foster-mother. With regard to adoption it is suggested that some infants with this end in view, are subjected to early weaning and changes of diet, probably a contributory factor to the disproportionately high death rate of illegitimate infants.

HEALTHY HOLIDAYS FOR THE WORKER

CONFERENCE AT SKEGNESS

A conference of the British Health Resorts Association attended by a large number of medical visitors from London and elsewhere was held at Skegness on April 17 when the subjects discussed were 'Industry and the Health Resort' and 'The Health Values of Sport and Sea Bathing'. This Lincolnshire resort, to the fortunes of which the Hassall 'So Bracing' poster largely contributed, was hospitality itself, though some of its attractions had to be taken for granted. It was claimed by various speakers that its hours of bright sunshine number 1,570 annually, that it is the centre of the driest belt of the British Isles that its average is only two gales a year, some ten fogs and some twelve snowfalls that its mean temperature the year through is only one degree lower than the average of the balmy South and that it is one of the eighteen towns in the British Isles where there is sufficient ultra-violet radiation to cause sunburn in December. Unfortunately a period of drizzling rain and shivering cold coincided with the visit and the "garden town" for the East Midlands was not seen at its best.

Lord MESTON the president of the Association in a foreword to the conference, said that since that energetic body was founded a few years ago it had shown that British spas, sea resorts, and mountain pleasantries comprised everything or nearly everything in health resources and enjoyment that could be found on the Continent. It was now on the threshold of another task to ensure if possible that the restorative value of our health resorts was accessible in organized fashion to the working-class as well as to those who were better off. It was a task which called for the co-operation of the local authorities in these places, the medical profession, the hotel and boarding house industry and the organizations of employers and employed.

Industry and the Health Resort

Mr ERNEST BEVIN general secretary of the Transport and General Workers Union said that this was one of the subjects which would engage the newly constituted joint committee representative of the Trades Union Council and the British Medical Association. One of the principal struggles of the trade union movement had been to establish as a part of the contract of service the right of work-people to holidays with full pay. The need for annual holidays was becoming more imperative with the intensification of industrial processes and the increasing wear and tear of modern life and public opinion was now ripe for a reform in the direction of holidays with pay. It had been amply demonstrated that the cost of holidays to industry was offset by the decrease in sick leave and absenteeism. One result of the extension of holidays for workers would be a lengthening of the holiday season, which would be spread more or less over the year, entailing a good deal of thought if the resorts were to be made enjoyable and beneficial in changeable weather.

The subject of convalescent treatment was also touched upon by Mr Bevin. At present, he said, convalescent treatment was provided in a very haphazard way. Trade unions and friendly societies had established convalescent homes but the selection and treatment were limited and the fullest possible benefit was not derived. There was a call for a co-ordinated plan shaped by the unions and societies on the one hand and the municipalities on the other whereby the health resort likely to be most beneficial to the person needing the convalescent treatment could be chosen and suitable arrangements made for the completion of the cure and for a pleasant and restful vacation in the best possible conditions. Another idea of Mr Bevin's was that the Government should be urged to set up a Royal Commission to examine the whole

problem of the planning, equipment, and co-ordination of health resorts

The need for more attention to the planning of the holiday for the industrial worker was also stressed by Mr A. L. PETERSON of Letchworth. It was necessary to popularize the idea of holidays being taken over periods other than what were now known as the holiday months.

Prophylactic Holidays

A very original and suggestive contribution was made by Dr LEONARD P. LOCKHART, medical officer of Boots Pure Drug Company, Ltd. of Nottingham. Dr Lockhart considered that the distinctions between the holiday-maker and the patient were too marked. It was the holiday atmosphere that counted most in both cases and it was a pity that people were not sent away far more often as a prophylactic receiving sick benefit and subject to no unreasonable restrictions. A fortnight at Skegness in selected cases would keep large numbers away from the insurance practitioner for weeks. There was still too much reluctance, he said, on the part of approved societies to send people away early rather than after long and debilitating periods of sick absence. His own firm had a home in Skegness and he believed that money spent on the right cases at the right time had saved months of idleness and much domestic and financial loss. The doctor in industry and the insurance doctor working together were able to select cases with a high degree of accuracy. If only small firms would pool their welfare resources and employ a doctor part-time to watch over their staff this doctor again in co-operation with the insurance doctor could by means of prophylactic holidays effect a great deal of good. If in addition some skilled but simple psychotherapy could be brought into play before the holiday another large class of potential patients might be helped over some critical phase and breakdown avoided. Dr Lockhart then went on to make a number of suggestions as to winter holidays: diet at resorts, the organization of the family side of the problem, the question of transport, and the aesthetics of holiday-making important also from a health point of view of which it is to be hoped holiday resorts and others concerned may take note.

In some further discussion on this subject Mr McADAM ECCLES said that the extension of the season during which health resorts could be used was essential. There was still a feeling that resorts were only for three months of the year. The difficulty lay in inducing the worker to believe that it was good to have a holiday at other than the orthodox time; that in fact the year is the season.

Health Values of Sport and Games

Sir KAYE LE FLEMING, a member of the National Advisory Committee on Physical Fitness (though he was careful to point out that he spoke in an individual capacity) opened a second session of the conference on the subject of sport and games. The subject he said was associated with the idea of leisure, a thing not well understood and requiring a good deal of education to make it enjoyable and profitable. It had two distinct aspects—relaxation after work and recreation in the true sense of the word. Games not only gave pleasure because of a competitive element but because they afforded opportunity for the development of skill or in other words the bringing out of the latent possibilities of the body. He described games as often the specialized ends of physical education or training. The training of the body to perform whatever tasks it was set was different from the test to which it was put in such a game as—to take an extreme example—Rugby football. Nobody would describe Rugby football as the ideal physical training without a preliminary training of many other kinds.

Some games were particularly suitable for the general training of the body—he gave lawn tennis, swimming, and

skating as examples. The disadvantage of some recreations such as cricket and football was the space they demanded but there were other games which could be played with less demand in this respect and with great benefit to the industrial populations. Badminton was of this description of extraordinary value in physical training and requiring very little space. Another game which might be very much more widely known and applied was deck tennis.

Sir KAYE LE FLEMING said also that he looked forward to the time when not only at seaside resorts but in all places especially where there were bathing facilities there would be a building which for want of a better name he would call a gymnasium not however fitted with fixed apparatus for different exercises and nothing else but a large covered building in which games could be played, physical training and exercises undertaken and music enjoyed. He touched briefly on other topics such as clothing in relation to exercise and work and with regard to sea bathing suggested that the scientific effect of light and sea water combined had not received enough attention from the medical profession. He was looking forward to the work of the new Advisory Council in establishing a college of physical training for men to afford facilities whereby various research could be carried out on physical education, fatigue, exercise tolerance and the like.

Sea Bathing

Dr R. COVE SMITH addressed the conference on sea bathing which he said had a tonic effect in promoting a healthy vascular co-ordination. The stimulus of the changing temperature, the alternation of douching and evaporation on the cutaneous nerve endings and other physical factors had a bracing effect provided it was not allowed to be too drastic at the beginning. The best time to bathe was between the hours of 10 and 5 in the day, preferably about two or three hours after a meal and when the tide was high. At first the bath should be short, measured in minutes and with children old people and invalids it should always be short. Those of more robust physique might lengthen the time and increase the frequency but this should only be done gradually. The early morning bath on an empty stomach before the body had regained its natural warmth could only be undertaken with benefit by the strongest and by those who had become acclimatized by long practice. Bathing in the night air was also to be deprecated. The ideal was to leave the water before the stage of primary reaction had worn off. At the end of the bath a period of rest was advisable and perhaps a sun bath. Dr Cove Smith ended with the record of some observations on the effect of bathing on blood pressure in trained and untrained subjects.

Dame LOUISE McILROY gave a brief address on the treatment of gynaecological affections at health resorts. For chronic gynaecological affections sea water baths and warm douches were excellent. Some cases of sterility were due to endocrine dysfunction associated with obesity and yielded to treatment by means of baths, exercises, and dieting. Intestinal stasis was responsible for many gynaecological and obstetrical complications. The loss of tone in the bowel with a sagging colon and defective support from the abdominal wall could be cured in many cases by colonic lavage baths and exercises. The Vichy bath was specially valuable with massage under warm water sprays. She also referred to the mental aspect of treatment at health resorts, many gynaecological and obstetrical affections being associated with neurotic states. Rest and complete relaxation with freedom from domestic worries did much to restore reproductive function.

The Skegness Urban District Council entertained the visitors to dinner on the evening of the conference. Replying for the British Health Resorts Association to the toast of its health, Dr ALFRED COX said that he believed that during its short life the Association had taught something of real value to the resorts. Many a

paces had been content to cater for the crowds who came to them during the holiday months but now the more enterprising were seeking to offer their advantages over a longer season and on a better organized system. Seven such conferences as the present had been held at different seaside resorts. Lord Meston fittingly acknowledged the hospitality of Skegness to which Mr J W CRAWSHAW responded in a speech describing some of the developments on this part of the Lincolnshire coast. He claimed for Skegness that its bathing pool was among the first half-dozen in the country its solarium was the first of its kind and its physical culture classes were inaugurated long before the national call for such training.

Those attending the conference also visited the National Deposit Friendly Society's convalescent home, one of nine convalescent homes at Skegness—a very handsome and pleasant building run on hotel lines and accommodating some 120.

HOME NURSING SERVICE

PROVIDENT SCHEME FOR GREATER LONDON

A largely attended meeting to inaugurate the Greater London Provident Scheme for District Nursing was held at Grocers' Hall on April 19. The scheme will make it possible for persons working in a place where five or more are employed to obtain nursing benefits at rates far below those hitherto practicable in London. Benefits will include free nursing care of contributors and dependants, subject to medical direction in the patient's home, also the loan of certain appliances. Midwifery and normal maternity work are excluded.

The EARL OF ATHLONE, president of the Scheme, said that he had followed with keen interest the efforts resulting in the setting up of the new organization and the growing sympathy and support it had received. London was served not by one but by scores of district nursing associations each drawing rightly much of its vitality and inspiration from the sense of local patriotism. But the economic way of operating a provident scheme was to avoid the laborious house-to-house collection and collect at the place where the contributors worked or were congregated. Only through a central organization acting as a clearing house for local bodies could a large scale provident scheme be successfully run in London. The new scheme aimed at providing a supplementary service for existing district nursing organizations to enable them to offer to the public at the lowest possible cost an extended and fully adequate supply of properly paid and equipped nurses. Once established the scheme would be self-supporting, although in its initial stages it might be necessary to seek to increase the generous financial backing it had already received. The scheme was already well sponsored in that it had been initiated by the wish of a substantial body of opinion among the associations concerned and had the active participation and support of the associations providing the great majority of the district nurses in the London area.

The Provident Principle

Lord HORDER, chairman of the council of the Scheme, said once it was accepted that the provident principle was right it might occur to others as it had to him that home nursing was the only health service which up to now remained uncovered by that principle applied in one form or another. Every health requirement was within reach of the ordinary wage-earner except that one service which in many cases made the greatest difference of all—the service of the district nurse in a patient's home. The provident idea was the same as that of insurance. A halfpenny a week—the actual basic rate proposed under the scheme—was within the means of any wage-earner. The reason why the amount was so small was largely because collection in bulk from a large number of workers at their place of employment could be done simply and at little cost. The provident or contributory method was popular

from the point of view of the contributor because whereas the demand for payment at a time of illness might come at a moment when family resources were already depleted the small regular weekly contribution was relatively little felt; also the weekly wage-earner preferred to feel that he was a supporter according to his means in normal times, of a service the benefit of which to himself and his family he was the first to appreciate.

From the point of view of the district nursing service itself nurses must be assured of a source of income independent of the incidence of sickness and which relieved them of the onerous task of acting as collectors. Wherever the provident method had been instituted on a large scale it had been the means of supporting an extended and better paid service. Lord Athlone had referred to the special difficulties of setting up a comprehensive scheme in London but like other difficulties they were not insuperable and it certainly seemed that the meeting had before it the right proposals for establishing and maintaining a very necessary service. The scheme was being brought forward at an opportune moment for the whole nation was believed to be becoming keen on physical fitness and it was hoped, might become keen on mental fitness also.

A Great Preventive Scheme

Miss M WILKINSON, general superintendent of the Queen's Institute of District Nursing, said that the patients who could be nursed at home were far more numerous than those requiring institutional care. Thus the trained nurse was essential in acute and chronic cases as a link between hospital treatment and the patient at home and also as a link between health authorities and the patient. Every district nurse in the county of London had received full hospital training and in most areas in the outer ring she was also fully qualified. When mention of district nursing had been made as applied to Central London it had often been asked: "But where are the patients who need nursing?" That indicated little realization of the back streets or tenement dwellings where there were thousands of families in need of nursing. For the carrying out of the scheme there must be some centralization of the collection which would enable contributors to be nursed in any part of Greater London in which they might live. The employment group suggested by the Greater London Provident Scheme as a basis of its work was therefore the simplest and most effective solution. The scheme would prevent those subscribing from having any reluctance in calling in a nurse for fear of additional expense. Hundreds must now be muddling through illnesses. The scheme would undoubtedly be a great preventive agent. Moreover because skilled care would be given to the small beginnings of illness serious complications would in many cases be avoided. Employers would surely realize the importance of that. With increased income the district nursing associations would have the opportunity for which they had long waited of extending their service and improving and enlarging the accommodation for the extra nurses they so badly needed. In view of the steps being taken to ensure a fitter Britain the preventive work done by the district nursing service was becoming of increasing importance.

The February issue of the *Bulletin de l'Office International d'Hygiène Publique* contains articles by Dr Sven Gard on *formes frustes* of poliomyelitis in Sweden, cerebro-spinal fever in the British Colonies in Africa, by Sir Thomas Stanton, cerebro-spinal fever in the French colonies in Africa by Inspector-General Sael, human infection by *Leptospira icterohaemorrhagiae* by Professor W A P Schüssler and Miss B Welch, Sordrager, spirochaetosis, icterohaemorrhagica in Poland by Dr W Chodzko, frequency and forms of tuberculosis in man caused by the bovine bacillus by Professor I Lange, incidence of human tuberculosis of bovine origin in Great Britain by Sir Weldon Dalrymple-Champneys, frequency of human tuberculosis due to the bovine bacillus in Scotland by Dr M T Morgan, frequency of tuberculosis of the bovine type in Holland by Dr A Charlotte Ruyss, and an English memorandum by the Ministry of Health on sterilized surgical catgut.

Reports of Societies

MENTAL DISORDER FOLLOWING HEAD INJURY

At a meeting of the Section of Psychiatry of the Royal Society of Medicine on April 13 with Dr T A Ross in the chair Dr C P SYMONDS introduced the subject of mental disorder following head injury confining himself to the effects of closed injury (that is injury without compound fracture) and excluding any reference to the effects of focal lesions or to mental disorder associated with traumatic epilepsy.

Dr Symonds said that the outstanding symptom in the cases under consideration was loss of consciousness in some degree. The duration of the loss of consciousness was most conveniently measured by that of the traumatic amnesia. He considered first the case of minor head injuries the so-called concussion. The recovery of consciousness might be extremely rapid but however rapid there was a transition from deep stupor to a state of dazed bewilderment, and after this automatism before full consciousness was regained and the amnesia would often be found to include some utterance or action which had appeared as conscious to the bystander. Occasionally the loss of consciousness after the injury might be delayed. The patient might remember the accident and the events immediately following it and afterwards relapse into a state of automatism which might last for several hours.

After an exceptionally severe injury the progress of recovery to full consciousness might be spread over a period of days, weeks or even months. The mental disorder after the minor injury might be dismissed as the after-effects of concussion and that after the severe injury regarded as acute traumatic psychosis but he believed there was no essential difference between the two though the latter condition with the more or less regular sequence in the symptoms from stupor to confusion and finally to a state which resembled Korsakow's psychosis afforded an opportunity for detailed analysis of the traumatic mental disorder. He preferred to consider traumatic psychosis as a whole recognizing in its course the predominance of one or other symptom—in the early stages stupor, later confusion and after confusion had faded into the background defective memory of recent events and a tendency to confabulation. The state of deep stupor was associated with restless bodily movements but without speech and without any response to internal or external stimuli above the level of the simplest alimentary, excretory, and protective functions. This might last for a few days though he had seen one case in which stupor of that degree lasted for as long as eighty five days, with recovery.

State of Confusion

When the patient emerged from stupor he was as a rule excited and acted in a resistive irritable way to outside stimuli. The state of confusion often with delirium might last for days or weeks with an occasional relapse into quite deep stupor. At the stage when the patient began to be accessible the salient features were profound disorientation in space and time with a tendency to interpret the immediate surroundings in terms of long past experience. There was defective perception, memory and judgement were grossly impaired and there was conspicuous disturbance of the speech function. A far reaching retrograde amnesia was noteworthy. Perseveration was one of the most striking features in this form of disorder.

The disturbance of speech function in this stage attracted the attention of the neurologist. After the first return of speech there was often a considerable amount of talk in which words and phrases were well formed but unrelated to one another or to the circumstances. Afterwards the spontaneous talk began to have some general

relation but was still in part meaningless. In this phase the patient's attention could generally be gained for a moment or two but his responses were inaccurate and often so distantly related to the question or request as to seem quite at random. Comprehension of the written command generally seemed to return later than that of the spoken command possibly due to the fact that the written sentence was less quickly appreciated.

Later Stages of Disorder

The transition from the state of confusion to the state resembling Korsakow's psychosis was a gradual one. There was a tendency for the patient always to confabulate when pressed for information and this persisted at a time when his behaviour in relation to hospital surroundings and his speech in simple conversation no longer showed confusion though impairment of memory and of insight and judgement remained. The confabulation might take the form of false accusations in relation to the accident.

The Korsakow state was a constant feature of the later stage of every prolonged traumatic psychosis. Gross defect of memory for recent events remained the outstanding symptom sometimes for a long period. Occasionally there was a rather childish petulant depression but the commonest abnormality appeared to be undue elation. The ending of the Korsakow state was not by any means clean cut. After the tendency to confabulate had disappeared there was generally a period with defective insight and judgement and often gross defect of attention. Notable was the patient's refusal at this stage to admit anything wrong with him and to talk in a light hearted way about the accident even though it had involved the death of a relative or friend.

The prognosis for the acute traumatic psychosis appeared to be invariably good whatever its duration. The longest case of which he had a record was that of a man of 67 who still showed some confusion and grossly defective memory fourteen months after his accident but a month later was quite clear and although having some residual deterioration of intellect and personality was able to manage his own affairs. He had two other cases of patients over 60 who made comparable recoveries so that it looked as if the pathological changes whatever they might be which were responsible for the whole sequence of mental disorder so far described were reversible at any rate to the point of allowing restoration of function under normal conditions. These cases of severe injury provided a slow motion picture of the mental disorder which followed minor injuries. After the minor injury the phases of stupor, confusion and amnesic automatism followed one another with such rapidity that the whole sequence was over in a few minutes.

compensation with its attendant worries often bulked largely in environmental stress. The tendency always was towards recovery.

All the most comprehensive studies of mental disorder following head injury had included some reference to the precipitation of a specific mental illness. In persons of a paranoid, schizoid or manic-depressive constitution a psychosis of the appropriate type might be precipitated by the injury. There were two ways in which the effects of an injury might contribute to such a development. In the first place one of the symptoms in the state of post-traumatic dementia was exaggeration of pre-existing traits and in the second place the injury created a situation of incapacity and invalidism to which the patient reacted in terms of his individual make-up. There appeared to be a special liability of this kind in the case of manic-depressives.

Traumatic Neurasthenia

Dr Symonds added that he could not leave this subject without saying something about traumatic neurasthenia following head injury. Why was traumatic neurasthenia so called more commonly found after head injuries than after injuries to other parts of the body? He suggested that the patients liable to this condition after head injury fell into three groups: (1) those in whom the injury had released a pre-existing disposition to illness of the depressive invective type, (2) those who were incompletely recovered from post-traumatic dementia, (3) those who were suffering from psychogenic illness. These last might be regarded as suffering from neurasthenia which was traumatic in a physical rather than in a psychogenic sense.

Attempts had been made to explain the pathology of acute traumatic psychosis in terms either of increased intracranial pressure or subarachnoid haemorrhage. He believed that neither of these theories could be accepted but he had no alternative pathology to offer except the old and vague conception of direct molecular damage. He had one generalization in which he desired to indulge in conclusion. The later effects of head injury could properly be understood in the light of the full psychiatric study of the individual patient and especially of his constitution—in other words it was not only the type of injury that mattered, but the kind of head.

A Subjective Study

The PRESIDENT said that about eighteen months previously he had had the good fortune to be thrown from his horse and to have a slight concussion. He had a number of memories of his confusion state which he carefully set down in writing three hours afterwards. He remembered sitting on the ground in a familiar landscape though he did not know where it was. It was very cold the wind was blowing and there was a babel of voices above his head. He also remembered looking at a haystack and had a very strong recollection that he hated the colour of it. Then he remembered walking in the road with a young man to whom he was extraordinarily polite whereas the testimony of a niece who was with him at the time was that immediately after the accident he was the very reverse of polite. It was evidently an instance of selective memory similar up to a point to that which occurred in dreams where the impressions were consecutive, but not in the least consequential.

Dr THOMAS TENNENT gave a study based on 44 patients who had been admitted to Maudsley Hospital during the period 1923 to 1936 each of them suffering from a psychosis following a head injury and their stay in hospital ranged from two months up to in one case two years. During the first eleven years of the period only twenty-six such cases were admitted and during the last three years eighteen suggesting that such cases were on the increase. Four of the cases proved to be general paralysis and these would not be further considered. Of the remainder the initial symptoms were more or less the same in all—con-

fusion, varying degrees of irritability and depression, disorientation, and gross memory disturbances. In five cases, when the degree of confusion became less marked, hallucinatory experiences and bizarre or paranoid delusional ideas became prominent. There was evidence that two of these patients had had previous hallucinatory experiences neither of them showed any permanent improvement. In seven other cases the form of illness became depressive in nature of these four had now recovered from the psychosis one was still in a mental hospital one was dead and one untraceable. There were three cases in children under 16. There remained twenty-five patients in whom the form of the illness was attributable solely to the accident and no other factor could be determined. All had marked impairment of memory. Two of them who had seen active service during the war showed a remarkable antedating, maintaining that the war was still on and furnishing details of their adventures. One patient died in hospital and of the other twenty-four so far as it was possible to ascertain their present condition ten had recovered, nine had improved, two were in mental hospitals, two were untraced and one was dead. Those in the 'improved' group suffered sometimes from pains in the head and lack of ability to concentrate and make a decision.

Retrograde Amnesia

Dr EDWARD MAPOTHER said that Dr Symonds in this brilliant piece of clinical psychiatry had identified the amnesia which there might be for a period following the accident with the unconsciousness which supervened immediately upon the accident. He rather doubted whether that was justifiable and he quoted a personal experience. Everyone knew of accidents on the football field in which the player who had been kicked on the head carried on automatically until the end of the game. Once while he was a medical student he received a kick on the head while playing football and when he came round he found to his surprise that he was playing in the opposite direction to that in which he had played before losing consciousness. He had always assumed that following the kick on the head he had played reasonable football in an automatic way, and had changed over with the others at half time. But now he was not at all sure that he did not receive the kick considerably later and after a very brief period of unconsciousness woke up with a retrograde amnesia extending over the previous ten or fifteen minutes. It was very important to study the gradual emergence through stupor to confusion and the automatic stage of Korsakow's psychosis.

Professor HUGH CAIRNS said that there was still a great deal to be done on the pathological side especially in relation to acute psychosis. It was an extraordinary thing that this reversible process could exist for ten months with complete recovery. He had seen the condition come on in a man about five days after the head injury, at the time when he developed sepsis or cellulitis from other injuries and it persisted until the sepsis disappeared. He had seen it also persist with the use of barbiturates and cease when these drugs were withdrawn. It was remarkable that a man might have a certain amount of damage to his brain and yet be able to celebrate quite well until some toxic process began or some excess of barbiturates was taken, which caused or maintained the psychosis.

General Discussion

Dr W. F. MENZIES mentioned several interesting cases in his experience. One was that of an old school fellow who was hit on the head by the boom when waching on the Clyde. After the injury although it was eighteen years since he had left school during which period he had never looked at Greek he was able to repeat correctly *fifty lines of the Odyssey* and other reputation exercises which he had learned in his school days. The speaker thought that there was a molecular dissociation in these cases followed in the chronic condition by a fibre-

Dr ERIC GUTTMAN drew attention to some observations on bovers, saying that there was sufficient reason to suppose that the transient disturbance of consciousness owing to a knock out was functional, and that there was no structural brain damage. Dr A. A. W. PETRIE said that Dr Symonds had used the term "post-traumatic dementia." Did they all mean the same thing when they used that term? He suggested that some of the cases cited by Dr Symonds were rather of the order of post-traumatic instability of the kind which showed itself more commonly in the young. Would not that term more fittingly describe many of these cases rather than post-traumatic dementia such as one saw occasionally in the analogous condition of alcoholism?

Dr PURDON MARTIN said that there were a number of people who went into dementia after having made apparently a fair recovery from the accident. He recalled the case of a railway man who had a severe injury from which in the course of a few months he recovered sufficiently to go back to work, but after a further month or two gave it up again and then deteriorated mentally fairly rapidly and became at length profoundly demented. Dr Symonds had referred to the symptom of elation in some of these cases with which confusion and loss of memory were associated. He was inclined to regard the elation as more or less a focal symptom, because it was a symptom often seen in frontal lobe lesions, and recently it had been seen in cases in which surgeons had carried out daring operations on the frontal lobe. It was very uncommon for such patients to pass into an anxiety depressive state later on.

Dr CLIFFORD ALLEN asked whether it was possible that in these cases of head injury the details of the accident were not retained in the mind but the victim kept dreaming of them. Dr HENRY WILSON said that what they tended to forget about head injuries was that the stage of acute confusion might last very much longer, though in a very slight degree, than was supposed. He had seen one or two cases in which apparently the patient had been held to be conscious and not confused, whereas actually he had had a very grave degree of confusion.

PSYCHOLOGY OF PUBERTY

At a meeting of the Medical Society of Individual Psychology on April 8 Dr H. CRICHTON MILLER discussed puberty and adolescence. This was the fourth and last lecture in the symposium on mental health in childhood and adolescence, the previous addresses having been delivered by Dr Joyce Partridge, Dr Emmanuel Miller, and Dr Margaret Lowenfeld respectively.

Dr Crichton Miller began by likening adolescence to an escalator. The element of inexorable physical development was in its way, precisely comparable to the relentless physical cadence of senescence. From the low level of childish inadequacy the individual was carried to the level of adult adequacy only to come down again as the generative life closed, to the inferior level of senescent inadequacy. On this moving stairway some adolescents were so eager that they walked, or even ran so that the development of their character outstripped their physical growth. Others hung back and showed a regressive attitude so that the growth of character was retarded when compared with their physical development. But to the child's mind the central factor was that this physiological growing up was an inexorable process in which were involved certain highly important principles of human life. Already familiar to the average child was the first of these principles—that of sharing valuation. In nursery and kindergarten schools he had already been taught or should have been taught, that he was not the only pebble on the beach, that his fellow creatures preferred a child who was not self assertive and obtrusive and that friends were made on a basis of mutual affection and respect. All through adolescence this broad lesson

constantly confronted and challenged him but a still more crucial and narrow application of this principle was going to present itself. It was that in adult life self-realization both biological and spiritual, would always be a problem in reciprocation.

Puberty and Sex

At puberty the child's outlook on the sex problem was variable. The most constant thing about it was that it was rarely what the adult imagined it to be. Probably the average child's only interest was to know whether the subjective experience of early physical gratification was to be left behind with childhood, or whether it would persist through adolescence and in adult life. Whether it was to be a secret or not or whether it would cause him to suffer condemnation or reproach.

Dr Crichton-Miller then went on to describe the different attitudes of male and female adolescents in relation to hysteria and anxiety. Cases were quoted to illustrate the repressions in adolescence of sexual problems. The adolescent was necessarily in a transitional state and the function of this difficult period of life was to work out an adjustment between the dependence of childhood and the independence of adult life, between irresponsibility on the one hand and responsibility on the other, between the security of child life and the adventure that was the zest of adult life, between the suggestibility of youth and the responsible judgement of the grown man.

SUDDEN DEATH

At a dinner-meeting of the West London Medico-Chirurgical Society on April 9, Mr NEIL SINCLAIR presiding, a discussion on sudden death took place.

Dr B. T. PARSONS SMITH in opening confined his remarks to cases in which sudden death was due to natural causes. As a matter of practical experience it had been found that the risk of sudden death was most common in such conditions as disease of the aortic valves, specific aortitis, angina pectoris, coronary atheroma and in acute and chronic myocarditis. Various theories had been put forward in explanation of the occurrence of sudden asystole in these diseases. The modern trend of thought, which, incidentally was confirmed by electrocardiographic study associated sudden death with the development of ventricular fibrillation, which was believed to be a possible complication of all the different types of heart disease. It was further suggested that fibrillation might be the cause of sudden death in patients with cardiac disease following what might appear to be a faint. This was very probably the explanation of the unexpected fatalities which at times followed trivial accidents, sudden shocks, and painful or other stimuli. Sudden death after haemorrhage was a well-recognized possibility in the later and complicated stages of certain diseases in some the actual loss of blood might be responsible for the sudden fatality. Dr Parsons Smith also dealt with other vascular accidents including arterial embolism and thrombosis. Thrombosis he said should always be included as a potential cause of sudden death. The condition was usually secondary to slowing of the blood stream in the diseased vessel.

Anaesthetic Deaths

Dr EDWIN SMITH, coroner for the Western District of London, said that often not in London but in country districts the post-mortem examination did not disclose the cause of death and that was very often the case when one had to take the opinion of people who had not had practical experience in pathology. Sometimes the coronary arteries were never examined, the cerebellum was missed entirely and the stomach might not even be opened. Again, errors might occur from sheer ignorance.

on the part of the person conducting the examination. In deaths occurring under an anaesthetic his own practice was not to consider that such deaths necessarily called for an inquest, but he was guided very largely by the desire of the relatives. A sharp distinction should be drawn between death due to an anaesthetic and death occurring while the patient was under the anaesthetic. With regard to the question of reporting a sudden death to the coroner the legal position was nebulous. There was no Act of Parliament requiring a doctor to report certain deaths to the coroner, the legal compulsion being on the registrar of deaths but it was customary for the doctor to make the notification.

Dr T SKENE KEITH said that in 800 recent necropsies all performed at the request of coroners the causes of death were found to be cardiovascular disease in 60 per cent, pulmonary disease in 8 per cent, intestinal disease in 2.5 per cent, diseases of the nervous system in 1.5 per cent, and renal disease in 0.5 per cent, while "special conditions" accounted for 6 per cent and external agencies for 21 per cent. Of the external agencies, accidents and suicides represented about two-thirds and pathologically were of little interest, surgical operations accounted for just under a quarter of these deaths. No pathologist could avoid the conviction that there was a condition in which enlarged lymphatic glands, enlarged lymphoid follicles, an enlarged thymus, a lymphoid spleen, and often an enlarged thyroid were associated with sudden death; this was often seen in children who died under an anaesthetic.

NEOPLASM OF THE COLON

At a meeting of the Manchester Medical Society on April 7 Dr S W PATTERSON (Ruthin Castle) reviewed eighty-two cases of new growths of the colon and rectum.

He said that Sir Edmund Spriggs had during the last few years analysed the admissions to Ruthin Castle of patients with diseases of the colon and had collated and published papers on diverticulitis, ulcerative colitis, and functional disorders of the colon. Of the eighty-two cases of cancer of the colon and rectum the colon was involved in sixty-eight and the rectum in fourteen. Two-thirds of the patients had been men. Their average age was 62 years, 64 in the case of men and 57 for women. The age of most lay between 50 and 70, five patients were under 50 and eight were over 70. The sigmoid and pelvic colon were the parts of the colon most affected. The length of history ranged from a week or two to three years, but was usually a few months. The lesion was sometimes well advanced before it caused any sign or symptom. The symptoms at onset were divided into five main forms: (1) increasing constipation, (2) irregular stools or looseness of the bowels of the colonic type, (3) pain usually above or below the navel but occasionally in the back, thighs or rectum, (4) upper abdominal discomfort or nausea, sometimes related to food—dyspeptic onset, and (5) the early passage of blood from the rectum. There might be an overlapping of two types of onset in the same patient. In some cases the onset was insidious. The bowel symptoms were almost negligible until some other condition led to the investigation of the digestive tract; recurring lumbago in one patient was found to be due to a secondary growth in the bodies of the eleventh and twelfth thoracic vertebrae which had originated in a carcinoma of the descending colon. In the fourteen cases of carcinoma of the rectum the age at the onset of symptoms ranged from 37 to 75 years. The symptoms of onset were described as a frequent desire to stool or diarrhoea in eleven, constipation in two, and increased epigastric pain after meals in one. Only two patients had noticed no blood in the motion, five had suffered serious loss of weight, and in one man pain

with micturition had been an early and troublesome complaint.

In the diagnosis the triad of constipation, more or less associated with diarrhoea and haemorrhage, was characteristic but only half of the patients with cancer of the colon complained of serious constipation and constipation might be present in ordinary intestinal stasis. Bleeding from the bowel occurred in 60 per cent of the patients and was not seldom ascribed to piles. Among the general symptoms loss of weight and anaemia were predominant. The anaemia might be severe in cases of carcinoma affecting the proximal colon without much obvious blood appearing in the motion, whereas when the growth involved the distal colon and blood and mucus were common, anaemia was not a prominent symptom. In all cases rectal and sigmoidoscopic examinations should be made. The patients might thus complain of dyspepsia or general malaise, usually with colonic symptoms, constipation, diarrhoea, pain, stoppage or haemorrhage but there was always a change in the character of the motions.

The radiological diagnosis of new growth was illustrated by a series of x-ray photographs and diagrams. In differential diagnosis the age factor had to be considered. Full discussions of the treatment from the surgical point of view had been published in the weekly medical journals during the last few years by Wilkie of Edinburgh, Devine of Melbourne, Rayner of Manchester, and Martin of London. In the present series excision was undertaken in thirteen of the cases of colon carcinoma and two of carcinoma of the rectum. Colostomy was performed in fifteen and ten cases respectively, while a short-circuit operation without removal had proved possible in nine of the colon cases. A consideration of the length of history with the results of surgical treatment showed that if advice had been sought earlier and a diagnosis made many more lives could have been saved.

In the subsequent discussion Dr LUXTON (Professor MORLEY), Mr RAYNER and the President (Mr GARRETT WRIGHT) again stressed the importance of early diagnosis and attention to the commencing disturbances of the bowel.

Local News

NEW ZEALAND

[FROM OUR CORRESPONDENT IN WELLINGTON]

Royal Australasian College of Surgeons

The annual scientific meeting of the College was held at Auckland from January 19 to 22. The first meeting was in the Town Hall and was addressed by Viscount Galway. The incoming president, Sir Louis Barnett, delivered an address and the fifth J. A. Syme Oration was given by Professor Hercus on "Prevention and Research in Relation to Surgery." The meetings may justly be called a course of intensive study during full morning, afternoon, and evening sessions. So many papers were read that there was little time for discussion. Orthopaedics was included in the general surgery section and ophthalmology constituted a separate section. Papers of more than ordinary importance were read by Sir H. Devine on "Advances in the Surgery of the Rectum," J. A. Bennett on "Lobectomy," and Miller and Coates on "Surgery of Head Injuries," while Royle introduced some new operations. The epidioscope, the lantern, and the film reduced the actual reading of the papers to a minimum. On general questions the discussion of apprenticeship in surgery took a prominent place and it became evident that conditions of hospital appointments and organization are quite different in Australia and New Zealand and are far from uniform in the different States.

of the Commonwealth. In Victoria the hospital system is more nearly comparable to the British system, but generally the honorary appointment is rapidly losing ground. It is more applicable to the situation, at least in New Zealand to advocate a visiting staff rather than a purely honorary staff.

British Medical Association

The biennial conference of the New Zealand Branch of the British Medical Association was held in Wellington from February 23 to 26 under the presidency of Mr. T. D. H. Stout. Sir Edmund Spriggs attended as a representative of the parent Association and also as a delegate from the Royal College of Physicians. He addressed the meeting on 'Diseases of the Colon: their Diagnosis and Treatment' and his address was illustrated by very striking and instructive x-ray films. Sir Edmund spoke also on the subject of coronary disease. Sir Robert Muir of Glasgow delivered an address on 'Paget's Disease of the Nipple,' bearing on his outstanding investigations into intraduct cancer. He showed on the screen a large number of photomicrographs revealing consecutively the various stages of development of Paget's disease of the nipple. As is well known he believes that cells can be malignant for a long time before they infiltrate, for infiltration is a secondary effect of cancer. His slides illustrated the changes not only in the epithelial cells but also in the connective tissue. His views lend support to the belief that malignant changes are the result, at least in part of endocrine disturbances. Another visitor was Dr. F. G. Morgan of the Australian Commonwealth Laboratories who spoke on the intravenous use of therapeutic sera, and also contributed notes on the use of serum in poliomyelitis. The Hunterian Gold Medal was presented to Dr. F. O. Bennett, this honour coming for the first time to New Zealand.

National Health Insurance

The Government has decided to introduce in the next session of Parliament a national health service, and a Parliamentary Committee is now considering the British system and also taking the evidence of witnesses. This subject came before the Conference of the New Zealand Branch of the British Medical Association which was asked for advice by the Ministry of Health. There was little or no discussion in open meeting but a committee of the Association has given serious consideration to the question. A political section in Parliament appears to favour nationalization of the medical profession but the consensus of opinion in the medical profession is against nationalization and in favour of a modified scheme of national health insurance. Though they considered that adequate provision for a full health service should be made available for those not able to make financial provision for themselves members of the National Health Insurance Committee of the New Zealand Branch of the British Medical Association favoured the view that any scheme embracing a large section of the community is neither necessary nor desirable. To quote the finding of the B.M.A. Committee:

By all means let the State ensure that no necessary medical service shall be unattainable by anyone from reason of lack of ability to pay for it. By all means let the heavier costs be so spread that no one will be crippled financially by major calamities of sickness, but leave to those who can meet their own costs the responsibility of meeting their needs in their own way and to their own satisfaction. Let the State concern itself more particularly with building a healthy virile race which cannot be done by running to the doctor and leaning on the State but by education, disease prevention and encouragement of self-reliance.

These sentiments are reminiscent of Macaulay and appear sound but may not be practical in these times. In the meantime the doctors may extract whatever comfort they can from the assurance of the Government that it does not contemplate any scheme which will react

detrimentally on the profession either as regards its earnings or its professional standards. But what actually does it contemplate? We must wait and see. The British system of national health insurance cannot be applied unmodified to New Zealand. In this Dominion there is no shortage of doctors and certainly no shortage of hospitals, the standard of living is very high and the sick in all classes of the community expect and will exact close and skilful individual attention.

IRELAND

The Need for a National Serum Institute

At a meeting of the Section of Medicine of the Royal Academy of Medicine in Ireland on April 2 Dr. C. J. McSweeney opened a discussion on the need for a national serum institute in Ireland. He pointed out that all the different varieties of sera and other biological products used in the prevention and treatment of infectious diseases had to be imported from abroad, a most unsatisfactory arrangement in view of the fact that a national emergency elsewhere might lead to a grave shortage of supplies in the Irish Free State. Moreover, sera prepared from strains or organisms prevalent in other countries could not be expected to be as potent against the local dissimilar strains. The case mortality rates for diseases such as diphtheria and cerebro spinal fever were consistently higher in Dublin than in cities across the water even when similar methods of treatment and dosage were employed. Elsewhere such serum institutes had proved beneficial, they were not conducted on profit making lines and they served also as centres for research into problems related to serum therapy and prophylaxis. Such an institute could most usefully be organized in connexion with the new Dublin fever hospital scheme: there would be adequate land available for the grazing of the necessary animals, and a great wealth of bacteriological material would be obtained from the wards. In it there could be prepared a good supply of human sera for the prophylaxis and treatment of virus diseases such as measles and anterior poliomyelitis and there would be enough convalescent donors to provide sera for private medical practitioners, a procedure which had hitherto been found to be impossible in most European countries. The administration of measles immune serum to the children of the poorest classes would materially lessen the mortality from this disease without requiring hospitalization of the patients. Commercial firms had not the facilities which such an institute situated in the grounds of a fever hospital would enjoy. Dr. McSweeney thought it essential that the institute should be linked closely with the newly formed Medical Research Council and the Irish medical schools. A specially qualified medical director, who was experienced in serology, should be in charge and young graduates should be given facilities to conduct investigations of the public health problems peculiar to the Irish Free State. The institute would not undertake the routine work of bacteriological examinations: it would not be given a monopoly of the manufacture of sera for use in the Free State nor would it attempt to compete with the many reputable commercial firms which marketed their biological products there. Its function would be to conduct research into biological problems generally and to prepare human immune sera for use especially by dispensary doctors particularly in the homes of the poor and by orphanages and similar institutions which had no facilities for manufacturing their own supplies. The institute might be financed out of the hospital sweepstakes funds which were not necessarily wholly earmarked for the building and equipping of hospitals. Professor J. W. Bigger remarked that such an institute might well become a centre of education, research and propaganda, while it would reduce the adverse trade balance of the country, give employment and teach medical practitioners the value

of diphtheria prophylaxis. From the financial point of view little would be gained. The institute should be free from State control, which would tend to narrowness of administration and outlook as well as to undesirable attempts at undue economies. Professor Henry Moore, who for three years had been conducting a large serum institute at the Rockefeller Institution which supplied pneumococcal sera throughout the world, said that it was not very difficult to run such an institute if the help of sufficient technical experts could be obtained. Before deciding on its establishment in the Irish Free State there should be a careful preliminary examination of the business aspects, since it would almost certainly not prove to be commercially successful. It should not be controlled by the Medical Research Council, but should gain useful constructive advice from it. Professor Abrahamson thought that further examination of the whole question was necessary. If it could be proved that the increased mortality from diphtheria could be combated by the local preparation of serum such an institute was then a necessity, whether self supporting or not. Dr V M Synge remarked that in Ireland the cases of meningial infection were sporadic, and so the mortality was higher than in England where cases were epidemic. Professor W D O'Kelly agreed that with a population of only three millions the establishment of such an institute could not be economical though from the point of view of research it was most desirable. Dr W R F Collis stressed the necessity for the supply of measles serum and thought that the institute could be best started in a small way in connexion with the new fever hospital, but not as a State venture. Dr J C Flood was sure that the State would not consent to financing such an institute without some measure of control of it. He deprecated dependence on one serum production centre alone and indicated the advantages of permitting competition. Dr McSweeney replied that in Cork Street Hospital with its 300 beds between £3 000 and £4 000 was spent annually on sera and that probably the expenditure in this connexion in the whole country amounted to at least £20 000. To run a small institute would not cost more than £10,000 a year. The diphtheria mortality in Dublin could be much reduced by using better brands of sera and the measles mortality could be almost abolished. There must be no monopoly as regards the conduct of the institute, it should be controlled by medical practitioners and not run for profit.

ENGLAND AND WALES

A Centre of Physical Medicine in London

The Institute of Ray Therapy and Electrotherapy in Camden Road, N.W., which was established about eight years ago for the assistance of people of small means who cannot afford physical treatment in the ordinary way, is appealing for £25 000 by the end of the present year. The object of the appeal is to secure more space for its crowded work, to treble the equipment and accommodation of the electrotherapy department and to make the Institute a centre for physical fitness with classes for remedial and corrective exercises combined with light baths—in fact a London spa—a home of physical medicine in the heart of the capital. To commend this plan to the sympathy of the Press a luncheon was given at the Institute on April 19 with Lord Horder, the president of the Institute in the chair. Lord Horder said that a great work had been done in this Camden Road hospital during the last eight years and he commended in particular the proposed enlargement on the electrotherapeutic side. Electrical methods in treatment were some two hundred years old—not nearly as old of course as massage or hydrotherapy—but they had been obscured by a spate of new discoveries in the direction of what was generically called ray therapy. Electrotherapy had thus become the

Cinderella of medicine, and he applauded the effort to be made by the Institute to restore it to a more dignified place. The Institute, with its Medical Advisory Committee under the chairmanship of Sir Robert Stanton Woods, provided up to date equipment and a staff expertly trained. There was much indiscriminate use by untrained people of old-fashioned machines—really a form of quackery by which the public was exploited. A type of pseudo scientist was accustomed to go round an apparently well-equipped room and turn on one switch after another in the hope that at last the patient would say he felt better. Lord Horder also welcomed the Institute, especially with its projected extensions, as a strong ally in the campaign against that crippling and disabling group of diseases called rheumatism. Lord Semphill, chairman of the governors, described the work in more detail. The conditions treated, he said, included rheumatism and kindred diseases, the after treatment of accidents on discharge from hospital, the prevention and cure of children's diseases such as rickets, also skin diseases, nervous disorders and diseases of ear, nose and throat. The Institute was giving nearly three thousand treatments a week, the number of new patients—2,344 last year—was growing rapidly, and there was evidence of the real need of this form of treatment in industrial London. Miss Violet Vanbrugh added a few sympathetic words about cases known to her which had been benefited at the Institute, and Mr Russell Howard, a member of the Medical Advisory Committee underlined the appeal after which, under the guidance of Dr William Beaumont, honorary physician and medical director, and Mrs Beaumont, honorary secretary, the visitors made a tour of the building. The equipment includes all forms of ray therapy, infra red rays, radiant heat, ultra violet and r rays diathermy, including the new 'short wave' galvanism, faradism, sinusoidal currents, ionization and Schnee baths. More impressive still was the sympathetic handling of the patients, especially the child patients, for whom something of a playroom atmosphere is provided. The patients all come on a certificate from their own doctors, and pay what they can afford.

Advisory Committee on Scientific and Ancillary Mental Health Services

The Board of Control with the approval of the Minister of Health has appointed the following to be a committee to advise upon questions arising in connexion with scientific and ancillary mental health services. The Earl of Radnor (chairman), Sir Laurence Brock, Sir Hubert Bond, M.D., Alderman J W Black, Alderman W E Loysey, Dr A A W Petrie, Miss Adeline Roberts, M.B., Alderman J C Grime, Dr C J Thomas and Dr George Somerville with Mr H J Clark as secretary. A committee was appointed in 1931 but owing to the financial crisis which occurred in that year its work remained in abeyance. The Mental Treatment Act 1930 empowered local authorities to provide for out patient treatment and for the after care of mental patients and subject to the approval of the Board of Control to undertake or contribute towards the expenses of research in relation to mental illness. The primary function of the Advisory Committee will be to advise the Board of Control regarding organization and encouragement of research and other ancillary services will be within its purview. On technical questions relating to research the committee will have the expert assistance of members of the Committee on Mental Disorders, of the Medical Research Council.

The Isle of Wight Mental Clinic

Some five years ago the Mental Hospitals Committee of the Isle of Wight County Council established a mental welfare clinic for out patients under the Mental Treatment

Act, 1930 The result, as outlined in the report of the medical superintendent of the county mental hospital, Dr C Davies Jones, has been very encouraging The clinic meets at Cowes, Newport and Ryde approximately every week, and at Whitecroft (the county mental hospital) about every fortnight In 1936 there were in all 211 patients, including thirty nine under 16 The medical superintendent indicates the disadvantages of trying to deal with children and adults together and hopes for the establishment of a child guidance clinic He regards the work with potential suicides as most important and hints that the recent fall in the incidence of suicide on the island may be due in some measure to the help which the clinic gives to persons whose anxiety and misery are overcoming them The Ryde sessions are held at the county hospital and the Newport sessions at premises in the town, so that the clinic is an interesting example of the three different systems which are advocated for out-patient clinics—namely in conjunction with the general hospital, with the mental hospital, and with neither

SCOTLAND

Lunacy in Scotland

The annual report of the General Board of Control for Scotland shows that during 1936 the total number of patients admitted to mental establishments (excluding transfers) was 2 564 130 fewer than in the previous year and 304 fewer than the average for the quinquennium 1930-4 The number of insane persons, excluding those maintained at home by their natural guardians, was 19 631 Of these 2 719 were privately maintained 16 821 were maintained from the rates and ninety one at the expense of the State The number of voluntary patients admitted to asylums was 900 and the total number of such patients resident on January 1 1937 was 1 327 Private patients discharged as recovered numbered 148, and pauper patients similarly discharged 842, these numbers being respectively 7 and 9 more than those for the preceding year There were 266 deaths of private patients and 1,116 of pauper patients the death rate for all patients having been 7.5, as compared with 7.3 per cent in the previous year Of the 147 patients discharged on probation sixteen were finally discharged as recovered, forty three returned to asylums and three died The report refers among other matters of general interest to the present shortage of asylum accommodation While extensions have recently been made or are in process of being made, at the Aberdeen Royal Mental Hospital the Crichton Royal Institution and the Montrose Royal Asylum, there is considerable congestion in several other institutions It is pointed out that admission is now taking place at an earlier stage of mental illness for while in the period 1890-4 the average number of persons in residence in Scottish asylums on a voluntary basis was sixty two the average number of such persons during the years 1930-4 was 1,069 The report expresses the opinion that generally speaking the mental hospitals throughout Scotland are medically under-staffed Wide variations were found to exist in different mental hospitals in regard to the ratio of medical officers to the number of patients—from 65 to 389 patients in residence per single medical officer It is suggested that the medical superintendent and his assistants should be regarded as specialists and that their time and energies should not be occupied in ancillary services—such as those of clerk of the works stewards farm managers and dispensers—while their services to the public outside the institutions to which they are attached would be of great value With regard to expenditure the returns furnished by local authorities show that for pauper lunatics a total sum of £943 616 was spent during the year and for aided mental defectives a further £264,106

Association of Physicians

The annual meeting of the Association of Physicians of Great Britain and Ireland was held in Edinburgh on April 16 and 17 The sessions for hearing scientific communications were held in the Music Classroom of the University, clinical cases and demonstrations of new methods were arranged in the wards and clinical laboratory of the Royal Infirmary On the evening of April 16 Sir Robert Philip presided at the annual dinner of the association which was held in the hall of the Royal College of Physicians

Falkirk Infirmary

At the annual meeting of the Falkirk and District Royal Infirmary the report submitted for 1936 mentioned that two serious problems had arisen the provision of additional accommodation for inpatients and the obtaining of an income necessary for the ordinary maintenance of the Infirmary The managers had therefore resolved to proceed with an appeal for £40 000 which would be used for the erection of a new nurses home capable of later extension, which would set free for the reception of patients a newly erected two story ward unit which was at present occupied by part of the nursing and domestic staff The report showed that for the first time in the history of the Infirmary there had been an adverse balance amounting to £757 Employees contributions represented 51.5 per cent of the total income of the institution and employers contributions 5.58 per cent The total number of inpatients during 1936 was 2 130 and of out patients 5,836

Correspondence

Auditory Nerve Section

SIR—The possibility of section or partial section of the auditory nerve is a question of great interest to otologists as by this means the most severe cases of Ménière's symptom-complex can undoubtedly be cured

It is very much open to question whether the operating endoscope suggested by Mr Rutherford in his article in the *Journal* of March 27 is likely either to facilitate the operation or to diminish its risks Having spent a great many hours during the past twenty five years in direct laryngoscopy, bronchoscopy, and oesophagoscopy, I have come to realize the limitations of tubal vision and still more the limitation that is imposed on an operative procedure which must be carried out at the end of a rigid tube In the case of exposure of the auditory nerve and in the region of the internal auditory meatus the view through an endoscope might permit the identification of the facial nerve pars intermedia and auditory nerves, as their relationship is constant but the nerves are accompanied by vessels whose relationship is not so constant and it would seem that to limit one's field of vision and manipulation to an endoscopic area without the possibility of any lateral approach might result in the disaster that it is its intention to avoid

The approach to the auditory nerve by open operation under local anaesthesia and after evacuating the basal and lateral cisterns is a matter of comparative simplicity and the operation has passed long beyond the experimental stage MM Ombrédanne and Aubry working in Hautant's clinic in Paris have evolved a technique which they have employed in more than forty cases With their method a free exposure of the region of the internal auditory meatus is obtained the nerve required can be picked up with a crochet hook and divided or partially divided and vessels can be avoided or bleeding dealt with by

electro-coagulation with the assurance that any untoward happening can readily be located

Endoscopy in tubular structures is an unfortunate necessity but to apply it to regions which can be more adequately exposed and dealt with more accurately by a carefully planned approach does not seem to me to be an advance in surgical procedure—I am, etc.,

London W1 April 19

WALTER HOWARTH

Treatment of Leucorrhoea by Zinc Chloride

SIR—When we first considered the treatment of leucorrhoea due to the excessive activity of the cervical glands, whether inflammatory or functional we had foreseen the possibility of stenosis caused by scar contraction after the separation of a slough, as suggested by Dr Worrall. For this reason we began by using the method described in the *Journal* of January 16 (p 116) on cases which were to be operated upon either by amputation of the cervix or by hysterectomy during the following few months in order to study the histological changes that followed separation of the necrotic mucous membrane. We noted the rapid resolution of the inflammatory zone at the line of demarcation and complete re-epithelialization of the denuded canal within two months, and decided that the method might safely be used as a form of treatment.

In a follow up clinic established over two and a half years we kept a close observation on more than 100 patients treated by this method, and examined them periodically with the possibility of cervical stenosis in view. In not one instance was there the slightest development of contracture of the lumen and in a few cases that needed reapplication a larger pencil than the preceding could always be inserted with ease. Histological examination of over twenty cervixes following an experimental application of the pencil fully supported these clinical findings. The possibility of scarring and stenosis is brought to a minimum by the presence of the slough, which very efficiently preserves the contour and size of the cervical canal until it is cast off at the end of the first week, leaving the processes of resolution well established beneath. Cervixes studied microscopically some two months after the separation of the slough show no greater evidence beneath the new epithelium of the previous inflammation than small numbers of lymphocytes (see Figs 6 and 7 of our article) and there is no sign whatever of any fibroblastic reaction such as might subsequently give rise to contracting fibrous tissue.

Repeated applications of zinc chloride a former German treatment mentioned by Dr Worrall in his letter, might well give rise to scarring tissue since any attempt at epithelialization in the canal is constantly being thwarted so that the lining is for several weeks composed of raw granulations which are being continually inflamed and irritated by fresh applications of zinc chloride. After the single treatment with a clay pencil which we described the canal is left lined by granulations for at the most two weeks after the separation of the slough after this time it has become epithelialized and the inflammatory exudate in what was previously granulation tissue can be seen rapidly to resolve leaving finally connective tissue which is indistinguishable from that normally found between the cervical glands. Simple painting of the cervical canal by weaker solutions of zinc chloride are quite useless as a means of destroying the vast number of deeply branching glands. This is clearly evident if a large number of sections of the cervix are carefully examined and it was this failure to destroy the glands and the disappointing results of all chemical treatment which made us feel that nothing short of chemical endocervicectomy would be

of any value. If simple repeated chemical application were successful, surgeons would not have attempted to cure the disease by diathermy, the cutting curette and various operations.

We would like to take this opportunity of answering some of the points raised in the large number of letters we have received personally. The clay applicators may be used repeatedly. After use they should be washed and soaked in water for a few hours dried and then replaced in the saturated solution of zinc chloride ready for further use. To obtain the best results it is important to use the largest applicator that can be pressed into the cervical canal in order to ensure that the folds of the mucous membrane have been flattened and are wholly in close contact with the applicator. It must be pressed well home preferably so that its butt end is just inside the external os. If it is only partially inserted it will almost certainly be squeezed out into the vagina during the following two hours. Unless the patient is tolerant we find that brief anaesthesia such as gas or evipan is almost essential.

Lastly it is necessary to select the cases carefully. If the cervix is deeply torn or the os is so patulous as not to grip the stick firmly there will not be sufficiently close contact between it and the whole of the mucosa. But if a large size applicator is used and inserted for its whole length and tightly gripped by the cervical canal we can promise a satisfactory result.

—We are, etc.,

ALECK BOURNE

L T BOND

K A MCGARRITY

London W1, April 17

Obstetrical Flying Squads

SIR—With reference to the note in the *Journal* of April 3 (p 728) regarding the attack on maternal mortality by the Birmingham Maternity Hospital I would like to report that such a service has operated from the Lanarkshire County Council under my supervision since December, 1931. During that time approximately 300 cases have been attended by our flying squad, with very gratifying results, which have already been communicated to another authority for publication. This report will appear at an early date—I am, etc.

Bellshill April 14

H J THOMSON

Medicinal Kaolin in Food Poisoning

SIR—In the *Journal* of April 17 (p 835) Mr Norman Evers draws attention to the standardization and peptization of medicinal kaolin. Peptization or dispersion is affected by many ions. These are supplied not only by the electrolytes of foodstuffs alimentary secretions and prescription but also by the electrolytes already present in kaolin as it leaves the mine. Such electrolytes are present in all kaolins which have been won or cleansed by water no matter whether the purification has been by simple elutriation with moorland water or by the more elaborate catalpo or osmosis processes. They usually promote flocculation or coagulation rather than dispersion.

The biochemical problems involved when solid adsorbents are taken internally are indeed complex. They offer a wide field of interesting and important research for a team of workers with special knowledge of physical and organic chemistry as well as bacteriology, pharmacology, and clinical medicine.

In the application of adsorption therapy to the treatment of food poisoning it is rational to let the practising physician know as precisely as possible (1) the range of poisons of clinical interest for which the adsorbent has special affinities (2) the amount of each poison which can be removed by a given weight of material. Antitoxins

are assayed in terms of toxin. On the grounds of practical utility it is desirable that antidotes such as kaolin should be assayed in a comparable manner.—I am, etc.,

London W1 NATHAN MUTCH M.A., M.D., F.R.C.P.
April 17

Angina Innocens

SIR—Dr Trevor Davies's letter in the *Journal* of April 17 indicates the real difficulty which exists in diagnosis of some cases of cardiac pain. This is largely due to two points. First, extensive coronary disease may exist with no evidence of cardiac enlargement or disease as shown by electrocardiograph and by x-ray or clinical examination. In one such case I found that both coronary vessels would scarcely admit a bristle. The second point is that in patients with cardiac pain as in so many other diseases, there is not infrequently a mixture of both functional and organic symptoms. Hurst has discussed this fully, and Paul White, in his book on heart disease, notes it in connexion with cardiac pain. In my experience it is not uncommon to find that the clinical picture of angina innocens may be added to that of angina of effort, or spasmodic angina, in some cases. It is generally possible to define the different types, although in a few cases it is exceedingly difficult.

The best point to stress in disentangling the two appears to be to define with exactitude whether the pain comes on during exertion, and, if so, to persist in the cross-examination of the patient until it is clear whether that pain is definitely quantitative to exertion. Pain which comes on during exertion disappears with rest and is quantitatively related to exertion indicates in my experience the presence of a definite, though possibly slight, coronary lesion. If such a pain is present whatever other types of pain may also be found angina of effort is present. It is essential for the ultimate clearing up of the difficult points in this problem that every effort be made that such cases as that described by Dr Tudor Davies be most carefully investigated as regards their symptomatology, and that a detailed post-mortem examination be made in the event of death.—I am, etc.,

London W1 April 19

GEOFFREY BOURNE

Diphtheria Immunization with A.P.T.

SIR—I was interested in Dr Chesney's article in the *Journal* of April 17 (p. 807) and would like to confirm the good results he has obtained with alum precipitated toxoid by the two shot method. At this hospital during 1936 a total of 207 children between the ages of 1 to 5 years were given A.P.T. in doses of 0.1 c.c. and 0.5 c.c. with an interval of a fortnight between each injection. Schick-testing after three months yielded the following results: Schick negative 156, Schick positive 3, not tested 48. That is, approximately 98 per cent of those tested became Schick-negative. Although this is not quite such a good figure as Dr Chesney obtained it demonstrates the high efficiency of A.P.T. given in two small doses. Economically it is one of the cheapest methods and limitation of its use to younger children avoids all local and general reactions. Apart from the usual small "nodule" after the second injection there were no reactions in this series of 207 cases.

While I should not quite like to dispense with the subsequent Schick test, as Dr Chesney suggests, the high figure of conversion to the Schick negative state relieves much of the anxiety concerning those cases which fail to return for the test.—I am, etc.,

A. WILSON RUSSELL, M.D., D.P.H.
Portsmouth April 19

Blood Sugar Worship

SIR—Dr Oliver Walker's question in the *Journal* of April 17 (p. 835)—asking upon what grounds I base the statement that hyperglycaemia without ketosis or glycosuria is more likely to lead to complications than a normal concentration of sugar in the blood of a diabetic—is eminently fair, and I thank him for not demanding evidence or proof.

F. M. Allen showed before 1914 that hyperglycaemia in a dog which had had five sixths of its pancreas removed led to degeneration of the remnant and rapid death, whereas if hyperglycaemia were avoided the dog might live indefinitely. When the treatment suggested by Allen was adopted and the diet regulated to avoid glycosuria it was found that it was easy to render the patient sugar free but extremely difficult to keep him so. Later when the diet was arranged to prevent hyperglycaemia not only was the disease arrested but a few patients increased their tolerance for carbohydrate.

When insulin became available some of my patients were given only sufficient to maintain them free from glycosuria; these not only required more and more insulin as time passed but also occasionally developed neuritis, retinitis, etc. The patients who received sufficient insulin to prevent hyperglycaemia escaped neuritis and most other complications, but a very small number developed retinitis. Occasionally a patient will recover from neuritis when increased doses of insulin prevent hyperglycaemia. These observations led me to believe that complications were rarer in patients who were not allowed to be hyperglycaemic.

I admit, however, that some individuals appear to be immune to hyperglycaemia. I have seen four untreated patients with symptomless hyperglycaemia and glycosuria enjoy excellent health for close upon ten years. These I have considered to be exceptions.—I am, etc.,

London W1, April 17

OTTO LEYTON

Compulsory Pasteurization of Milk

SIR—I am grateful to Dr G. Arbour Stephens and Mr Paul Bernard Roth (*Journal* April 10 p. 785) for raising two most important issues in connexion with the pasteurization of milk.

No one could disagree with Dr Stephens that the ideal must always be to have healthy cattle and pasteurization should be looked upon as a temporary measure. The eradication of disease among cows must necessarily be a lengthy process and during the intervening period there is clearly need for protection. It should be noted that the medical officer of health has little jurisdiction over the cow herself.

Mr Roth asks whether pasteurization is necessary in the preparation of cream, butter and cheese. Cream probably contains relatively more pathogenic organisms than milk, since bacteria tend to rise to the surface. It is, in fact, evident that cream is more dangerous than milk and that it should be marketed only after pasteurization. Efficient pasteurization by the "holder" process together with rapid cooling gives satisfactory results and the cream is not materially altered by this process (Harvey W. C. and Hill H. 1936 *Milk—Production and Control*). Butter and cheese have been shown by a number of workers to contain tubercle bacilli and *Brucella abortus* (Pullinger E. J. *Lancet* 1935 i 1342). Eight of a series of a hundred outbreaks of food poisoning between 1914 and 1923 (Medical Research Council 1925 Special Reports Series, No. 92) and a recent serious out-

break of Sonne dysentery (Leuchs J., and Heim, E., 1930, *Z. Medizinalbeamte*, 19, 587) were shown to be due to cheese. Pathogenic organisms tend to die out as a result of fermentation but nevertheless it is clearly desirable that butter and cheese should be prepared from pasteurized milk. There is evidence that this is practicable and that it is being done quite extensively. Professor Orla-Jensen in *Danish Bacteriology* 1931 writes: "The pasteurization of cream and subsequent use of good cultures have more than anything else contributed towards making Danish butter a uniform and well-keeping product—I am etc.,"

FRASER BROCKINGTON

Horsham Sussex April 13

Medical Officer of Health

Blood Films in Lead Poisoning

SIR—The greatly extended use of lead in the metal rubber electrical, and other industries suggests that lead intoxication must be commoner than ever before. This is confirmed by the final report of the Committee on Ethyl Petrol (H.M. Stationery Office 1930), which proves that normal urine contains lead and that the lead hazard is omnipresent. Thus early diagnosis cannot rest on laboratory reports of a trace of lead in the urine but must depend on symptoms even less marked than formerly, and on signs amongst which the blue line on the gums has almost vanished, and blood changes alone remain important.

Blue Line—Since the war workers have had dental treatment and clean their teeth more regularly so that the typical blue line is seldom seen and must be looked for with a lens in a good light. Its presence indicates lead absorption but if excretion is adequate the worker remains healthy. In plumbism of domestic origin the blue line is often absent and in mild cases diagnosis used to be so uncertain that I was much interested in the earlier reports on the blood film and by 1907 was convinced that evidence of lead absorption obtained in this way made us independent of the blue line in diagnosis.

Blood Film—The blood film is examined for evidence of pathological regeneration. In pernicious anaemia the marrow is greatly altered and punctate basophilia and other changes in erythrocytes are so constantly present in the blood film that they are accepted as evidence of pathological regeneration. Now in any serious anaemia with failing normal regeneration we expect the onset of the pathological process to meet the emergency but in early plumbism there is no anaemia yet pathological regeneration—which is not needed—precedes all other symptoms and must be regarded as evidence of reaction of marrow inevitably excited by small doses of lead. In man the changes are both nuclear and cytoplasmic and as long as the marrow is capable of normal regeneration there will be pathological regeneration too if there is lead in the blood.

In the course of normal regeneration every corpuscle enters the circulation more or less polychrome and for the first few hours is a reticulocyte but within twenty-four hours it becomes mature and loses its polychromasia. If the demand is urgent polychrome erythroblasts also appear but become normoblasts in twenty-four hours.

Pathological regeneration is well seen after giving lead acetate 1 grain three daily for ten days. Polychromes and therefore reticulocytes are increased, many are larger and some show basophil punctation which as I have shown persists for twenty-four hours after polychromasia has disappeared (*Lancet* 1920 1 1110). Nuclear changes appear at the same time as these cytoplasmic changes often in the same corpuscle. Some polychromes show azur (Cabot) rings or arcs which also survive polychromasia, and are evidence of pathological regeneration. Commonly punctation is seen in 1 in 1000 corpuscles and perhaps in twice this number rings are usually less numerous. Punctation has been adopted as an

index of pathological regeneration just as reticulation has in total regeneration and occasionally both are seen in the same corpuscle. Routine methods stain the punctate changes poorly and the rings not at all thus sacrificing half the available evidence. But both stain well with polychrome Manson's methylene blue and eosin (*Journal* 1930 2 213).

I speak of the blood film with confidence because I used it to control the administration of lead in anaemia and in haemorrhage and since 1915 in cancer. When it is given as suggested rings and punctations appear by the fifth day, and erythroblasts, which are often punctate, before the tenth. I tested the blood films of painters and packers, and in plumbism from beer, from abortifacients and from unknown sources. Rings and punctations should not be found in painters, and their presence indicates faulty working conditions. Plumbism means culpable carelessness, often of a foreman, and the victim has blood changes up to punctated erythroblasts.

A beer had an average of one grain of lead to the gallon for fifty-five days and a woman who drank one pint daily had colic and her blood showed rings and punctations. Her illness was mild but several men who drank a quart or more daily had typical plumbism with punctated erythroblasts. Again a woman was admitted to hospital as having alcoholic neuritis. Careful inquiry proved that she was really abstemious and other possible causes of her neuritis including lead were considered without definite result. At this stage (July 1908) examination with Leishman's stain showed a normal blood film except for a little punctate basophilia. Had she been seriously anaemic one might have supposed that pathological was assisting failing normal regeneration but in approximately normal blood basophilia is an utter discord and presumptive evidence of lead absorption. The source of lead was not discovered but subsequent progress supported this diagnosis.

Healthy workers in accumulator factories may excrete 0.35 mg of lead per litre of urine which we may reckon at two litres daily (Final Report on Ethyl Petrol p. 90). Now the bowel excretes more than twice as much as the kidneys so that a total daily excretion of 2 mg of lead is preventing accumulation. Experimentally by subcutaneous injection in cats it has been found that lead taken up by the bones equals more than half the total excretion (Aub. Fairhall Milnot and Reznikoff 1926 *Lead Poisoning* p. 82 and Table XVII). The worker therefore is storing in his skeleton at least 1 mg. of lead daily and must be absorbing about 4 mg. (1/16 grain) daily. Now the woman taking 1/8 grain (8 mg.) of lead daily in her beer had plumbism in fifty-six days. The danger point, therefore, lies between 4 and 8 mg of lead daily.

Many live just outside the danger zone. Though symptoms are absent no one suggests that the marrow is better for long-continued irritation and meanwhile other important tissues may be damaged. Dr David R. Lewis has proved the association of peptic ulcer with long exposure to lead absorption (*British Medical Journal* 1932 1, 185) and since then I have found pathological regeneration still present in films from a painter on discharge from hospital after treatment of gastric ulcer. In any workman exposed to lead the presence in the film of erythroblasts particularly if punctated indicates that suspension from work is necessary. Punctate basophilia and Cabot rings are never present in healthy blood—I am etc.

London W 13 April 13

ROBERT CRAIK, M.D.

Dermatitis Artefacta

SIR—The interesting paper by Dr E. W. Prosser Thomas in the *Journal* of April 17 (p. 804) recalls to my memory a case of dermatitis artefacta which I saw more than a quarter of a century ago.

The patient a woman of a neuropathic type in the early forties had always enjoyed rather indifferent health and had had two abdominal operations. There appeared on her

right upper arm (she was left-handed) blisters with considerable surrounding inflammation. I suspected that these were self-inflicted and a surgical colleague who kindly saw the case with me arrived independently at the same diagnosis. He promptly put the arm up in plaster and the blisters cleared up in due course without any local treatment other than a single dressing, there was no recurrence. It was found that in producing the lesions she used matches.

—I am, etc.,

London, W 1 April 17

EVA MCCALL.

Intraperitoneal Haemorrhage from a Graafian Follicle

SIR—A further case of intraperitoneal haemorrhage from a ruptured Graafian follicle may be of interest.

A girl of 20, single, was waiting for an interval appendicectomy having had at least six more or less acute attacks of appendicitis of the "obstructive" type spread over some six to nine months. She was seen originally just as a typical attack was subsiding, and was due for operation in a week or two. These attacks bore no relation to the periods and there had never been any dysmenorrhoea. She was seen at 7 p.m. on March 20 following an attack of acute pain, which she described as exactly similar to the previous appendicular pain. On close questioning, since she was exactly half way between two periods and the recent correspondence was fresh in mind she said that for the last three months she had suffered slight pain radiating to the epigastrium—in contradistinction to her "appendicular" attacks (see letter from J. C. Leedham-Green *Journal* March 6 p. 527) apparently just half way between the periods.

Immediate operation was performed since her temperature was 99.8° F, her pulse rate 110 and there was rigidity of the right rectus with marked tenderness over McBurney's point, hyperaesthesia etc. A right paramedian subumbilical incision showed no free fluid but a long retrocaecal appendix was firmly bound down by a broad adhesion half way between caecum and tip—with a Jacksonian membrane and much congestion. The appendix was removed with some difficulty. On exploration the right ovary was found to be the size of a pigeon's egg and cystic and a thin but steady trickle of blood was coming from a small cyst. After trimming up the cyst some difficulty was experienced in suturing the wound firmly enough to stop the haemorrhage since the sutures cut out repeatedly (see the case reported by J. C. Nicholson *Journal* March 13 p. 585). I was unwilling to remove the ovary forthwith in a young patient, since there was quite a lot of normal ovarian tissue present. Later however I regretted this decision since her pulse rate rose slowly for several days to 116 after coming down to 80 although her temperature subsided. There was, too, some pain in the iliac fossa possibly due to sutures in the ovary which are always said to be painful.

Injections of calcium gluconate morphine etc. did not help and since the pulse volume was good and one naturally did not want to reopen the abdomen unless it was absolutely essential further measures were tried. These consisted of an intravenous injection at a rate of not more than 2 c.c.m. a minute of 10 c.c.m. of sodium and magnesium citrate (Dr. Todd's Bristol Royal Infirmary haemostatic solution—B.D.H.). Within a few hours the pulse rate had begun to fall reaching 80 within twenty-four hours and further convalescence was uneventful.

I have reported this case in some detail since the two conditions obstructive appendicitis and intraperitoneal haemorrhage from a ruptured Graafian follicle were present there was no history of dysmenorrhoea there was no question of pregnancy sutures failed to control the haemorrhage following the post-operative rise of blood pressure and intravenous injection of a solution of sodium and magnesium citrate apparently did control the haemorrhage. Incidentally I have used this solution many times as no doubt dozens of other former house surgeons of the

Bristol Royal Infirmary have done, with no alarms and almost invariable control of any reasonable haemorrhage. It seems insufficiently well known.

Most of these cases appear to be of haemorrhage from a Graafian follicle, but the second case reported by J. C. Leedham-Green seems to be one of haemorrhage from a luteal cyst, since it occurred two days before a period was expected (not mid-menstrually), and the cyst was lined with luteal cells.—I am, etc.,

CRESSWELL DAVIS M.B., M.R.C.S.

Highbidge Somerset, April 5

The Birching of Children

SIR—In the *Journal* of April 10 (p. 785) Dr. Bentlif advocates corporal punishment 'carried out humanely'. From what was said in your excellent leading article on judicial birching it is hard to conceive how such a procedure can be humanely carried out—it certainly puts a wide interpretation on the term 'humane'.

Dr. Bentlif draws an analogy with corporal punishment at public schools. Apart from the fact that this may be deleterious there is an important difference. Parents who dislike the system can withdraw their children. The working-class parent when judicial birching is ordered, has no option—except perhaps in cases such as those cited when the alternative of imprisonment is offered.

The letter concludes with the usual diatribe against psycho-analysis, and Dr. Bentlif makes the dogmatic assertion that it can do incalculable harm and turn healthy young people into neurotics. It would be interesting to know on what grounds he makes this statement. During the last few years I have seen a considerable number of cases of neurosis and psychosis at various out-patient clinics and in wards children both normal and "problems"—the latter at a child guidance clinic. It is rare to come across patients who have had previous psychotherapy: the patients I have seen in five years who have been psycho-analysed could be counted on one hand (and this includes private patients who have had more facilities). Where then has Dr. Bentlif come across the material which allows him to make this sweeping observation? (I am no psycho-analyst but I know from collecting results of psychotherapy how extraordinarily difficult it is to arrive at conclusions on the efficacy of treatment.) One is tempted to wonder whether it is not bias rather than scientific observation which actuates his assertion. In which case how much importance can one attach to his observation that the victim 'left the prison as if nothing had happened'? And if so what good was the birching? But surely the fundamental psychological error lies in the idea that the boy accepts the punishment as part of the game—that is the essence of sportsmanship. If things have come to the pitch that nothing short of imprisonment or birching is going to act as a deterrent then it appears highly unlikely that the delinquent would adopt such a very 'old school' attitude ' (or is he a Colonel Blimp in embryo?)'. What Dr. Bentlif leaves out of his calculations is that a boy who is already an enemy to society is not going to react in this spirit but as you yourself pointed out in your leader is frequently going to become more resentful and more anti-social than before.

In conclusion it is worth remarking that probably the greatest of all children's magistrates Sir William Clark Hall discontinued ordering birching completely, on the grounds that it was no use.—I am, etc.,

W. LINDSAY NEUSTATTER M.B., M.R.C.P.

London W 1 April 10

Combined Universities Election

SIR—The implication, stated or implied in the letters of Dr J S Manson (*Journal* April 3 p 729) and Dr Walter Asten (April 10, p 786) that the result in the Combined Universities Election was a deplorable party triumph over an independent candidature does not bear examination. First the successful candidate was supported by nearly all those members of all parties and of no party who assisted Miss Eleanor Rathbone in what was the first completely independent candidature in this constituency. Secondly, the reasoned argument in Sir Henry's election address on complete independence which according to Dr Manson has carried so little weight with that portion of the constituency which included medical graduates may have been rejected by some because they feel that even a candidature based on a resolution of the Representative Body of the British Medical Association may not conform to their ideas of independence. It is to be noted that the general electorate were not informed of the origin of the candidature.

It is possible for many to honour and respect Sir Henry Brackenbury as they do and still to feel it right to support another candidature. It is churlish to reflect on the success of the successful independent candidate by ascribing it to a blind party loyalty, to which it obviously was not due—I am etc.,

School of Medicine Leeds April 12 FRANK C HAPFOLD

Radiograph or Skiagram?

SIR—Mr Lawson and Dr Myles may prefer skiagram and radiograph respectively but there is only one word which truly meets the case—namely, rontgenogram—about the meaning of which there can be no doubt. This and the other members of the same group rontgen bild rontgenaufnahme etc., are almost exclusively used in the American Scandinavian and German medical literature. For general clinical use the shortest word will always be most popular, and the x ray, short for 'the x-ray photograph', will be hard to supplant—I am, etc.,

A G G MELVILLE FRCS ED

Victoria Infirmary Glasgow

Reprints of Papers

SIR—From time to time I receive reprints of papers which have appeared in various periodicals. May I call attention to a not uncommon fault in these reprints? It is the omission of the number of the first page of the article. I have before me a reprint from a well known scientific publication. It gives the name of the journal, the number of the volume, the number of the issue and the date of publication, but no page number. In a country like this it is not always possible to get into touch with a library to repair the omission and I find the impossibility of inserting a page number a difficulty in carrying out properly the Harvard system of references—I am etc.

Nairobi Kenya March 27

JAMES H SEQUEIRA

The Institute of Linguists (Lambert House 10 Ludgate Hill E C 4) of which Sir Francis Goodenough is president has reissued in an enlarged form its approved *List of Translators and Interpreters*. An index of trades and an index of languages are included, also the scale of minimum charges for translations confirmed at a conference of translators and interpreters held in London in 1935. This classified list is intended mainly for commercial and business houses but a few of the translators claim acquaintance with medical terms.

Universities and Colleges

UNIVERSITY OF LONDON

The regulations for the Academic Post Graduate Diploma in Medical Radiology were amended at a meeting of the Senate on March 17 by the deletion of the following words in the seventh paragraph on page 617 of the *Red Book* 1936-7.

A mark of distinction will be placed against the names of those candidates who show exceptional merit in the whole examination whether taken at the same time or in two parts.

Sir Ernest Graham Little was appointed representative of the University at the celebrations to be held on the occasion of the four hundredth anniversary of the foundation of the University of Lausanne from June 3 to 5.

The ceremony for presentation for degrees will take place at the Royal Albert Hall on Thursday May 20 at 2.30 p.m. and at 5.30 p.m. the same day the annual service for members of the University will be held at St Paul's Cathedral. The preacher will be the Right Rev Frank Partridge DD Bishop of Portsmouth. Applications for tickets accompanied by a stamped addressed envelope should be sent to the honorary secretaries Presentation Day Service Committee 42 Tooting Square W C 1.

UNIVERSITY COLLEGE

A course of three lectures on 'The Meninges and the Cerebro spinal Fluid' will be given by Professor Lewis H Weed, director of the School of Medicine and professor of anatomy in Johns Hopkins University Baltimore at University College Gower Street, W C on May 24, 26 and 28 at 5.30 p.m. At the first lecture the chair will be taken by Professor H H Woollard.

A course of four lectures on 'The History of Physiology' will be given in the Department of Physiology Pharmacology and Biochemistry at University College Gower Street W C, as follows: May 18 'Ancient Biological Conceptions' by Dr E S Russell, May 20 and 21 'Emergence of Modern Doctrines to the end of the Eighteenth Century' with special reference to the growth of views on the circulation of the blood by Professor Charles Singer, May 24 'Development of Theories regarding Combustion and Respiration in the Eighteenth Century' by Dr D McKie, and May 25 'The Development of Certain Aspects of Metabolism during the Nineteenth Century' by Dr F G Young. All the lectures are at 5.30 p.m. and are open without fee or ticket to students of the University and others interested in the subject.

A course of three lectures on 'Some Economizing Mechanisms as a Condition of the Body's Adaptation to Increased Activity' will be given at University College Gower Street W C by Professor H Rein, director of the Physiological Institute in the University of Göttingen on May 3, 4 and 6 at 5 p.m. At the first lecture the chair will be taken by Professor C A Lovatt Evans FRS. The lectures which will be delivered in English and illustrated by films and lantern slides, are addressed to students of the University and to others interested in the subject. Admission is free without ticket.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The following candidates have been approved at the examination indicated.

ACADEMIC POST-GRADUATE DIPLOMA IN PUBLIC HEALTH—Part I.
Beatrice H Bakewell J S B Bray Enid S Davies Sylvia C Gavron E H Harte M U Hayat S M H Naqvi A W Rasiah H C Sak ena Margaret B Steel M N de S Sunjawanja V M Vatie

WESTMINSTER HOSPITAL MEDICAL SCHOOL

At the recent Entrance Scholarship Examination in Anatomy and Physiology scholarships were awarded to F C N Holden (King's College London) and P D Trevor Roper (Clare College Cambridge).

COLLEGE OF PHYSICIANS AND SURGEONS OF BOMBAY

The Council of the College of Physicians and Surgeons of Bombay at its meeting in January decided to institute an examination for the Diploma in Ophthalmic Medicine and Surgery. A committee appointed to draw up regulations and a syllabus of study for the diploma reported to the Council at its meeting on March 12, when the report was adopted. The first examination for the diploma will be held in July. A copy of the regulations can be obtained from the secretary of the College.

Obituary

ARCHIBALD DONALD
LLD MD FRCP FCOG

Emeritus Professor of Obstetrics and Gynaecology Manchester
University Consulting Gynaecological Surgeon Manchester
Royal Infirmary Consulting Surgeon, St Mary's
Hospital Manchester

We regret to announce the death at his home in Alderley Edge of Dr Archibald Donald on April 17. He had been in failing health for some time, and had not the strength to recover from an attack of influenza.

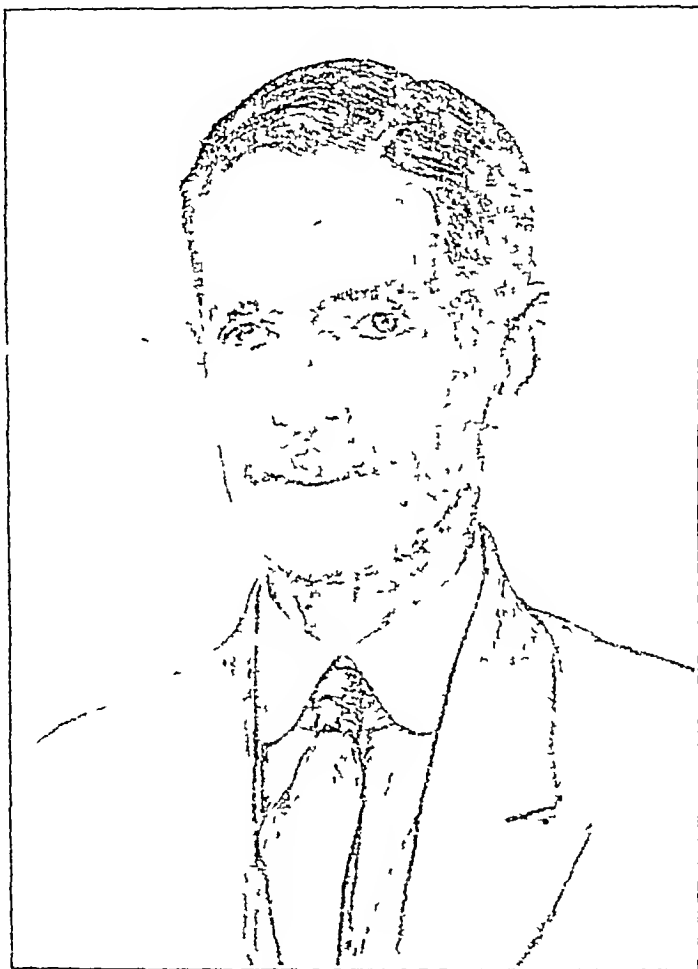
Archibald Donald was born in Edinburgh in May, 1860, and was educated at Craigmount House School and Edinburgh University. Before proceeding to the medical course he took his M.A. in 1880 including in this philosophy and logic and this training stood him in good stead in later years. He graduated M.B. Ch.M. with honours in 1883 and proceeded to the M.D. in 1886. After having held resident posts at the Royal Maternity and Simpson Memorial Hospital in Edinburgh he was appointed house surgeon and resident obstetrical surgeon to St Mary's Hospital then in Quay Street, Manchester in 1885 and so began his long connexion with that city and hospital which was to end only with his death. This was one of the most important resident obstetrical and gynaecological posts

in the kingdom as the hospital attended about 4,000 maternity cases annually for all of whom the senior resident was responsible as well as having forty gynaecological beds for which he acted as house surgeon. He held this post for three years and then started to practise as a consultant in this branch of medicine with a clinical experience which very few men of his age had obtained. In 1888 within a few months of leaving the hospital Dr Cullingworth was appointed to the staff of St Thomas's, London and Donald was elected to the vacancy on the staff of St Mary's Hospital.

In those days operative work was conducted in a theatre which was a bare room with no means of artificial

illumination, washing arrangements were inadequate, there were no steam sterilizers, only a large pan in which the instruments were boiled, there was no central heating, only a small open fire, no modern table which could be moved into Trendelenburg's position, only a flat-topped wooden table. In these inadequate surroundings pioneer surgery was done, but it could be carried out only by men endowed with more than average strength of character and mental equipment. At that period the scope of abdominal surgery was expanding rapidly, following the pioneer work of Clay, Spencer Wells and Lawson Tait, and Donald a young recruit to gynaecology naturally wished to follow in their footsteps.

Seniors however do not always take kindly to the experiments of a younger colleague and in later years Donald often laughed over the methods employed by his seniors in limiting his opportunities. As an equal member of the staff he claimed an equal use of the theatre but they insisted upon their prior claim of seniority so whenever he had carefully prepared a patient for an abdominal section they preceded him with a filthy septic case which precluded any clean operation for the remainder of that day. It was not long before he had this rectified but in the interval he turned his mind to the cure of prolapsus uteri. Since Manchester was a centre employing much female labour cases of complete procidentia abounded, and up to now these were definitely incurable. The only attempt at palliation was to tighten the perineum so that the



vagina would hold a pessary. Donald decided to try to cure this condition and the more he was told how useless was the attempt the more determined did he become. In 1888 he operated upon five of these cases combining an anterior and posterior colporrhaphy and perineorrhaphy with amputation of the cervix. Silver wire was the suture material in the first two cases and both were cured, being able to follow their occupation as charwomen without any return of their trouble. In this same year he heard that some German surgeons were using catgut as suture material so he obtained a supply and used it in his third case which he did in two stages. So successful was this case that he never again used any other material except

four silkworm sutures for the perineum in his colporrhaphies. This catgut was sent over in small bottles of carbolic oil a large number of which I found in an old cupboard in the hospital twenty years later. So impressed was Donald with this material that he experimented with other methods of sterilizing catgut, which he used more and more for all types of operation, till finally he discarded all other suture materials. He must have been one of the first surgeons in this country to use it certainly as a standard suture and in the whole of his long career he had only one case of tetanus. Donald was a brilliant operator and his small hand allowed him to use an incision which in those days of small incisions, was the envy of his contemporaries and he was able to turn to practical use many suggestions which otherwise would have been failures.

Donald was notable too for a clear and logical outlook which allowed him to distinguish, among the many new suggestions of those days procedures which had a practical value while ruthlessly rejecting those which were merely novel. His inquiring mind was never content to accept a statement merely because it had the impress of age and one of the strong lines he took at an early age was against the then accepted idea that retroflexion was the common cause of female ills. Being an easily recognized condition and in many cases one which was easily rectified, it became fashionable to replace these retroflexed uteri and insert a pessary, and in Donald's time some abdominal reposition operation was often employed. Nowadays it is difficult for a young gynaecologist to realize how firmly held were the views with regard to this condition and what temerity was required for a young man to assail them.

He was a strong believer in the curette, but he advocated its use in special cases and not indiscriminately, and when he used it he scraped the uterus clean. He read many papers before the London Obstetrical Society and the North of England Obstetrical and Gynaecological Society. I remember with gratitude how Donald took me to read my first paper before the London Obstetrical Society in 1906 just as Cullingworth had taken Donald himself twenty years earlier. In the flood-tide of his career Donald had little time for writing: he was much too busy attending to his innumerable patients, both in hospital and in private practice and he trusted to direct teaching to publish his views. This is unfortunate, as much of his work is unrecorded and part is absorbed in that of others who watched and learned from him. His early days were the golden era of gynaecology and fortunate was Manchester to have at that time a man endowed with such originality, logic and operative ability. In 1895 on the retirement of Lloyd Roberts he was appointed honorary gynaecological physician to the Manchester Royal Infirmary, having become a member of the Royal College of Physicians a qualification then essential for the post a short time earlier. Although Donald was naturally attracted to the rapidly developing field of gynaecology, he was always deeply interested in obstetrics and many of his early papers are on obstetrical subjects. He served on the Departmental Committee of the Ministry of Health which reported upon the cause and prevention of puerperal sepsis and this was the last subject I discussed with him. He held the view that there would be little puerperal sepsis if the attendants used a plentiful supply of an efficient antiseptic for their hands.

In his early days he wrote *An Introduction to Midwifery* for students and nurses which ran through many editions and was for many years a standard textbook for mid-

wives. He was the acknowledged leader in his branch of medicine in Manchester and the thickly populated area around it and the wonder was that he was able to get through such a vast amount of work. Slight of build and frail in looks, it often seemed impossible that he could carry on, but one of the secrets of his success was his refusal to be fussed. If he was late he serenely carried on and allowed his mind to relax when he had finished. No matter how difficult the position Donald always had full control of himself and in over thirty years of the most intimate co-operation I never once heard him use even the mildest of expletives. The only sign that things were critical was the use of the title doctor instead of the more familiar surname and on these occasions every one worked under tension until the corner was turned. In 1912 on the death of Sir William Snelair, he was appointed professor of obstetrics and gynaecology of the Victoria University of Manchester but systematic lectures on rigid lines never appealed to him, and in 1920 he persuaded the University to bring obstetrics and gynaecology into line with general medicine and surgery and create a chair of clinical obstetrics and gynaecology. This he enjoyed, as he chose his own subjects and demonstrated cases in his inimitable way calling upon the vast storehouse of his clinical memory. This was another of Donald's outstanding features. He rarely forgot the details of a case, and when confronted by a puzzling set of symptoms he could usually recall a case with similar features and so make a correct diagnosis: this gift at times seemed almost uncanny. It was in 1925 that he resigned his chair and was elected emeritus professor.

During the war he was attached to the Second General Western Hospital as a surgeon and threw himself heart and soul into the work, and for his services he was made a Deputy Lieutenant of Lancashire. Donald was one of the most modest of men. He never raised a finger to obtain recognition and scorned those who did. Not infrequently he stepped aside and allowed another to occupy an office that should rightly have been his. Nevertheless, when honours came entirely unsought especially from his professional brethren they gave him great pleasure. He was a past president of the Obstetrical Section of the Royal Society of Medicine, past president of the North of England Obstetrical and Gynaecological Society of which he was one of the founders, past president of the Manchester Medical Society, and a past president of the Manchester Pathological Society. His old University of Edinburgh conferred upon him an honorary LL.D. in 1927 when the British Medical Association met in Edinburgh to celebrate the centenary of Lord Lister. The University orator, in presenting him for the conferment said: "When gynaecology was undergoing its most rapid expansion he was in the vanguard of the movement. A bold and skilful operator, original in his ideas and quick to recognize and adopt any new and sound suggestion, he has done more than any one man to raise the Manchester school of gynaecology to its present eminence. Edinburgh is proud to recognize the sterling value of the work which this *alumnus* of hers has done." The Edinburgh Obstetrical Society made him an honorary Fellow and the Liverpool Medical Institute made him an honorary member along with Lord Dawson of Penn and Sir Robert Jones as representatives of the three branches of Medicine.

Donald had a lovable nature. A strong character with perfect control over himself, he nevertheless made allowances for others especially younger men not so well endowed as himself. Generous to a fault, genial, easy,

in manner and loving his fellow men he was at his best when acting as host especially to younger men or away on a golfing holiday with old friends. Those who worked under him revered him as a chief and loved him as a man and when he retired from the active staff of St. Mary's old residents attended from far and near a dinner in his honour and presented him with his portrait of which each cherished a reproduction. Happy and successful in his work happy in his home life he like all others had his draught of bitterness. His eldest son a youth full of promise was an Oxford undergraduate when war broke out and joining up at once laid down his life in Gallipoli. His third son after being called to the Bar also died after a long illness. He leaves a widow two sons and two daughters one son in the Navy and the other a member of his own profession already well established as one of the younger consulting physicians in Manchester.

W F S

Professor Daniel Douglas writes

In obstetrics and gynaecology as in politics there is a Manchester school of thought, and its founder was Archibald Donald, whose death we mourn to day. His influence began to make itself felt soon after his arrival from Edinburgh in 1885 and continued with unabated force until his retirement from active hospital practice forty years later. Donald was a clinician first and last and Nature endowed him with all the mental and physical qualities which make for success in that field. Not the least of these and one which he retained to the end of his working days was an extraordinary capacity for assimilating new ideas and applying them in the treatment of his patients. Despite the claims of an enormous hospital and private practice Donald found time to make important contributions to the literature of obstetrics and gynaecology. His pioneer work on the treatment of genital prolapse is well known and will no doubt be referred to elsewhere but almost as far reaching was his advocacy of a more rational treatment of uncomplicated backward displacements of the uterus. It is largely due to Donald's teaching that the indiscriminate fixing up of the retro flexed uterus has now been abandoned.

He retained a youthful outlook almost to the end and was never happier than when in the company of his younger colleagues. Until a few years ago he rarely missed a meeting of the North of England Obstetrical and Gynaecological Society and those of us who were privileged to be his companions on the train journeys between the different meeting places in Lancashire and Yorkshire will always be grateful for his cheery companionship and inexhaustible fund of anecdote. At the meetings of our Charles White Club he was also in his element and his colleagues are not likely to forget the summer meetings at Alderley when Donald always the perfect host entertained us to a dinner of such excellence that the indifferent golf which preceded it was mercifully forgotten. Now he has died full of years and secure in the memory and affection of his friends who can say with truth as he passes on—there goes a man!

A Surgeon Colleague writes

To those who recall the extraordinary activities physical and mental alike of Archie Donald throughout a long and extremely distinguished professional career it must have caused distress to witness the rapid decline of the last few months during which he was confined indoors quite unable to enjoy the beautiful garden which he loved so well and on which he had expended so much time and

interest and energy. Of the details of Donald's career other colleagues in his special sphere of work are in a much better position to testify than I but it is of Donald the man himself that I would pen a few words in most affectionate memory. Widely recognized from his early days as the outstanding exponent of his chosen specialty Donald was throughout completely free from any hint of professional jealousy and his help was always most willingly and cheerfully given to his younger colleagues. Indeed most members of the honorary staffs of the Manchester Royal Infirmary and the St. Mary's Hospitals owe their position largely to his support since his influence with the governing bodies was greater than that of any other individual medical man and to have Donald on one's side practically connoted success in such elections. His modesty so far as it concerned his own most valuable and original work was carried almost to the point of absurdity, for although he was undoubtedly the originator of the Manchester operation for uterine prolapse this procedure has elsewhere come to be associated with the name of one of his younger colleagues who first learned it from his senior and whose only contribution thereto was a trifling and comparatively unimportant modification. Endowed with an almost uncanny power of sifting the wheat from the chaff among the many suggestions in the medical journals of his day he was ever quick to seize upon and to put into practice those he considered to merit for real progress. A powerful and fearless advocate of what he believed to be right he was absolutely intolerant of shams and frills of every description and although his advice when sought did not always coincide with the seeker's own inclinations yet in the long run it invariably proved correct. No one could be more loyal or generous as a friend and the many happy hours spent with him on the golf links and at the billiard table though almost without exception to my own gross undoing remain as priceless recollections.

The loss of his eldest son killed on the Gallipoli Peninsula was a cruel stroke of fate from which he never really recovered. At the outbreak of the great war Donald then aged 54 joined the *à la suite* staff of the Second General Western Hospital with the rank of captain becoming thereby junior to most of those considerably junior to himself in civil practice for some months in addition to his other military duties he took his turn to live in and do what was in reality merely the work of a house surgeon—an admirable instance of his loyalty and devotion to what he thought to be his duty. So passes into the realm of our most treasured memories one whom all who had the honour of his close acquaintance proudly regard as a conspicuously brilliant example indeed the very embodiment of what is after all the very finest of all the many fine species that go to constitute the genus *homo* in every sense of the word and in every aspect and action of daily life the truly British gentleman.

later became surgical specialist to a base hospital in Mesopotamia and to the 1st Scottish Casualty Clearing Station. He was also medical officer to the Scottish Horse and reached the rank of lieutenant colonel R.A.M.C.(T.A.). After the war he decided to devote himself to orthopaedics. He was appointed lecturer in regional anatomy at University College, Dundee and clinical surgical tutor and assistant to the professor of pathology at St Andrews University, becoming later honorary assistant surgeon and anaesthetist to the Royal Infirmary of Dundee. He joined the British Medical Association in 1917 and was a Fellow of the Association of Surgeons and an associate member of the Orthopaedic Society of Great Britain.

Mr Taylor made various communications to current medical literature including *Three Cases of Acute Perforating Ulcer of the Small Intestine* (*Edinburgh Medical Journal* 1925), *Value of Ileocolostomy in Acute Intestinal Obstruction* (*ibid* 1924) and *Note on Operative Treatment of Perforated Gastric Ulcer* (*British Medical Journal* 1926). He was a popular member of the medical profession in Dundee and its neighbourhood, and was unmarried.

SIR JOSEPH FAYRER Bt CBE,

M.D. St. And. F.R.C.S. Ed. Lieut. Colonel R.A.M.C. (ret.)

The death took place at his residence in Gullane East Lothian on April 13, of Lieut.-Colonel Sir Joseph Favrer Bt who for a number of years occupied the position of superintendent of Edinburgh Royal Infirmary.

He was born on March 8 1859. His father was the celebrated Sir Joseph Favrer the first baronet who at one time was surgeon-general I.M.S. and president of the Medical Board of the India Office and who was well known for various medical works dealing with diseases and snakes of India. The son was born in Edinburgh when his parents had returned from India after the siege of Lucknow. He was educated at Rugby and afterwards at Trinity College Cambridge where he graduated B.A. in 1882 taking his M.A. in 1885. Later he studied medicine at St George's Hospital and the Extramural School at Edinburgh and qualified L.R.C.P. and S.E.D. in 1886 taking the M.B. of the University of St Andrews in 1887 and the M.D. in 1889 in the same year becoming also a Fellow of the Royal College of Surgeons of Edinburgh.

He entered the R.A.M.C. as surgeon in July 1886 and was at first medical officer to the Royal Horse Guards and afterwards spent many years on service in India and Hong Kong. He became lieutenant colonel in 1906 and retired from the Corps in July 1911. He first joined the British Medical Association in 1906 and in the following year succeeded to the baronetcy on his father's death. In the latter part of 1911 he returned to Britain and was elected superintendent of the Royal Infirmary of Edinburgh a post which he held until 1923 when he retired. During his military service he had held the posts of secretary to the P.M.O. London District and medical officer to the Duke of York's Royal Military School at Chelsea and before his appointment to Edinburgh had been for two years in command of the military hospitals at Hong Kong. During the war he became commanding officer of the 2nd Scottish General Hospital situated at Craigleith, Edinburgh, and at the close of the war he again took up his duties as superintendent of the Royal Infirmary. In 1919 he received the C.B.E. for war services.

The late Sir Joseph Favrer was celebrated for his charm of manner which endeared him greatly to all those

who served under him. The great success attained by the 2nd Scottish General Hospital was largely due to his unwearying exertions in constantly organizing various forms of service for the soldier patients for whose care he was responsible. In all his dealings he showed a sense of fairness, kindness and an understanding of the point of view of other people. He is survived by his widow the son who succeeds him in the baronetcy and two daughters. The interment took place at Dirleton Cemetery East Lothian, on April 16.

N. C. PATRICK M.R.C.S. D.P.H.

The death occurred in a Belfast nursing home on March 24 of Dr N. C. Patrick, Chief Medical Officer to the Ministry of Home Affairs Northern Ireland after a brief illness. He was a member of a distinguished County Antrim family and was well known to most members of the profession of Ulster for his administrative ability, his gracious personality, and his interest in the profession to which he belonged. He was chosen to act as one of the vice-presidents in the Section of Medical Sociology at the forthcoming Annual Meeting in Belfast, and it is a matter of regret that his unexpected death deprives the Section of a wise officer and useful member.

An intimate friend writes: An outstanding member of the medical profession in Ulster has been removed by the death of Captain Norman Colum Patrick. He was educated at Rossall and was a graduate of Cambridge University receiving his medical training at St Bartholomew's Hospital. He was appointed medical officer of Glenavy Dispensary District in Co. Antrim and subsequently became tuberculosis officer for the county. At the outbreak of the great war he volunteered for active service and as captain in the Royal Army Medical Corps served in France with the 110th Field Ambulance 36th Ulster Division throughout the greater part of the war. After the war he was appointed medical inspector of the Local Government Board of Ireland and subsequently of the Ministry of Home Affairs in Northern Ireland, as Chief Medical Officer. In this capacity he enjoyed the confidence not only of the Department but also of the local authorities with whom he came into close contact. His ability, coupled with a quiet manner and an unassuming disposition gained for him the respect and esteem of all and endeared him to his colleagues and associates in the Ministry who have suffered the loss not only of a wise counsellor but of a loyal friend.

Dr Patrick is survived by his wife (the only daughter of the Lord Chief Justice of Northern Ireland and Lady Moore) and one daughter, with whom there is wide spread sympathy in their bereavement.

Dr HECTOR LEAK who had practised for many years at Winsford Cheshire died on April 10 after a short illness. He was born at Winsford on October 5 1856 the son of A. P. Leak M.D. and received his education at King William College Isle of Man, and Owens College, Manchester qualifying as M.R.C.S. and L.R.C.P. in 1878. Dr Leak during his long life took a prominent part in local public affairs. A justice of the peace for the county of Chester he acted for many years as chairman of the local bench of magistrates. In politics he was a keen Liberal and a supporter of the League of Nations. Before retiring from practice he was senior surgeon to the Albert Infirmary, medical officer to the Post Office and to the Northwich Union. During most of his active years he was a member of the British Medical Association. His son Dr W. M. Leak practises at Winsford thus continuing the long family tradition.

Medical Notes in Parliament

The Army and Air Force (Annual) Bill and the Coal Mines (Employment of Boys) Bill, which had passed the House of Commons, were read a first time in the House of Lords on April 14.

On the same day the House having received a report from the Attorney General on the Liverpool United Hospital Bill read the measure a second time. The Bill was sent to the Committee on Unopposed Bills, the promoters having arranged to make amendments which meet observations made by the Attorney General.

The Education (Deaf Children) Bill the title of which had been amended from Deaf Children (School Attendance) Bill, was read a third time by the House of Lords on April 15 and returned to the House of Commons. The Edinburgh Royal Maternity and Simpson Memorial Hospital Order Confirmation Bill was read a first time by the House of Lords on April 15, and, in conformity with the new procedure on Scottish private legislation was deemed to have been read a second time and reported from Committee.

On April 20 the Maternity Services (Scotland) Bill and the Methylated Spirits (Scotland) Bill were introduced in the House of Lords and read a first time.

The Divorce (Scotland) Bill which has passed the House of Lords was read a first time in the House of Commons on April 19. The Diseases of Fish Bill was reported from a Standing Committee of the House of Commons on April 20.

The Budget

Mr CHAMBERLAIN opened the Budget in the House of Commons on April 20. He announced that the income tax would be increased by 3d in the £ to 5s with additional provision against tax evasion. A National Defence Contribution was proposed on the growth and profits of trades and businesses but not of professions. No increases were proposed in indirect taxation. Mr Chamberlain referred to the report of the Select Committee on the medicine stamp duties. He said he had had many representations from various quarters since its publication and he was having the recommendations of the committee examined in the light of those representations. In view however of the very complex issues involved and the strain on the time of Parliament he did not propose to introduce legislation on the subject in the Finance Bill this year. He proposed to increase the income tax by 3d in the £ and to impose a tax on the growth of profits of all persons engaged in industries trade or business of any kind whose profits in any accounting year ended after April 5 1937 exceeded £2,000. That of course left out small concerns whose profits were at a low level. The tax would not be applicable to professions or employments for although those engaged in employment or in a profession would no doubt benefit by the general improvement he did not consider that circumstances would warrant their inclusion in this charge and indeed the proposal could not be appropriately applied to them. This charge would be called a "National Defence Contribution."

The Budget resolutions were agreed to.

Marriage Bill

The Marriage Bill as amended by a Standing Committee was discussed in the House of Commons on report on April 16. On Clause 2 (Grounds of Petition for Divorce) Mr OSWALD LEWIS moved to insert "persistent before cruelty in the ground has since the celebration of the marriage treated the petitioner with cruelty."

Sir DONALD SOMERVILLE said the Bill would not interfere with the authoritative definition of cruelty as "conduct of such a character as to cause danger to life and limb or health

bodily or mental or such as to give rise to a reasonable apprehension of such danger. If it resulted from one act the House might desire that the act should be a ground for divorce. He recommended the House not to limit the clause as Mr LEWIS proposed.

Lord WOLMER said the Attorney General could not intend one single act however grave should be a ground. Sir DONALD SOMERVILLE said the communication of venereal disease would be a sufficient single act. Lord WOLMER said the subject ought to be treated separately in the Bill. In most cases it involved an act of adultery and so would come under the present law.

Commander AGNEW said that the sub-section in dealing with cases of cruelty where venereal disease was involved would seek to cover cases where a disease of this kind was inherited or acquired accidentally. He would support the later clause which dealt with as a ground of nullity the question of a respondent who was suffering from the disease at the time of the marriage. But it would be difficult to ascertain whether a respondent was suffering from the disease at the time of the marriage and cases of confusion or victimization might arise. He did not believe that because of an accident of this terrible kind a man should have a decree of divorce granted against him.

The proposed amendment was defeated by 130 to 48.

INSANITY AND DIVORCE

Mr TURTON moved to substitute seven years for five as the period after which the spouse of an insane person could sue for divorce. Commander AGNEW said few medical men would be prepared to say after five years that a person was incurably insane. In Western Australia and New Zealand the conditions on which relief from insanity was provided were stricter than those in the Bill.

Sir ARNOLD WILSON said the conditions in the Bill were that the patient must have been continuously under treatment for five years and must after that be subjected to a medical examination which in the opinion of the court proved that he was incurably insane. Doctors would in future be increasingly reluctant to declare that a person was incurably of an old mind. No person who would recover within seven years would be certified by a doctor as incurably insane in the fifth year. There were no sudden changes; it was a question of slow recovery.

Mr BARR pointed out that in the Bill introduced in the House of Lords in regard to Scotland the period proposed was three years. Major NEVEN-SPENCE asked the House to consider the insane persons who broke down during childbirth after a long period of infectious illness, or at the change of life. The excellence of these people's lives might have been a contributory cause yet a long period of treatment was almost inevitable before they were restored to mental health. These cases were capable of being restored. Divorce on grounds of illness was contrary to medical opinion.

The period of five years was retained by 141 votes to 48.

Commander BOWER moved to omit Clause 3 (Definition of Insanity). Sir DONALD SOMERVILLE said the clause merely defined what "care and treatment" meant. Paragraph (b) of the clause dealt with the small class of cases in which for psychological reasons the actual certification was lifted and the person became a voluntary patient. If they attempted to go out or if their relatives attempted to take them away they would be immediately certified again.

Mr BELLENGER asked if the clause would cover the persons who entered an asylum as voluntary patients without previously having been certified. Sir DONALD SOMERVILLE said he thought that class would also be covered subject to the overriding consideration that the court had to be satisfied that such persons were incurably of unsound mind.

Commander BOWER withdrew his amendment. The second of the Bill was adjourned till April 2.

Tuberculosis in Newfoundland

On April 13 Sir JOHN WARDLAW MUIR asked the Secretary of State for Dominion Affairs how many deaths from tuber-

culosis had been recorded in Newfoundland in 1936 and how the figures compared with previous years Mr MALCOLM MACDONALD circulated the following tabular reply

Returns for deaths from tuberculosis in Newfoundland in 1926 are not yet complete but in fifteen out of the eighteen registration districts deaths from this disease totalled 544. This gives a mortality rate of 1.9 per 1,000. The total number of deaths from tuberculosis and the mortality rates per 1,000 of the population in previous years were as follows

Year	Deaths from Tuberculosis (all forms)	Mortality rate per thousand of the population
1925	592	2.3
1926	628	2.4
1927	604	2.3
1928	692	2.6
1929	614	2.3
1930	573	2.0
1931	553	1.9
1932	521	1.8
1933	526	1.8
1934	552	1.6
1935	550	2.0

Debate on Nutrition

On the motion that the House of Commons should go into Committee of Supply on the Civil Estimates on April 13 Mr ROWSON drew attention to the question of malnutrition which he said existed in various parts of the country in a greater or less degree. There were 4,500,000 people who did not spend more than 4s per head per week on food. It was utterly impossible to provide a diet which was body building and strengthening for a child, an adolescent, or an adult on such a figure. He was prepared to admit that sometimes malnutrition among miners was not altogether due to low wages. Malnutrition and a subnormal physical condition might be due to the speed at which they had to work and the heat they had to endure. In the case of mothers and children, especially pregnant mothers, it would be agreed that in the distressed areas there was a good deal of malnutrition. He hoped due notice would be taken of the suffering entailed in so many ways by women. The Minister of Health might do something to get the people to realize what was necessary in foodstuffs. He might also enter upon a poster campaign. That would be a good method of advertising the way in which the people might more profitably spend their money. A group of commodities might be shown and the calories, proteins, and vitamins contained in various foods. Something should also be done to organize the better feeding of children in the schools.

Mr JAMES GRIFFITHS said that one of the best services which the Minister of Health could render would be to make representations to the Unemployment Assistance Board to increase their scales.

NUTRITION ADVISORY COMMITTEE'S REPORT

Sir KINGSLEY WOOD said he welcomed discussion because it gave him the opportunity to call attention to the publication of the first report of the Advisory Committee on Nutrition of the Ministry of Health. He considered that report to be the most valuable document on nutrition that we had had up to the present time. There could be no question as to the authority of the committee: the chairman was Lord Luke and among the members were Mrs Barton Profesor Cathcart, Professor Sir Gowland Hopkins, Professor Mellanby, and Sir John Orr. The report was unanimous. It served a very useful purpose at present in that during the last year or two the question of nutrition had not only been a subject of much discussion but one on which all sorts of statements had been made as to the condition of the nation. Many people had been bewildered and confused by masses of assertions and advice, informed or otherwise. The Advisory Committee said that a great deal of further information had to be obtained before we could reach a final national policy on nutrition.

The report was particularly valuable in that it pointed out a number of ways along which advances could be made. In considering nutrition we must have a right perspective in the sense that while this was an important side it was one side only of our national health problem. Man did not live by calories alone. The national health did not depend only on vitamins, but on better housing, the clearance of slums, maternity and child welfare, the provision of more open spaces and physical recreation.

The Advisory Committee had shown how the consumption per head of most foodstuffs had increased since before the war and gave the proportionate increases in condensed milk, fruit, butter, vegetables, eggs, tea, margarine, and cheese. It said that the consumption of butter and margarine together was now 50 per cent. higher than it was before the war, but on the other side the consumption of cereals had fallen by nearly 10 per cent. since 1913 and milk and cream by about 6 per cent. This increased consumption of foodstuffs was considered by the committee to be evidence of a continued improvement in the national dietary and a rise in the standard of living. The weakest thing to which the committee could point in connexion with the national dietary was the consumption of milk which was on a very low level in this country.

INQUIRIES AND INVESTIGATIONS

The report called attention to two or three inquiries which ought to be made and pending which people ought to suspend judgement. The report was described as a preliminary survey of the whole field and a further investigation into family budgets and matters of that kind was recommended. Accordingly the Minister had asked local authorities to review at an early date their arrangements under the Maternity and Child Welfare Acts for the supply of milk and other foods in view of the importance of securing that the diet of expectant and nursing mothers should contain the proper constituents, and that the consumption of milk, especially by young people, should be increased. He had also drawn attention to the fact that there was to be no question of the limitations which had hitherto been in operation in some areas. He had said that he did not think it desirable to adopt any such restriction for instance as that the supply of milk to expectant mothers should be only during the last two or three months of pregnancy or that children should be supplied with milk only up to the age of 18 months or 2 years or that the limit of supply in every case should be one pint per day. Local authorities had also been asked to review the scale of income used in connexion with the payment for milk and other food supplied. He had added as regards liquid milk that wherever possible a supply of efficiently pasteurized milk should be provided and that where this was not practicable the medical officer of health should approve of the source and quality of the supply. Finally they had been asked to consider afresh the question of a properly organized system of meals. As the block grants to local authorities had been raised by £5,000,000 to nearly £50,000,000 a year and at any rate the rearranged distribution gave a larger share to the authorities whose need was greatest, these authorities would be able to continue and extend the work which they were doing in the direction indicated by the Advisory Committee.

Through the Ministry of Labour an inquiry was being made into family budgets to provide the material required for a revision of the basis of the cost-of-living index. This was going to be incorporated in the Ministry of Labour cost-of-living inquiry. The proposals would involve the collection of budgets from 10,000 families for one week, and from the large proportion of those families for three other weeks, and also supplementary budgets of personal expenditure from wage-earning members of the families. Certain dietary studies were also to be undertaken. Although there was much to be done a great deal had been achieved in the direction of improving the health of the nation in the matter of nutrition. Since August 1931 the biggest milk-in-schools scheme in the world had been started and the Milk Marketing Board in co-operation with local authorities and the Commissioner for the Special Areas had devised schemes for the provision of

milk at a cheap rate for expectant and nursing mothers and for children not of school age. In 1931-2 so far as milk was concerned about 16,472,000 meals were being provided. That figure in 1935-6 had reached 63,710,000. In 1931-2 the figure for free meals was 93,232 and last year it had risen to 406,341. The same proportion obtained for other meals.

DEFICIENCIES OF WHITE BREAD

Mr TURTON said that the Advisory Committee had not dealt with that part of the report of the Technical Commission of the League of Nations which pointed out that white flour in the process of milling was deprived of important nutritive elements. This country was living on white bread and all the beneficial properties of bread were being taken out in the process of milling and the country was being given something very bad for the nutrition of the nation. Other countries had taken drastic action to deal with this bread problem. Every year 36,000 people were dying of tuberculosis and he attached considerable importance to the connexion between the bread we were consuming and the rate of tuberculosis mortality. In the North Riding they had tried to improve nutrition and lower the tuberculosis rate and had been extremely successful. One of the ways in which the tuberculosis officers had dealt with the matter in the North Riding had been to give those suffering from tuberculosis a large proportion of bran in their diet. Surely the Advisory Committee should go into the question of the bread we consumed with great care. He had noticed in the country districts a gradual increase in the consumption of tinned food. He would like the Advisory Committee in their next investigation to inquire more fully into the value of tinned foods as opposed to fresh foods.

Mr E. J. WILLIAMS said that Dr Hastings had recently mentioned the time that was taken in inspecting school children under the school medical service. He was dealing with the London County Council schools. He said that six minutes was the time taken to examine a school child and he complained that it was quite impossible to find out the flaws in a child's health in six minutes. The Minister should consult the President of the Board of Education to see whether something could not be done to give far more accurate information as to school children's state of health than we had at present. We did not really know the physical state of our school children and with such inadequate medical examinations we could not hope to know it. The Minister should insist that the school medical service was treated in a far more scientific way than it was at present.

NUTRITION AND REHOUSING

Mr A. V. ALEXANDER said that the policy which the Government had adopted was not touching the problem. In his book Dr M. G. Gingle had referred to the transfer of the working-class population from slum areas to housing estates. From this it was obvious that it was impossible to hope for a solution of the problem unless with improved housing conditions and the rental charges involved we increased the income of the individual holders whether employed or not in order that they might be able to obtain the minimum standard of nutrition. The Minister seemed to take pride in the fact that there was to be a further inquiry into family budgets. In the Sheffield inquiry, the Liverpool inquiry, the Manchester inquiry, the Salford inquiry, and the inquiry of the British Medical Association we had an abundance of material for any necessary action. It was simply a long-drawn-out process of appointing inquiry after inquiry instead of doing what was essential: enabling the people by improved wages or by increased assistance or by adequate scales for those who had recourse to public assistance to be able at least to purchase the minimum standard of food required to set up a proper basis of nutrition. He hoped the Minister of Health had seen in the *Journal of the Royal Statistical Society* the paper by Mr R. F. George in which he had clearly proved the case that in settling the poverty line now it ought not to be done by the figures of the British Medical Association's scale of two or three years ago. It must be done by the present cost. Mr George had worked out the cost on the basis of the British Medical Association's scale. In 1933 the

cost for an adult meal on that scale was 5s. 11d. per week. On the cost of living index figure for July 1936 that diet would cost not 5s. 11d. but 6s. 9d. and if we examine the change in costs since July 1936 then the cost on the B.M.A. scale would not be 5s. 11d. per week or 6s. 9d. but 7s. 3d.

Mr R. S. HUDSON said he was told that in fact the time taken for the examination of school children was not six minutes. The examination of some of the children took a longer time and that of others less time, the average being six minutes which was adequate for the purpose. Mr Alexander had referred to the results as Dr M. Gingle saw them of the transfer of some neonates from slums to new housing estates. He (Mr Hudson) did not know that that point would be raised or he would have brought some extremely interesting results which had been obtained from investigations made by various local authorities into similar circumstances in their own areas. The general effect was that inquiries were made on a much bigger scale than the one of Dr M. Gingle in Leeds, Manchester, and another large town and it was found that precisely the opposite results had accrued from shifting the population—the mortality rate had gone down and the general health had enormously improved. It was clear that much bigger experiments in large towns such as Manchester and Leeds gave infinitely more valuable results than the very small experiment made by Dr M. Gingle. We could take it that the figures given by Dr M. Gingle were not followed in the rest of the country but that on the contrary the universal experience had been that the people had materially benefited as the result of being shifted from the slums.

Factories Bill in Committee

On April 13 the Standing Committee of the House of Commons which is examining the Factories Bill considered Clause 54 (Lifting Excessive Weights). Mr R. DAVIS moved to omit the words which restricted the clause to young persons. He said that if heavy weight lifting was injurious a restriction of the prohibition to young persons would leave untouched the majority of the accidents. Out of 1,055 weight lifting accidents in a period of three months 1,000 were to adults. Mr BANFIELD, supporting the amendment, said there was a high prevalence of hernia cases among bakers when sacks of flour each weighing 280 lb. had to be lifted by adults. The millers reduced the weight to 140 lb. with a resulting almost total absence of hernia cases among operative bakers.

Mr G. G. LLOYD pointed out that the clause besides prohibiting the lifting by young persons of loads so heavy as likely to cause injury also provided that the Home Secretary could make special regulations prescribing maximum weights which might be lifted, carried or moved by persons employed in factories. Subsection 2 of the clause thereby extended the provision to men but there were powerful reasons why it was not wise to make a purely general provision when the actual circumstances were so complicated. Research had shown that it was not easy to say in general terms how much might safely be lifted. It was desirable to give additional protection to young persons owing to their physical immaturity and mental inexperience. Sir JOHN STURGES said there was at present no general provision in the Factory Code on this subject but in the Children Act a clause stated that a child should not be employed to lift, carry or move anything so heavy as to be likely to cause injury.

Mr R. DAVIS withdrew the amendment and the clause was added to the Bill.

Clause 55 (Prohibition of Employment of Female Young Persons in Certain Processes) was also added to the Bill after withdrawal of amendments to extend this prohibition to the making of bricks and tiles and to the employment of girls under 17 on power presses.

LEAD POISONING AND ABORTION

On Clause 56 (Prohibition of Employment of Women and Young Persons in Certain Processes Connected with Lead Manufacture) Sir ERNEST GRADY LITTLE moved to leave out the limitation to women. He said the suggestion of a ex-

proclivity towards lead poisoning rested on half baked physiology and wholly cooked statistics. The statistics which Miss Margaret Bondfield had quoted on the lead poisoning Bill had proved to be fallacious. The work on this subject which would be accepted in medical circles was that of Dr Collis and Professor Greenwood president of the Royal Statistical Society. Their books stated that there was no evidence to support the suggestion that women were more subject to lead poisoning than men or the suggestion that the accidents which followed in childbirth and so on were due to any sex proclivity. The women concerned objected to this discrimination. The latest knowledge of medicine should be used in framing this Bill.

Mr LLOYD said he realized there might be conflicting views in the medical profession on the susceptibility of women to lead poisoning, but it was not part of the Home Office case that there was greater susceptibility in the case of women. Apart from susceptibility the consequences to women were more serious particularly in maternity. The Home Office was advised that this poisoning was liable to produce abortion. Sir Ernest Graham Little said the mortality was not any higher as a result of maternal poisoning than as a result of paternal lead poisoning. Paternal plumbism would give rise to many miscarriages. The international labour conference had recommended that in view of the danger to maternity and the physical development of children women and young persons women should be protected in this matter. The British Government had undertaken to give effect to that recommendation and could not accept the amendment without breach of international obligation.

Sir Ernest Graham Little's amendment was negatived as was also an amendment by Mr Walker to include alloys containing more than 10 per cent of lead and the clause was added to the Bill.

Clause 57 (Provisions as to Employment of Women and Young Persons in Processes involving use of Lead Compounds) was also added to the Bill. Clause 58 (Power to make Special Regulations for Safety and Health) was also approved. Other administrative clauses were ordered to stand part of the Bill.

NOTIFICATION OF INDUSTRIAL DISEASES

On Clause 64 (Notification of Industrial Diseases) Mr ELLIS SMITH moved to extend the clause to any industrial disease to which the provisions of Section 43 of the Workmen's Compensation Act 1925 apply or silicosis. Mr Smith said chemical processes which were being introduced into industry were reflecting themselves in increasing industrial diseases. He was particularly concerned about silicosis. He was convinced that they were not getting the best out of reports of the Medical Research Council in dealing with these questions. Sir ERNEST GRAHAM LITTLE supported the amendment because the list of diseases which the Bill proposed should be notified to the Chief Inspector of Factories had been transcribed from Section 73 of the Act of 1901 although of the five diseases there included three were practically obsolete and not one case per annum had occurred in the last ten years. Other diseases had come into prominence in the interval. The most fatal cancer of the skin was not mentioned at all.

Sir JOHN SIMON said the amendment raised the question whether the committee should strike the present list out of the Factory Act. Whether the list ought to be revised was another matter. The list of diseases scheduled in the Workmen's Compensation Act differed from the list of diseases notifiable under the Factory Act and the purposes of the two lists was not the same. The object of the list in the Compensation Act was to enable workmen to claim compensation and of the list in the Factory Act to secure prevention. In considering whether a disease should be notifiable under the Factory Act the question was whether the information would be of value to the Factory Department in its effort to prevent the danger. Diagnosis of silicosis was a matter for experts and to impose the duty of notification on the general practitioner would be an inappropriate method of obtaining information which was wanted on the incidence of the disease. To obtain that information the Department conducted special inquiries in industries where there was reason to suspect silicosis such as

industries connected with quarrying and various aspects of mining. A committee of the Medical Research Council had been appointed to continue investigations into industrial pulmonary disease which included aspects of silicosis and the Home Office arranged to obtain information from the Silicosis Medical Board on cases that came to its notice. He was sure the way in which they were proceeding was the better way and he could not consent to substitute in the clause the Workmen's Compensation Act list for the Factory Act list.

The amendment was withdrawn.

MEDICAL REPRESENTATION AT INQUESTS

Clause 65 (Inquest in Case of Death by Accident or Industrial Disease in Factory) was next discussed. Mr MANDER said he wished to permit interested parties to be represented by a medical practitioner so that where a coroner directed a post mortem examination in an inquest under the clause the actual examination would be carried out by a specialist used to dealing with cases of that kind. This matter was the subject of a recommendation in the report of the Departmental Committee on Coroners. Mr GEORGE LLOYD said the question raised concerned the representation of two varying interests by medical practitioners at post mortem examination. He read the observations of the Departmental Committee on the matter and suggested that it should be left to be dealt with by further legislation when it could be looked at as a whole and in perspective. It was undesirable to deal with post mortem procedure in this Bill.

Clause 65 was approved and Clause 66 (Power to Direct Formal Investigation of Accidents in Cases of Disease) was also added to the Bill. On Clause 67 (Duty of Examining Surgeon to Investigate and Report in Certain Cases) Mr LLOYD said he was informed that the certifying surgeons preferred the term examining surgeons and as it was examination rather than certification which was the essential part of their work it was decided to change the designation. The clause was approved.

On Clause 68 (General Conditions as to Hours of Employment of Women and Young Persons) Mr RIDLEY moved to insert a provision forbidding employment of a young person under the age of 15 in a factory and a long discussion followed. Sir ERNEST GRAHAM LITTLE said the nation was going to be faced with a diminution of the number of children in the country, the most important capital that the nation could have. There were other ways than employment in factories for filling the gap between the elementary schools and the age of 15. The committee adjourned until April 15 when the discussion of age of entry into factories was resumed. Mr Ridley's amendment was eventually defeated by 32 to 22. A discussion followed on another amendment by Mr Ridley to make of general application the conditions laid down for women and young persons in Clause 68 in respect of hours worked, periods of employment and intervals for meals and rest. The amendment was defeated by 29 to 16 and the committee adjourned until April 20.

Replying on March 15 to Mr Wilfred Paling Sir JOHN SIMON said he hoped it would be possible to deal in the Factories Bill with the hours of young persons employed in connexion with factories, docks and warehouses whose inclusion in the new Factory Code was recommended by the committee on hours of employment of young persons in unregulated trades. As regards other classes of young persons in whose case the committee suggested an extension of the Shops Act 1934 it would be necessary to introduce separate legislation which could not be undertaken during the present session.

Manchester Hospital and Proposed Employment Exchange

On April 15 Mr FLEMING, Mr ELLIS SMITH, Mr WILKINSON, Mr BENS and Mr LEMLEY asked whether the Minister of Labour had considered the objections to the erection of an employment exchange adjoining the central branch of the Manchester Royal Infirmary. Mr Fleming suggested that the building of this exchange would cause the closing down of the hospital branch for inpatients.

Mr FLEMING BROWN said he was consulting the First Commissioner of Works about proposals made to him informally

on behalf of the board of the Manchester Royal Infirmary. Until the inquiries were complete he could make no statement. He was aware that the medical profession in Manchester objected that the proposed building would obstruct the work that was carried on in the central branch of the Infirmary. At the request of the representative of the Infirmary he had seen him privately and was securing consideration for the matter.

Mr ELLIS SMITH suggested that the Government should take over the site of the Infirmary and make suitable compensation. Mr BROWN said he preferred to make no statement on that at the moment. He could not say whether some proportion of the additional cost incurred by the hospital authorities in removing the branch would be repaid to them.

Sir KINGSLEY WOOD, answering Mr Ellis Smith on the same subject, said he had received representations from the hospital on the proposed erection of the central employment exchange but he had no powers in the matter. When in Manchester recently he had seen the site and the officials.

Corporal Punishment of Juveniles

Sir JOHN SIMON told Mr Muff on April 15 that names were under consideration for service on the committee to inquire into the administration of corporal punishment for juvenile delinquents. The scope of the committee's inquiry would cover also the question of corporal punishment imposed on adults whether by sentence of the criminal courts or by the prison authorities as part of the system of prison discipline.

Coroners' Comments

Lord MORRIS in the House of Lords on April 15 asked whether the Government was prepared to curb by legislation the tendency among coroners to moralize and lecture at the inquests over which they presided or alternatively to abolish the office of coroner. He said the matter had been before a Commission of Inquiry in 1935. The coroners' inquest was unnecessary and a growing volume of opinion favoured its abolition.

Lord DUFFERIN for the Government said the Home Office knew of no increasing tendency of coroners to moralize and lecture. There were 3,500 inquests yearly in London and he knew of no complaint against a coroner's conduct at any during the last year. The Home Office took a grave view of reflections on people who were not represented in court or at institutions which had not counsel to represent them. A circular to that effect had been issued to all coroners by the Home Office in 1927 and the subsequent recommendations of Lord Wright's committee were brought to their notice. Lord Wright's committee had said that on that particular point no legislation was required but when opportunity offered the suggestions of that committee would probably be the subject of legislation. The Government however could not contemplate the abolition of the office of coroner.

Welfare of Crews of Merchant Ships—Mr RUNCIMAN replying to a question on April 13 said that the recommendations of the Shipping Federation Committee for the welfare and comfort of the crews on merchant ships were now being generally adopted by shipbuilders and owners and were substantially incorporated in a revision of the Board of Trade Instructions to their Surveyors which was now under consideration by the Merchant Shipping Advisory Committee.

Approved Societies and Unemployed on Extended Insurance—An April 13 Mr JOYNTON asked the Minister of Health whether he was aware of the administrative difficulties of many national health approved societies which had a large proportion of unemployed members on the extended insurance period and for whom these societies only received half the administration allowance and whether he could make any announcements supplementing that allowance. Mr ROBERT HODSON said that the Minister had considered the representations made to him on the subject and had found it possible for the allowance to be increased by 50 per cent. as from the beginning of the present year.

Medical News

The ninety seventh half yearly dinner of the Aberdeen University Club London will be held at the Café Royal Regent Street W on Thursday April 29 at 7 for 7.30 p.m. followed by dancing from about 9.45 until midnight. The chairman of the evening will be Sir Peter Chalmers Mitchell, C.B.E., LL.D. F.R.S. and the chief guest will be Sir Benjamin Robertson K.C.S.I. K.C.M.G. LL.D. The honorary secretary's address is 51 Harley Street London W.1.

A lecture on 'Hypnosis Suggestibility and Progressive Relaxation An Experimental Study' will be delivered by Dr William Brown before the British Psychological Society at the London School of Hygiene and Tropical Medicine Keppel Street W.C. on Thursday April 29 at 8.30 p.m.

The committee entrusted with the arrangements for a memorial to the late Dr Carey Coombs in conjunction with the Bristol Medical-Chirurgical Society has arranged with Mr Laurence O'Shaughnessy F.R.C.S. to deliver a lecture on "The Operative Treatment of Cardiac Ischaemia." This will be given at 8.30 p.m. on Wednesday May 5 in the Physiological Lecture Theatre of Bristol University.

A new wing at the City of London Hospital for Diseases of the Heart and Lungs Victoria Park F. will be opened by Queen Mary on April 29. An appeal for £25,000 has been made for the provision of the new wing and Queen Mary has consented to receive at the opening ceremony purses given towards this sum.

The Lord Mayor of London and the Lady Mayoress have issued invitations to a festival dinner for the National Hospital for Diseases of the Nervous System Queen's Square to be held at the Mansion House on Tuesday April 27 when H.R.H. the Duke of Kent will be present.

A meeting of the Medical Section of the British Psychological Society will be held at 11 Chandos Street Cavendish Square, W. on Wednesday April 28 at 8.30 p.m. when Dr Jane Suttie will read a paper on 'Biological Echoes in Clinical Psychotherapy.' A discussion will follow.

A quarterly court of the directors of the Society for Relief of Widows and Orphans of Medical Men was held on April 7 with Dr C. Kempster vice president in the chair. The deaths of three members were reported and five new members were elected. A donation of £111 has been received from the Royal Medical Agency. A first application for relief was received from a widow of a member. The court voted her a yearly grant of £50 from the ordinary funds and one of £25 from the Brickwell Fund. The number of widows in receipt of relief has now reached a total of sixty which is the largest number to be dependent on the society at any one time. One of these widows celebrated her nineteenth birthday in March. She has been on the funds for forty one years and has received over £3,000 from the society. This is but one of many examples of the benefit that may be obtained by membership. Relief is only given to the widows or orphans of deceased members. £66 has been received from the Inland Revenue representing the return of income tax for the year ended April 5. The annual general meeting of the society will be held on May 19 at 5 p.m. Membership is open to any registered medical man who at the time of his election is resident within a twenty mile radius of Charing Cross. Full particulars may be obtained from the secretary at the offices of the society 11 Chandos Street Cavendish Square W.1.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1.

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QUERIES AND ANSWERS

Sleep Rolling

Dr H. STIVEN (Cairo) in reply to J. M. C. (*Journal* March 27 p. 694) writes: Try Coué's method of talking quietly to the child loud enough for the subconscious mind to hear but not loud enough to wake the child. Tell him to keep still over and over again about twenty to forty times each night and in two or three nights the habit will be cured.

Ownership of a Medal

Mr T. A. ANDERSON (Central High School Beaufort West S. Africa) writes: With reference to the inquiry by Dr Norman Klass in your issue of November 21, 1936 (p. 1066) about the bronze medal picked up in this district, you may be interested to hear that I have succeeded in tracing a daughter of the late Dr L. J. Newnham in this country and have now restored the medal. Her father came out to practise in South Africa at one time at Malmesbury later farther inland. He died in 1918 at the age of 67. The medal must have lain for years on the shelf. I have not yet succeeded in accounting for its presence in these parts. Charing Cross Hospital may be interested in the above information.

External Use of Iodine

Colonel R. J. BLACKHAM (London E.C.4) writes: As author of a first aid manual which has passed through very many editions and is still used for ambulance classes in India I have been particularly interested in the correspondence opened by Dr J. C. Macaulay in the *Journal* of February 13 (p. 374). Dr Macaulay has been at pains to point out that he did not mean to convey in his first letter that iodine was useless but that it does not suit some cases but some writers who have followed him have been unequivocal in their complete condemnation. The use of iodine known for so many years as the surgeon's wooden sword as a skin antiseptic is very well established but I think all recognize that the drug is an irritant—in fact much of its value is due to this fact. Hale White in the book which has served so many generations of students says it is a disinfectant and irritant so Dr Macaulay has only called attention to a quality of iodine which has been drummed into his pupils by every professor of pharmacology. This is agreed but when it is suggested that the action of the drug is superficial your correspondents are on debatable ground since authorities such as Cushing contend that it penetrates into the deeper layers of the skin. The most recent books on surgery continue to advise an alcoholic solution of iodine in preparation of the skin for operations. For instance Rowlands and Turner speak of "the remarkable power which the solution possesses of destroying the cutaneous

organisms" (1936 eighth edition p. 18). Again Rose and Carless's *Manual of Surgery* another students' bible with regard to skin preparation for operations, says: "A 2 per cent solution of iodine in 95 per cent of alcohol is painted over it [the skin] and allowed to dry and a sterile dressing applied. The painting with iodine is repeated once again at the time of the operation." I fully endorse the views of those correspondents who have emphasized the value of spirit and frizz balsam for the first aid treatment of wounds but I think they are inferior to iodine. I would like to call attention to the difficulties in carrying liquids when travelling. It is always the iodine bottle which gets broken and I have suffered much loss from such breakages. For some years past I have always carried unguentum iodintinctum or rather a proprietary article of the same class. I have found this preparation entirely satisfactory for first aid treatment of wounds and abrasions and the iodine which it contains certainly does penetrate.

Income Tax

Deduction for Rent

J. S. has for some years been allowed a deduction of £22 a year—that is one half of £44 the amount of rent payable before he bought the property. The inspector of taxes states that the deduction should have been one half of £34—that is £17—as £34 is the amount of the net Schedule A Assessment.

* * The inspector is correct where property is owned the rent should be reckoned for that purpose at the amount of the net Schedule A assessment. But J. S. is entitled in addition to deduct the amount of any expenditure on repair or decoration of that part of the premises which is used for professional purposes.

LETTERS, NOTES, ETC

Herpes Zoster and Varicella

Dr F. A. E. SILCOCK (Leicester) writes: I was much interested in the report of another case of herpes zoster and varicella by Dr J. G. Bennett in your issue of April 3 (p. 738) as I published a case of Herpes Zoster Brachialis with concurrent Varicelliform Eruption together with two photographs of the case and a few references to the literature in the *British Medical Journal* of July 22nd 1933. My case however was in a man aged 74 years. Following my communication there were several others who wrote and described the coincidence of the two conditions.

Vincent's Angina

Dr EUSTACE THORP (Sunderland) writes: I have been seeing lately quite a number of cases of Vincent's angina all of which have been bacteriologically confirmed and nearly all have been bilateral. This would seem to discount the general opinion that the disease is characterized by being unilateral.

Iodine in Pulmonary Tuberculosis

Dr W. O. C. HUNT writes: Recently I have been treating cases of pulmonary tuberculosis with graduated doses of triiodine giving as a maximum 5 minims three times a day. The results have been amazingly good. In a busy general practice the opportunity for studying these results are not so good. I wonder if some one in a suitable place for observation would give this treatment a trial.

Protamine Zinc Insulin

We have received from Messrs Boots a copy of their new booklet on protamine insulin (with zinc) suspension. This gives details of standardization and testing together with clinical results, the dosage for new and old cases of diabetes and particulars of the modified diet which should be used when changing over to the new treatment. The booklet concludes with a useful list of references to recent papers. Copies may be had on application to the Wholesale and Export Department Boots Pure Drug Co. Ltd. Station Street Nottingham.

Disclaimer

Dr W. A. BURNETT writes disclaiming any responsibility for or connexion with correspondence referring to him and his work appearing in the *Northern Rhodesian Advertiser*.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

318 Spontaneous Recovery in Schizophrenia

A. FAURBYE (*Nord med Tidsskr* February 6, 1937 p 206) draws attention to the need for accurate information with regard to the frequency with which spontaneous recoveries from schizophrenia occur. Only with such information is it possible to gauge approximately the value of the various new remedies advocated for this disease. As recoveries under ordinary institutional treatment and occupational therapy can be anticipated only in the first few years of the disease the author has chosen such comparatively early cases for his study at a mental hospital in Denmark. In November, 1936 he made up the therapeutic balance sheet of seventy-two patients whose disease was of comparatively recent origin and whose admission to the hospital dated at least one year back. These patients were cases of simple or katatonic dementia praecox etc. Of the forty patients discharged from the hospital as many as thirty had more or less recovered. A similarly high proportion of spontaneous remissions has been observed in several other mental hospitals to judge by the literature, and Lange found seventy-seven remissions among 100 cases. The author considers his own proportion of remissions (42 per cent) as an underestimate for of none of the patients still in his hospital could it be assumed that remissions would certainly not occur later. The proportion of remissions was highest in the katatonic group in which the best recoveries were observed. The author commends his observations as a sobering corrective to the enthusiastic advocates of new methods of treatment whether they be by Sakel's insulin-shock or by any other process.

319 Carcinoma of the Lung

O. FEUCHTINGER (*Z. Tuberk.* Ed 77 Heft 2 1937 p 81) discusses the aetiology and differential diagnosis of carcinoma of the lung, with special reference to ten personal cases. He finds no proof for the belief that tuberculosis and carcinoma cannot coexist or for the theory that carcinoma arises necessarily from a precancerous condition occasioned by tuberculosis. Only three of his cases had tuberculosis and in none of them was it associated in any way with the carcinoma. He suggests that when tuberculosis and tumour coexist this might occur because of a simultaneous appearance of both (very rarely) because an old tuberculous lesion develops into a cancerous one (rarely) or more commonly because a latent or active tuberculosis turns to carcinoma or a carcinoma activates tuberculosis. Tobacco appeared to have some significance for seven of the author's patients were heavy smokers. The ratio of men to women was 8 to 2 confirming the findings of other authors. Heredity appeared to be significant for four patients with a family history of cancer three had cancer of the lung. Aetiological factors mentioned by other authors—for example, dust profession habitat avitaminosis war conditions etc.—were not found in Feuchtinger's cases. He admits that the differential diagnosis is difficult but maintains that diagnosis is possible in 50 per cent in the first and 80 per cent in the later stages of the disease. A ray examination bronchoscopy and exploratory thoracotomy yield the best results in differential diagnosis. In the history the presence of possible aetiological factors especially occupational ones may help. Physical examination rarely allows of differentiation between cancer and tuberculosis (all ten cases had been diagnosed as tuberculous). The presence or absence of tubercle bacilli in the sputum does not exclude the occurrence of cancer but bloody sputum in the absence of tubercle bacilli in elderly people is strong presumptive evidence of cancer. Tumour cells are only rarely found in the sputum. Haematological and serological tests are only of value in conjunction with

other evidence. Increasing pain and dyspnoea in the thorax after tapping of a pleural exudate is in the author's opinion very suggestive of the existence of carcinoma.

320

Obesity in Women

T. BOTELHO (*Ann. bras. Gynec.* January 1937 p 25) maintains that a sharp distinction cannot be made between constitutional and acquired obesity, the neuro-endocrine factor being the important cause of the obesity. Two definite glandular groups may be distinguished—namely, an excito-anabolic group (pancreas anterior lobe of hypophysis adrenal cortex thymus spleen and parathyroids) and an excito-katabolic group (thyroid posterior lobe of hypophysis adrenal medulla testicle, and ovary). The preponderance of either of these groups may lead to obesity. Feminine obesity may appear in two different clinical types—namely a superior type in which the upper half of the body is affected and an inferior type in which the lower half of the body is involved. In the first type thyroid deficiency predominates. Three subtypes of the second type may be described—namely the Rubens type, the breeches type and the pantaloons type—according as the fat develops above the trochanter at its level or below it. In all three subtypes there is an ovarian deficiency. In dienecephalo-pituitary deficiency the fat involves the proximal ends of the upper and lower limbs. As regards treatment, Botelho regards regulation of the diet to suit the individual basal metabolism as most important and alludes to risk of the occurrence of deficiency diseases in restrictive diets. The key to the dietetic treatment of the obese patient consists in a proper amount of glycides and a minimum quantity of proteins and lipids. Thyroxine oestrin and progesterin are valuable aids in the different types of obesity. Protein therapy stimulates the glandular system while dinitrophenol increases the metabolic rate. Care should be taken in the administration of mercurial diuretics. Gymnastics and massage are useful subsidiary measures.

Surgery

321

Paget's Disease of the Breast

L. CLARENCE COHN (*Arch. Surg.* Chicago February 1937 p 201) draws attention to the evidence presented by Bloodgood in 1924 that Paget's disease of the female nipple may be a preventable disease and curable in its early stages. Although the lesion is comparatively uncommon the author has observed in the last two years five cases from which he draws several conclusions. It was noticed that there is no clinical difference between a small benign lesion of the nipple and one which shows fully developed Paget's carcinoma. If such a lesion does not heal with cleansing and protective measures a biopsy should be performed. This should consist of complete excision of the nipple the areola and the central zone of the breast beneath. Fully developed cancer of the nipple may be present without a fissure or ulcer; there may be only slight keratosis surrounded by an area of irritation the lesion being confined to the nipple only. When biopsy shows Paget's carcinoma complete removal of the breast should follow although pre-operative irradiation of the supraclavicular area axilla, and breast may be carried out. When an ulcer on the nipple is associated with a palpable mass in the breast or with palpable axillary glands one course of pre-operative irradiation may be given but when only an insignificant lesion of the nipple is present irradiation should not be done without a previous biopsy as an ulcer which is the previous seat of cancer may heal under treatment leaving the cancer in the breast and axillary glands unobservable. No conclusion has been come to as regards the increase of cures by the addition of pre-operative irradiation. Nine cases of Paget's cancer of the nipple are described and of these

four were clinically malignant and in five the diagnosis was settled by biopsy. Of the four patients who in addition to an ulcer of the nipple had a mass in the breast three died within a year and five months. Of the five cases in which the lesion was confined to the nipple one patient died more than five years after operation while three are living and well from one to five years after operation. The fifth patient was followed for five years and was then lost sight of. Comparison of the results in these two series shows that operation to be successful must be in the early stages while the lesion is still confined to the nipple.

322 Epicondylar Fractures of the Elbow

J. VERBRUGGE (*Scalpel Liège*, February 20 1937 p 225), in advocating the surgical treatment of epicondylar fractures of the elbow with displacement gives many reasons in favour of operation as compared with other methods of treatment. Intervention is short lasting not more than twenty five minutes at most. Reduction is easy as the fracture is exposed to view. Immobilization can be carried out at an early date. Dressing after operation is simple and the result of this treatment is a lasting and firm reduction of the fracture. Other methods entail immobilization for a long period, the wearing of an apparatus, repeated manipulations and radiography, and sometimes a second reduction if the anatomical result is not satisfactory. A review is given of thirty one cases of epicondylar fracture in children between the ages of 6 and 15 years. Of these ten were fractures without displacement, and were treated by immobilization in plaster with satisfactory results in all cases. There were seventeen cases of fracture with displacement and of these four were treated without operation with varying results. The remaining seventeen cases in the series underwent operation and in every case healing was by first intention, without fever, suppuration, or any nervous complications. The after results in sixteen cases showed the complete recovery of movement in the elbow and the joint was quite normal. In one instance where the fracture was of six months duration before operation was carried out there was a reduction of 20 per cent in extension and slight varus. The article is fully illustrated and the operative technique described. Emphasis is laid on the advisability of fixation by means of nails. Early operation is recommended especially in the case of children as the formation of callus which may take place in under ten days makes the repairing of the surfaces of the fracture more difficult. Immediate operation is necessary in cases with nervous complications.

323 Value of Individual Fingers

W. PORZELT (*Zbl. Chir.* March 6 1937 p 550) disagrees with the almost universally accepted view that the first finger is the most important after the thumb and that the rest decrease in value according to their numerical order. He points out that when the phalanges and metacarpals with their respective muscles are taken as an anatomical unit the middle finger becomes more important than the first. Because the strong adductor pollicis arises from the third metacarpal, loss of the second results in greater weakness of the hand than loss of the first finger with its metacarpal. Porzelt holds that the little finger, owing to the origin of the opposing muscles from the fifth metacarpal, holds the third place in the value of the fingers. The ring finger is the least useful. Loss of the first finger by no means results in irreparable damage to the function of the hand. The author has satisfied himself that with a little practice the hand's cunning for work, entailing complex movements can be regained. He is of the opinion that the traditional fear of sacrificing a healthy first finger in repairing a damaged thumb is unfounded. He regards as justifiable the attempt to replace a mutilated thumb with the first finger in conjunction with the second. More is to be gained thereby than by leaving the first finger intact.

500 n

Therapeutics

324 Hypertonic Saline in Migraine

G. VILLEY and J. BUVAT (*Paris med.* February 27 1937 p 189) draw attention to an article published in 1934 describing three cases in which epileptic patients were treated with intravenous injections of hypertonic saline. As a result of the success obtained in these cases this method of treatment has been tried in migraine crises with interesting results. Three cases are reported in which the symptoms were similar—violent headache, vomiting, depression and general malaise. Injection in each case brought about an almost immediate cessation of symptoms, and in one case the patient was able to resume work a few hours after treatment. The cases treated in this way are not sufficient for any definite conclusions to be drawn, but it is suggested that the success in these three instances justifies the authors in continuing with this method of treatment in any suitable cases, and also in trying the effect of hypertonic injection as a preventive measure in patients suffering from shock or other crises likely to lead to migraine.

325 Adrenaline in Malaria

M. ASCOLI (*Munch. med. Wschr.* March 5, 1937, p 370) administers adrenaline for the treatment of malaria in daily intravenous doses beginning with 1/100 mg and increasing the dose by 1/100 mg daily until it reaches 1/10 mg. The latter dose is repeated for about three weeks. The best results have been obtained in chronic malaria, with splenomegaly, anaemia, and cachexia. It has also been of value in fresh infections. Resistance to quinine often disappears and the quinine dosage can be lowered when adrenaline is employed. Adrenaline, as affecting the contractility of the spleen, has been used in the treatment of splenomegalies other than of malarial origin. Ascoli maintains that adrenaline cures the malarial patient by sterilizing the spleen and making relapses through further protozoal invasion impossible. Of fifteen patients treated two years ago and twenty one year ago none show enlargement of the spleen again and none have relapsed. Evidence is accumulating which proves that the adrenaline treatment raises the resistance of patients to malarial infection. Few cases have been resistant to treatment. In some an increased dosage has achieved success. The author points out that adrenaline only reduces congestive enlargement of the spleen. Fibrotic changes in it are left uninfluenced.

326 Insulin Shock in Schizophrenia

E. KÜPPERS (*Dtsch. med. Wschr.* March 5 1937 p 377) has treated sixty nine cases of schizophrenia with insulin hypoglycaemic shock on the lines laid down by Sakel of Vienna. In thirty-four cases the treatment was completed and in the remainder it was still being continued. Among the thirty four cases were eight in which this treatment was followed by complete remission—that is the disappearance of every abnormality indicative of schizophrenia. In fifteen cases improvement was achieved, seven of these patients being able to return to their work and three being fit enough to be discharged, while the remaining five had not improved so much. Professor Küppers is so pleased with this proportion of complete and incomplete recoveries that he considers them far better than those achieved by earlier methods of treatment and he thinks there can be no doubt as to the outstanding merits of this treatment. A distressing sequel in one of his cases was an intestinal catarrh which after its acute phase had subsided became chronic. Another undesirable effect of this treatment is its diminution of the patient's resistance to infections and it was often necessary to discontinue the treatment because of sore throats or boils. These drawbacks should not, however, disqualify patients from receiving the treatment.

which should be started as early in the disease as possible. Much can be done to minimize the ill effects of the treatment by giving the patient a whole holiday from it on certain temperature indications which the author describes in detail. He has not yet had any deaths from it and to judge from the recent literature of some 400 cases the mortality from this treatment can be put at about 15 per cent (six deaths). In consideration of the benefits of this treatment and the seriousness of the disease this mortality should be accepted as a worth while risk.

Ophthalmology

327

Sympathetic Ophthalmia

D. H. TROWBRIDGE, jun. (*Amer J Ophthal* February 1937 p. 135), reports on thirty-two cases of sympathetic ophthalmia. Most perforating injuries and most cases of sympathetic ophthalmia occur between October and April, this fact may be related to occupational pursuits. Most of the cases had soft exciting eyes. One case resulted from an exciting eye with fifteen years post-operative irritability, and another followed a non-perforating injury to an eye perforated fifteen years previously; one occurred nineteen years after the injury. The earliest inflammation was twenty-three days after injury. The vision of either eye at the onset of the inflammation gives no indication of the outcome nor were the cases with a ciliary wound predominant. Delayed or incomplete healing may justify an unfavourable prognosis. Early removal of the exciting eye after the appearance of sympathetic ophthalmia leads to a more favourable outcome. Photophobia and ciliary injection are the earliest signs in the sympathizing eye. Of the eight post-operative cases four followed cataract extraction. There were two instances of choroidal sarcoma with no operation or wound having caused sympathetic ophthalmia and three cases followed purulent infections. Discussing the pathological findings very fully it is noted that little prognostic help can be obtained from the extent or situation of the infiltration in the exciting eye. It is possible that enucleation with a long piece of optic nerve may afford better protection than evisceration. One case responded favourably to the elimination of a focus of infection and two others to irradiation with ultra violet light.

328

A Test for Aniseikonia

D. G. ALLR (*Arch Ophthal* Chicago February 1937, p. 320) points out that eyes can perceive a difference in size of retinal images of less than 0.25 per cent, that a difference in size insufficient to prevent fusion may cause eye strain and that in some cases images may be equalized by altering the base curve and thickness of lenses. He describes a stereoscope with rotary prisms and special targets for determining aniseikonia. A difference of 1 dioptre between spectacle lenses causes aniseikonia of 2 per cent, one of 2 dioptres gives 4 per cent and 3 dioptres difference results in 6 per cent difference in image size. Eye strain tends to appear if there is over 2 per cent of aniseikonia unless suppression of one image occurs and it is in these cases that size lenses may prove of value in equalizing the images and restoring stereopsis.

329

Kerato-conjunctivitis Sicca

E. AND T. DALSGAARD NIELSEN (*Læskr Læg* February 25, 1937) give an account of seven patients suffering from kerato-conjunctivitis sicca which they regard as a disease sui generis. In their experience, and according to the literature it is practically limited to women over the age of 40. It is bilateral and characterized by hyperaemia of the conjunctivae, reduced tear secretion, thickening of the epithelium of the cornea, a sense of

itching or burning, photophobia, reduced acuity of vision, dryness of the mouth and hoarseness. In five of the authors' cases there was a history of rheumatism of the joints or muscles, and of the two cases in which the temperature was taken over a considerable period one was found to be slightly febrile. The onset of the disease was insidious in every case and its further course was chronic and progressive. While four of the patients had been reduced to a state of chronic invalidism by the local phenomena and the associated general ill health, the other three were but little disturbed by this ailment, the treatment of which has hitherto achieved little. The recognition of its true character is however desirable and it must not be lightly dismissed as a manifestation of climacteric nerves. The authors have studied the nasolacrimal reflex in this disease and come to the conclusion that it is due to a chronic infection of the vegetative nervous system leading to hypofunction of certain glands. Considering the sex and age of the patients these glands seem to be connected with the sex functions of women.

330

Prevention of Ocular Complications in Tryparsamide Therapy

M. FINE AND H. BARKAN (*Amer J Ophthal* January 1937 p. 45) attribute the distrust of this therapy to the possibility of damage to the optic nerves. Possibly a very slow elimination of the drug in some cases causes a cumulative effect. Clinically the visual field rapidly contracts; good central vision remains, there are subjective symptoms and a slow appearance of atrophy. But recovery is prompt on stopping the drug. A pre-existing syphilitic lesion of the optic tract does not necessarily preclude tryparsamide atrophy, but pre-existing atrophy or the field contraction of early atrophy constitute to many writers a definite contraindication to the therapy, though there is no evidence that such lesions are aggravated by tryparsamide treatment. There is no connexion between dosage and the incidence of atrophy. It should be remembered that in neurosyphilis subjective examination is unreliable and that central vision being preserved the may not appreciate early changes in the peripheral field. Fundus changes appear three to six weeks after various loss of vision or field. Early field changes, therefore though difficult to elicit should be taken as the danger signal. The fields fundi and vision should be examined before the first, third, fifth and tenth and then before every successive tenth injection. At other times subjective symptoms call for examination of the vision and field. Any objective disturbance is an indication for termination of the treatment.

331

Intracranial Venous Sinus Thrombosis

F. B. WALSH (*Arch Ophthal* Chicago January 1937 p. 46) divides thrombosis into aseptic which characteristically occurs in non-paired sinuses, tends to organize or thrombose, is rarely associated with meningitis and is followed in half the cases by cerebral extravasation and softening, and septic found in paired sinuses, often followed by meningitis and cerebral abscesses, rarely associated with cerebral extravasation and always accompanied by surrounding lymphangitis. In septic thrombosis of the cavernous sinuses there is chemosis and exophthalmos, the latter dependent upon extension forward from the cavernous sinus and vascular obstruction. The edema of the lids is more marked in the upper lid especially if the infection begins anteriorly. External ophthalmoplegia is rarely in fulminating cases. Paralysis of the external is the first sign of involvement of the trochlear nerve. If the ophthalmoscope gives little help in diagnosis, a retrobulbar injection and slight pupil dilation may be of value. The prognosis is many cases has no fundus changes. The author describes six cases. Post-mortem he found a bacterial infection, oedema of the retina, thrombosis of the

the choroid, slight papilloedema, and hypophyseal necrosis. Thrombosis of the longitudinal sinus usually occurs in debilitated infants and is frequently accompanied by Jacksonian convulsions. Conjugate deviations are common, while papilloedema and vascular engorgement of the scalp retina, and conjunctiva are inconstant. The signs of increased intracranial pressure come on abruptly, fluctuate, and are non-progressive. In thrombosis of the lateral sinus bilateral papilloedema occurs often but does not indicate a grave prognosis. Sixth nerve paralysis indicates forward extension via the inferior petrosal sinus.

Obstetrics and Gynaecology

332 Simple Biological Pregnancy Test

N J KUSTALLOW (*Zbl Gynäk* January 30, 1937, p 269) has found that addition, to a fluid extract of hay, of the urine from a patient with an early uterine or an ectopic pregnancy causes in 30 to 90 seconds a cessation of motility in the ciliate infusoria (*Paramecium caudatum*) which are present and previously moved actively in straight lines. The immobilization, observed without use of a cover-glass is preceded by a substitution of linear by rotatory movements, in some cases by finely granular disintegrative changes and by a transference of the infusoria to the periphery of the preparation. It is but little affected by boiling the urine. The movements are unaffected by the urine of non-pregnant persons. A positive test is given in abortion so long as products of pregnancy remain, and in ectopic gestation the immobilization appears to occur more quickly than in uterine pregnancy. Since a degree of slower immobilization occurs in some pregnancy toxæmias (excluding eclampsia) and in septic gynaecological conditions, it would seem that a negative outcome of this test, for which further trials are asked, is of greater diagnostic significance than a positive

333 Caesarean Section

C J DUNCAN AND J B DOYLE (*New Engl J Med* January 7, 1937, p 1) present a ten-year study of Caesarean section (1926 to 1936) at the Boston City Hospital. In 22,880 deliveries 703 sections were performed with a mortality rate of 4.3 per cent. There were in all sixty-three operators of whom twenty-four were visiting surgeons, the remainder being house surgeons. The transverse cervical operation was most favoured, there being 480 cases, with a mortality 3.5 per cent, the classical section was done in 133 cases with a mortality of 6.1 per cent and in 70 operations in which the incision was a longitudinal one through the cervix the mortality was 7.1 per cent. There was a marked difference in the mortality rates of primary and repeated section—as compared with 6.8 per cent to 1 per cent—this being explained by the fact that repeat sections were done without previous vaginal examination. The indications for operation were extremely variable covering all varieties of toxic pregnancy and obstructed labour. It was noticeable that in the cervical sections lengthening of the time allowed for trial labour may be permitted.

334 Hyperfollicular Haemorrhage

R JOACHIMOVITS (*Wien klin Wschr* February 26, 1937, p 257) points out that the diagnosis of uterine haemorrhage due to follicular hyperactivity is essential for correct therapy. It is made in four ways (1) Five castrated mice are injected with 0.8 c.c.m. of urine five times in the course of two days. Forty-eight hours afterwards three vaginal smears are made and examined. 0.02 mg. folliculin per litre is sufficient to give positive results. The method is impracticable except in well-equipped laboratories. (2) Vaginal smears are examined. In cases of hyperfollicular haemorrhage the vaginal discharge shows the same characteristics during the menses and for some time afterwards

as that in the normal woman during the ninth to twelfth days from the onset of the period. These characteristics are cornification of the vaginal epithelial cells; many large columnar epithelial cells with small pyknotic nuclei lying together in groups; leucopenia; and much mucus. If the haemorrhage is continuous a check pessary is introduced to keep the vagina free of blood for a short time, thus avoiding contamination of the smear. (3) Mastalgia is present in a large proportion of cases of hyperfollicular haemorrhage. Experimentally it has been shown that folliculin produces swelling and pain in the breast, and in therapeutic administration of folliculin mastalgia denotes overdosage. (4) Histological examination of the uterine mucosa reveals, in cases of hyperfollicular haemorrhage the characteristic picture of the proliferative phase. Sporadic cases of hyperfollicular haemorrhage occur during the child bearing period, but the vast majority occur one to two years before the climacteric, at a time when physiologically large amounts of folliculin are being continuously produced. Provided that no other signs are elicited on careful palpation, conservative treatment will be indicated in the majority of these cases.

Pathology

335 Toxicosis Produced by Cereals

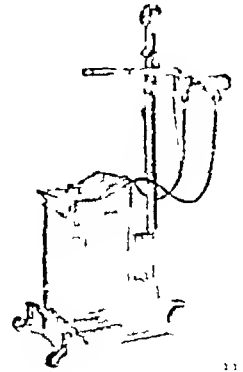
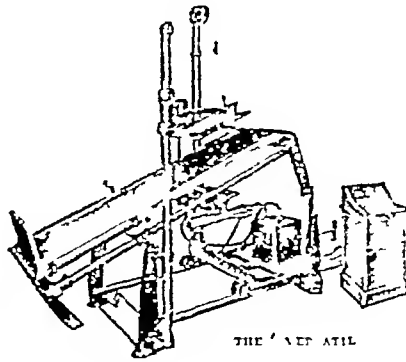
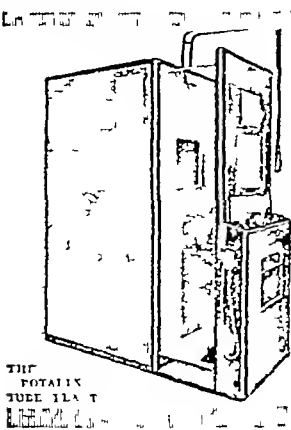
L A TSCHERKES (*Arch Sci Biol* 1936, p 13) has investigated the influence on animals of a predominantly cereal diet. The animals developed pathological conditions notwithstanding the addition of milk, yeast, and cod liver oil to the diet. The symptoms of the disease varied according to the animal species. White mice showed skin lesions, accompanied by necrosis of the helix toes, and tail. In rabbits there was a predominance of paralysis and convulsions while rats succumbed without any definite outward symptoms. As the diet contained all the known vitamins the pathological conditions could not be considered as deficiency diseases, and must be regarded as alimentary toxicoses.

336 Irradiation of Mouse Sarcoma 180

KANEIATSU SUGIURA (*Radiology* February, 1937, p 162) has investigated the effect of x rays of 200 kilovolts on mouse sarcoma 180. He irradiated *in vivo* tumours 0.3 to 1.5 cm in diameter through a hole slightly larger than the cross section of the tumour in a lead shield 5 mm thick. No tumour regressed with a dose of less than 500 r units and very few with less than 750 r units. With a dose of 1,000 r units about half of the cases showed complete regression, but with a dose greater than 1,500 r units tumour regression occurred in almost 100 per cent of cases. The lethal dose for the tumour growing in the animal was found to be about half of the dose required to destroy the viability of the same tumour *in vitro*.

337 Vitamin C and Capillary Fragility

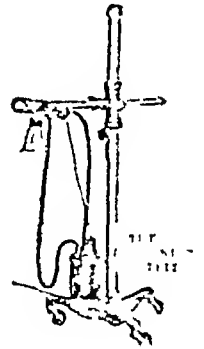
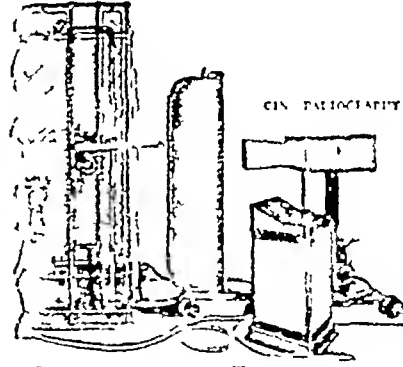
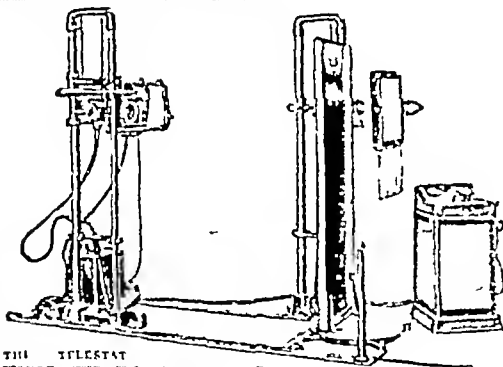
L COTTI (*Polichinico Sez. Med.*, March 1, 1937, p 134) states that a deficiency of vitamin C causes a capillary fragility which is manifested not only in well marked scurvy but also in the so-called prescurvitic state or latent scurvy which is revealed by the ordinary tests for capillary resistance, such as the lace test and Hecht's cupping glass test. Dalldorf and Russell have recently found that patients with well marked capillary fragility show a rapid increase of capillary resistance as estimated by Hecht's test one to two hours after an intravenous injection of 50 to 100 mg of pure vitamin C. Similar results were obtained by Cotti both with Hecht's test and the lace test. As entirely identical results were obtained both in normal conditions and in the haemorrhagic diathesis, he concludes that vitamin C produces an increase of capillary resistance.



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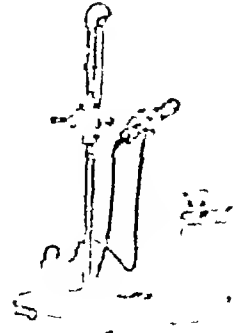
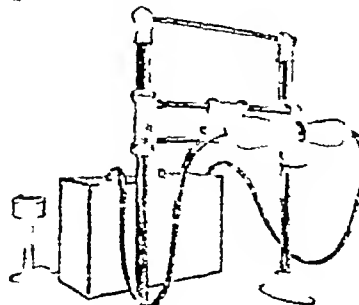
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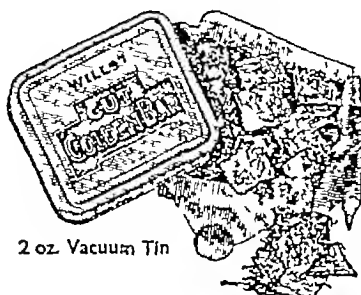
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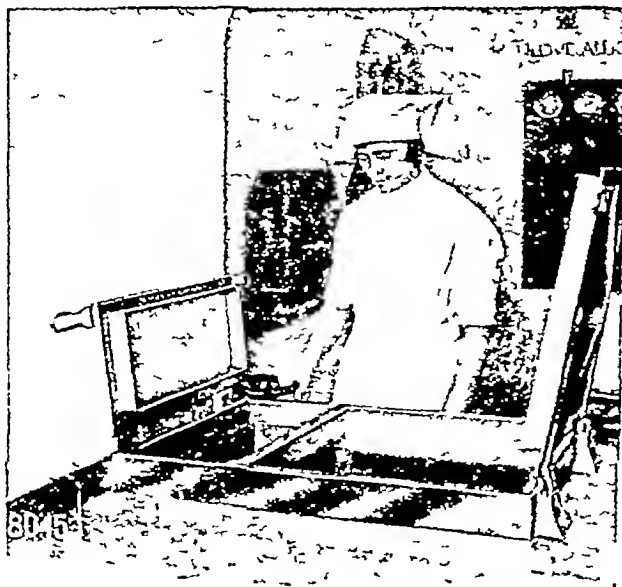


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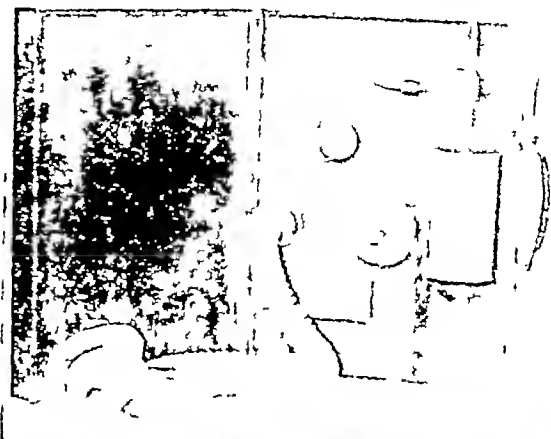
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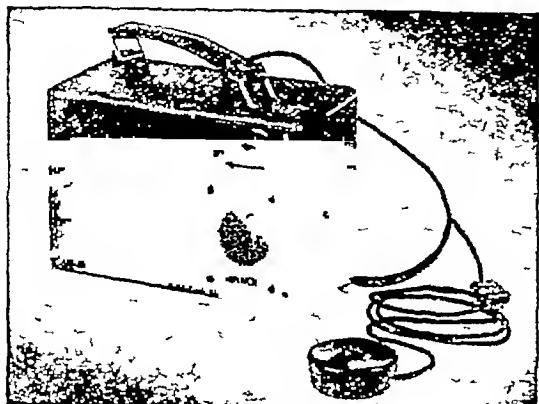
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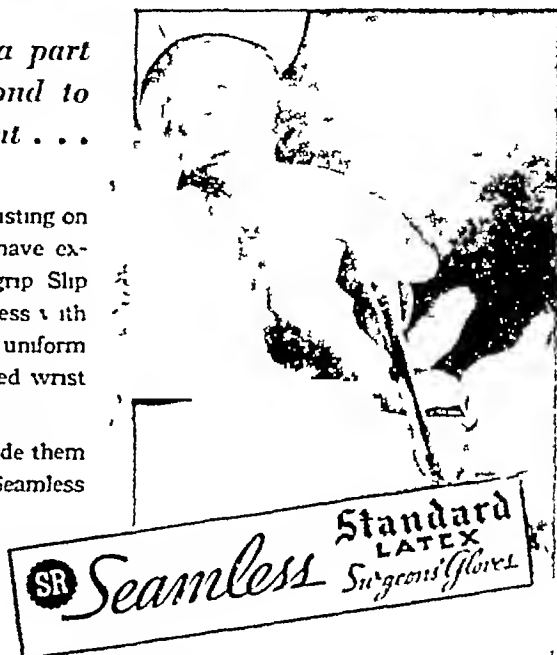
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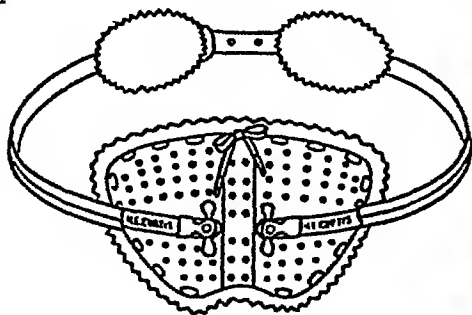
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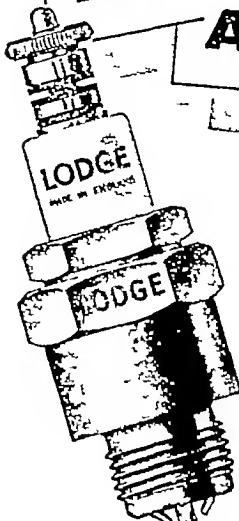
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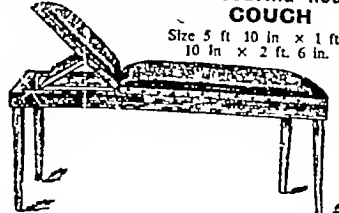
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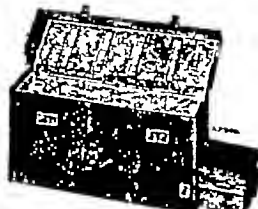
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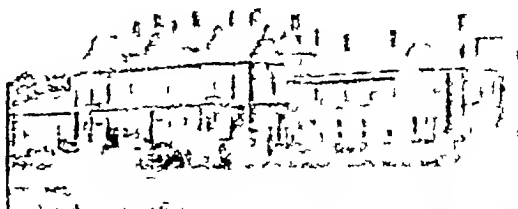
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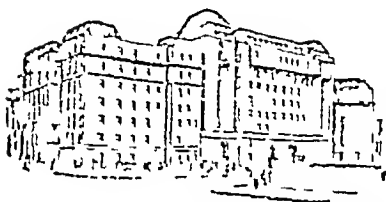
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Enjoy the tonic air of the Kentish Coast. Perfect for holidays or your permanent home. Ideal for the convalescent. Galley without noise. Music. Lovely sands for sea and sun bathing. Golf. Tennis.

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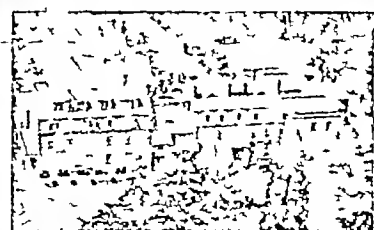
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Accommodates 25 Visitors. Modern Comfort.
Excellent table. A.A. and R.A.C. recommended.
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HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON, and FRIMLEY SANATORIUM.

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Council for treatment of Nervous and Curable
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New Out-patients—Men Mondays and Thurs-
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In-patients (a) 235 beds (both sexes) in wards or
separate rooms including 35 beds in a ward of
King's College Hospital which is in use as a
temporary annex of the Maudsley Hospital. (b) a
special ward (including some private rooms) for
those patients of each sex who are paying the full
cost and are otherwise suitable. Terms £5 a week,
but in case of patients with a legal settlement in the
County of London a less sum may be charged
according to means.

Terms include (with rare exceptions) all forms
of treatment for which there are exceptional
facilities as there is a staff of Consultant Specialists
and the Central Laboratory of London County
Mental Hospitals is attached to the hospital.
Inquiries of EDWARD MAPOTHER M.D. F.R.C.P.
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A Private Hospital for the Treatment
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in both Sexes

A modern country house, 12 miles from
Marble Arch in beautiful secluded grounds.
Fees from 10 guineas per week inclusive
Cases under Certificate, Voluntary and
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For Mental Disorders with or without Certificates.
Resident Physician CEDRIC W. BOWER.
Ordinary Terms Five Guineas per week.
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CHILD GUIDANCE COUNCIL

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The Child Guidance Council offers three Fellow-
ships each of £300 tenable for a year for half
time work at the London Child Guidance Clinic,
1 Canonbury Place (Islington N.1).

Candidates should hold the Diploma in Psycho-
logical Medicine or have evidence of psychiatric
knowledge up to a similar standard. Experience
in Paediatrics or School Medical Service will be
regarded as an asset.

The Fellows will be expected to commence work
in October this year. Further particulars and forms of application may
be obtained from the Secretary, Child Guidance
Council, Webbs House, Upper Webbs Place,
London W.C.1.

Applications should reach the Secretary not later
than May 10th 1937 and should be accompanied
by copies of three recent testimonials.

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BRITISH POSTGRADUATE MEDICAL SCHOOL

(UNIVERSITY OF LONDON)

AN INTENSIVE REFRESHER COURSE FOR GENERAL PRACTITIONERS will be held in the fortnight commencing May 31st as follows

1937	10.30 to 1.0	Conducted by—	2.0 to 4.30	Conducted by—
Monday 31st May	Principles of the Examination of Patients	Prof. THOMAS BEATTIE M.D. F.R.C.P.	Hæmorrhoids, Fistula and Fissure in Ano	Mr. C. I. SAUNTON M.R.C.S.
Tuesday, 1st June	Rheumatoid Arthritis	The Staff of the Red Cross Clinic for Rheumatism	Dyspepsia	Dr. T. C. HUNT M.D. F.R.C.I.
Wednesday 2nd June	Surgery of the Colon	Prof. G. GREY TURNER, D.Ch. M.S. F.R.C.S. F.A.C.S.	Common Respiratory Diseases	Dr. JAMES MAXWELL M.D. F.R.C.I.
Thursday 3rd June	New Therapeutic Agents	Dr. E. R. CULLEIN M.D. F.R.C.P.	Common Types of Anaemia Their Diagnosis and Treatment	Dr. JAMES M. VAUGHAN M.D. M.R.C.P.
Friday 4th June	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital, Gray's Inn Road, W.C.1	Diagnosis of Nervous Diseases	The Staff of the National Hospital, Queen Square, W.C.1
Saturday 5th June	Eye Conditions in General Practice	The Staff of the Royal London Ophthalmic Hospital, City Road, E.C.1	—	—
Monday 7th June	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1
Tuesday 8th June	The Acute Abdomen	Mr. R. J. McNEILL M.S. F.R.C.S.	Common Gynaecological Conditions	Dr. J. CHASSAR MOIR M.D. F.R.C.S. F.C.O.C.
Wednesday 9th June	Diseases of the Skin	Dr. R. T. BRAIN M.D. F.R.C.P.	Infectious Fevers	Dr. W. GUNN M.A. M.R.C.I. D.P.H. North Western Hospital, Lawn Road, N.W.1
Thursday 10th June	Demonstration of Local Anaesthesia	The Staff of the School	Injuries of the Ankle and Wrist	Mr. ST. J. D. BAXTON F.R.C.S.
Friday 11th June	Heart Attacks	Dr. D. E. BEDFORD M.D. F.R.C.P.	Thyroid Dysfunction	Dr. H. GARDNER HILL M.D. F.R.C.P.
Saturday 12th June	Psychiatry in General Practice	Dr. J. R. REES M.D. D.P.H.	—	—

Early application is recommended as only a limited number can be admitted. Fee 5 guineas

Similar courses lasting a fortnight will commence on the following dates

June 28th September 20th October 18th November 15th

Detailed programmes and any further information can be obtained from the Dean, British Postgraduate Medical School, Ducane Road, W.12

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES, 1937

The POST-GRADUATE COURSES to be held this year comprise

(1) A COURSE IN OBSTETRICS AND GYNAECOLOGY from July 12th to July 31st. Fee £8 1s

(2) A GENERAL PRACTITIONERS' COURSE from August 16th to September 11th

Fee £10 10s for whole Course, £6 6s. for two weeks

(3) A GENERAL SURGICAL COURSE from August 16th to September 11th

Fee £10 10s for whole Course, £6 6s. for two weeks

(4) A COURSE ON INTERNAL MEDICINE from October 18th to December 10th

Fee £15 15s

In addition to the above Courses in the following Subjects will be held at various periods of the year

INTERPRETATION AND SIGNIFICANCE OF MODERN DIAGNOSTIC METHODS Fee £3 3s

DISEASES OF THE BLOOD Fee £3 3s

ENDOCRINOLOGY Fee £3 3s

DISEASES OF THE NERVOUS SYSTEM Fee £3 3s

UROLOGY Fee £10 10s

X-RAY PHYSICS AND ELECTRO-TECHNICS Fee £3 3s

ULTRA-VIOLET RADIATIONS AND THEIR USES Fee £3 3s

OPHTHALMOLOGY Fee £5

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES Fee £3 3s

NEUROLOGICAL SURGERY Fee £5 5s

DISEASES OF NOSE, EAR AND LARYNX (Royal Infirmary) Fee £10 10s

DISEASES OF EAR, NOSE AND THROAT (Ear and Throat Dispensary) Fee £4 4s

OPERATIVE SURGERY OF THE EAR Fee £5

VENEREAL DISEASES Fee £10 10s

SURGICAL PATHOLOGY Fee £4 4s

ORTHOPAEDIC SURGERY Fee £4 4s

CLINICAL MEDICINE INCLUDING CHILD LIFE AND HEALTH Fee £5 5s

CLINICAL SURGERY Fee £4 4s

MODERN METHODS IN ANAESTHESIA Fee £3 3s

The Courses will be held only if a sufficient number of entries are received

Further particulars may be had on application to the Hon. Secretary, Post-Graduate Courses in Medicine, University New Buildings, Edinburgh

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m. — Post Graduates may enrol at any time for any period from 1 week to 3 months — Special facilities for Study Leave and for those wishing to take a course under the Grant aided Scheme for Post Graduate Study by Insurance Practitioners — Anaesthetic Courses — Clinical Assistantships — Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith W.6

POST-GRADUATE COURSES

Open only to Members of the Faculty of Medicine. Applications open 21st

PROCTOLOGY (Gordon Hospital, April 26th to May 1st, all days) PSYCHOLOGICAL MEDICINE (Maudsley Hospital, April 26th to May 29th, afternoons) DERMATOLOGY (St. John's Hospital, May 2nd to June 1st, afternoons) CHEST DISEASES Week End (Brompton Hospital, May 8th and 9th, all day, Saturday and Sunday) U.R.C.I. (CLINICAL AND PATHOLOGICAL) (National Temperance Hospital, June 1st to 17th, 10 a.m. to 5 p.m.)

Apply FELLOWSHIP OF MEDICINE 11, Upper St. Leonard's, London W.1

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SOME SUCCESSES

MD (Lond.),	1901-36 (9 Gold Medalists during 1913-36)	412
M.S. (Lond.),	1901-36 (including 4 Gold Medalists)	24
MB, B.S. (Lond.),	Final 1918-36 (Completed Exam I)	251
FRCS (Eng.),	Primary 1919-35	188
	Final 1919-36	183
M.R.C.P. (Lond.),	1919-36	270
DPH	(Various) 1906-36 (Completed Exam)	342
FRCS (Edin.),	1918-36	63
M.R.C.S., L.R.C.P.	Final 1919-36 (Completed Exam)	587
MD Various.	By Thesis. Many successes.	

Preparation for the above also for Medical Preliminary and all examinations leading up to M.R.C.S. L.R.C.P. or M.B. of various Universities also for M.R.C.P. (Edin.), D.P.M., D.M.S., D.T.M. & H.D.L.C., D.C.H., D.A., D.M.R.E., M.M.S.A., L.M.S.S.A., D.C.O.G. and some exams of Dominions Universities.

ORAL CLASSES

M.R.C.P. MD Primary and Final FRCS FRCS (Edin.) also Final M.B. B.S., and M.R.C.S. L.R.C.P. Museum and Microscope Work. Also Private Tuition

MEDICAL PROSPECTUS (48 pp)

CONTENTS The method and the cost of entering the Medical Profession. *Particulars of all Medical Examinations* Postal Courses, and Oral Classes. *Suggestions for the Higher Medical Examinations.* *Suggestions for the Higher Surgical Examinations.* *Suggestions for the Special Diploma Examinations.* *Refresher Courses.* *Openings for Women.* *Hints for writing theses.*

Medical Prospectus gratis along with list of Tutors etc. on application to the Principal 17 Red Lion Sq. London, W.C.1 (Telephone 1101born 6313)

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POSTAL AND ORAL COURSES

Full details of above and Private Tuition—H. C. ORRIN FRCS Surgeon's Hall, Edinburgh.

ROYAL MANCHESTER CHILDREN'S HOSPITAL, FENDLEBURY near MANCHESTER (30 Beds.)

RESIDENT SURGICAL OFFICER.

Applications are invited for the post of RESIDENT SURGICAL OFFICER. Salary £150 per annum. The appointment is for a period of six months commencing June 1st. Candidates must be unmarried and duly registered. Previous Hospital experience essential.

Applications stating age and accompanied by copies of not more than three recent testimonials to be sent to the undersigned not later than Friday April 30th. Canvassing directly or indirectly may disqualify.

By Order
H. HEARDMAN
Secretary

ROYAL DEVON AND EXETER HOSPITAL, EXETER (275 Beds.)

HOUSE PHYSICIAN—HOUSE SURGEON TO EAR, NOSE, AND THROAT DEPARTMENT

The above resident posts (male only) are shortly becoming vacant. The appointments are for six months, at a salary at the rate of £150 per annum with eligibility for re-election.

Candidates must possess registered qualifications. Applications, stating age, qualifications, and copies of three recent testimonials should be sent to the undersigned soon as possible.

S. S. COLE,
Secretary and Manager

April 15th, 1937

BRITISH POSTGRADUATE MEDICAL SCHOOL (University of London.)

THREE PART-TIME DEMONSTRATORS in Clinical Medicine are required for the British Postgraduate Medical School. Candidates will be required to attend on two mornings and one after-noon each week and carry out such duties as may be allotted to them by the Professor of Medicine. Applicants must hold the degree of M.D. or the Membership of the Royal College of Physicians. The appointment will be for one year and demonstrators will be eligible for re-appointment. They will receive an honorarium of £100 per annum.

Applications accompanied by copies of three testimonials must be received not later than the first post on Monday May 3rd 1937.

Further particulars can be obtained from the Dean, British Postgraduate Medical School, Ducane Road W.12.

MEDICAL COUNCIL OF INDIA.

Applications are invited from medical graduates of not less than ten years standing, preferably having experience of University medical teaching for the post of SECRETARY, MEDICAL COUNCIL OF INDIA. Office will be located in Delhi. Appointment from November 1st 1937—tenure for five years in the first place, the first year to be on probation. Pay Rs 1,700-75-1,500 per mensem. Benefit of the Medical Council of India Provident Fund on permanency provided that if the incumbent is a pensionable servant, or a pensioner he will not be eligible to subscribe to the Provident Fund. Will be governed by the Medical Council of India Regulations and Rules. Professional practice will not be allowed. Canvassing is a disqualification. Applications with copies of testimonials, which will not be returned, must reach the Secretary, Medical Council of India, Simla not later than June 15th 1937.

CITY OF COVENTRY

ASSISTANT MEDICAL OFFICER (WOMAN)

Applications are invited from duly qualified and registered women medical practitioners under 40 years of age and possessing a Diploma in Public Health for the post of Assistant Medical Officer in the City of Coventry Public Health Department. The duties will be mainly in connection with the maternity and child welfare scheme.

The salary will be £500 per annum rising by annual increments of £25 to a maximum of £700. The officer appointed will be required to devote her whole time to the duties of the post.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass the necessary medical examination as to fitness and to contribute to the Superannuation Fund.

Applications together with copies of three recent testimonials must be made on the prescribed form (which may be obtained on request) and must reach the undersigned on or before May 7th 1937.

A. MASSEY
Medical Officer of Health.

The Council House,
Coventry April 19th 1937

THE WELSH NATIONAL SCHOOL OF MEDICINE (UNIVERSITY OF WALES)

JUNIOR ASSISTANT IN THE MEDICAL UNIT

Applications are invited for the full-time post of Junior Assistant in the Medical Unit in the Welsh National School of Medicine Cardiff. The appointment is a temporary one for a period of two years at a salary at the rate of £250 per annum and the person appointed will be required to commence duties on October 1st 1937.

Further particulars of the appointment may be obtained from the undersigned by whom six copies of application accompanied by copies of not more than four testimonials must be received by May 2nd 1937.

S. C. EDWARDS Secretary
The Welsh National School of Medicine
The Parade, Cardiff
April 1937

YORK CITY COUNCIL

PUBLIC ASSISTANCE COMMITTEE

Applications are invited from qualified Medical Practitioners for the appointment of DISTRICT MEDICAL OFFICER of the West Medical Relief District of the City at an inclusive salary of £130 per annum. The successful applicant is required to reside or have a surgery within the District.

Further particulars as to the extent of the District may be obtained at my office. Applications should be forwarded to reach me not later than May 8th 1937.

JAS W DARNES
Public Assistance Officer
1 Museum Street,
York.

COUNTY BOROUGH OF CROYDON

CROYDON MENTAL HOSPITAL, UPPER WARLINGHAM SURREY

APPOINTMENT OF ASSISTANT MEDICAL OFFICER.

The Visiting Committee of the Croydon Mental Hospital are prepared to receive applications from Medical Men for the appointment of Assistant Medical Officer at the Croydon Mental Hospital. No married quarters are provided.

The salary will be at the rate of £350 per annum rising by annual increments of £25 each to a maximum of £450 per annum and the age of the candidates should not exceed 35. A further £50 per annum will be paid if in possession of the D.P.M.

Furnished apartments will be provided with board and washing and for the purpose of superannuation will be valued at £150 per annum.

Candidates must be registered under the Medical Act and preference will be given to those candidates who have held the post of House Surgeon or House Physician at a General Hospital.

The appointment will be subject to the provisions of the Asylum Officers Superannuation Act, 1909.

Applications to be made on forms to be obtained by sending a stamped addressed foolscap envelope to the undersigned with copies (not originals) of not more than three testimonials of recent date not later than 11 o'clock in the forenoon of Monday May 3rd 1937 endorsed "Croydon Mental Hospital Assistant Medical Officer."

Canvassing in any form is prohibited.

JOHN M. NEWMAN
Clerk to the Visiting Committee.

Town Hall
Croydon.
April 16th 1937

COUNTY BOROUGH OF PRESTON

SHAROE GREEN HOSPITAL.

MEDICAL SUPERINTENDENT

Applications are invited for the post of Medical Superintendent of the above-named Hospital and of Medical Officer in the Public Institutions.

The Hospital is appropriated for public health purposes and consists of 250 beds of which 35 are maternity beds. A consultant obstetrician has been appointed and the appointment of a visiting surgeon will shortly be made.

There are two Assistant Resident Medical Officers.

Preference will be given to medical men who have had administrative experience and hold higher qualifications in medicine.

Salary at the rate of £850 rising by biennial increments of £50 and a final increment of £12 10s to a maximum of £1,062 10s per annum. The salary is inclusive of house coal and light which are valued at £100 per annum.

The officer appointed will be required to pass a medical examination and to contribute to the Council's Superannuation fund.

Forms of application may be obtained from the Medical Officer of Health. Municipal Buildings Preston and must be returned to the undersigned by first post on May 8th 1937.

HERBERT E. NUTTER
Town Clerk.

Municipal Buildings
Preston.
April 17th 1937

LANCASHIRE MENTAL HOSPITALS

CALDERSTONES CERTIFIED INSTITUTION FOR MENTAL DEFECTIVES, WHALLEY NEAR BLACKBURN

APPOINTMENT OF DEPUTY MEDICAL SUPERINTENDENT

Applications are invited for the whole-time appointment of Deputy Medical Superintendent at the above Certified Institution. The salary is £750 per annum rising by annual increments of £25 to a maximum of £850 per annum. (A sum of £50 per annum in addition to the salary will be paid if in possession of the D.P.M. or a degree in Psychological Medicine of the London University.)

The appointment will be subject to the provisions of the Asylums and Certified Institutions (Officers' Pensions) Act 1918.

Applicants are required to send in their applications on a form to be obtained from the undersigned and applications endorsed "Deputy Medical Superintendent" should be sent to or delivered at my office not later than 11 noon on Friday May 7th 1937.

Canvassing either directly or indirectly will be a disqualification.

GEORGE EHTERTON
Clerk of the Board
County Offices, Preston

April 1937

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held but candidates will be required to attend for interview by a Selection Board.

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty.

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000.

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career.

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post-Graduate Study.

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools.

Applications for entry from intending candidates must be received not later than May 31st 1937

COUNTY BOROUGH OF ST HELENS ASSISTANT MEDICAL OFFICER OF HEALTH (FEMALE)

Applications are invited for the post of Assistant Medical Officer of Health (female). The duties will be mainly in connection with Maternity and Child Welfare and the School Medical Service together with such other duties as the Medical Officer of Health may direct. Candidates must have special experience in Midwifery and in the diseases of children and the possession of a diploma in Public Health will be regarded as an additional qualification. The salary will be at the rate of £500 per annum plus travelling expenses rising by annual increments of £25 to a maximum of £700 per annum. The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922, and to the successful candidate pursuing the necessary medical examination.

Forms of application may be obtained from the Medical Officer of Health, Town Hall, St. Helens, and completed applications accompanied by copies of not more than three recent testimonials should reach him not later than May 31st 1937.

FRANK HAUNWELL
Medical Officer of Health.

STAFFORDSHIRE COUNTY COUNCIL WOLDSLEY HOSPITAL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners (male) for the post of Assistant Medical Officer (Resident) at Woodsley Public Assistance Institution, by Stourbridge. Salary £200 per annum with board residence and laundry. Candidates should be unmarried. The appointment will be, in the first instance, for a period of 12 months but the successful candidate will be eligible for re-appointment for a further period of 12 months.

Facilities will be available for gaining experience in medicine, surgery, midwifery and care of children.

Applications, with copies of testimonials, should be sent to the undersigned not later than Thursday April 29th 1937.

H. L. UNDERWOOD
Clerk of the County Council
County Buildings
Stafford
April 14th 1937

CITY OF MANCHESTER WITHINGTON HOSPITAL—(1,200 Beds)

Recognized under the regulations for the F.R.C.S.

The Public Health Committee invites applications from registered medical practitioners for the under-mentioned posts—

1. ASSISTANT TO THE RESIDENT SURGICAL OFFICER (Grade 2) Salary £250 per annum with board residence and laundry. To commence mid-June.
2. ASSISTANT TO THE RESIDENT OBSTETRICAL OFFICER (Grade 2) Salary £250 per annum with board residence and laundry. To commence mid-June.
3. TWO ASSISTANT MEDICAL OFFICERS (Grade 3) Salary £200 per annum with board residence and laundry. To commence during July.

All the above appointments are subject to the Manchester Corporation conditions of service and each will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter.

Full information and forms of application may be obtained from the Medical Officer of Health, Sunlight House, Quay Street, Manchester 3, and applications for the posts should be received by him NOT LATER THAN MONDAY May 3rd 1937.

F. E. WAREBECK HOWELL
Town Clerk.

Town Hall, Manchester 2
April 19th, 1937

CITY OF MANCHESTER WOMAN MEDICAL OFFICER FOR MATERNITY AND CHILD WELFARE

The Public Health Committee invite applications from qualified medical practitioners who are experienced in midwifery and children's diseases. The salary is £600 per annum rising by annual increments of £50 to a maximum of £700.

Application forms with full information may be obtained on application to the Medical Officer of Health, Sunlight House, Quay Street, Manchester 3, and must be received not later than Sunday May 1st 1937.

F. E. WAREBECK HOWELL
Town Clerk.

ROYAL HAMPSHIRE COUNTY HOSPITAL WINCHESTER (167 Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post to take up duties on May 1st next. Six months' appointment. Salary £150 per annum with board residence and laundry.

Candidates who must be of British nationality to make application to the undersigned enclosing copies of three testimonials.

HERBERT MASLIN Secretary

April 3rd 1937

BOSTON GENERAL HOSPITAL (10 Beds)

RESIDENT MEDICAL OFFICER (male) required to take up duties as soon as possible. Salary £150 per annum with board residence and laundry.

The appointment is for six months and is renewable.

Applicants stating age, qualifications and previous experience with copies of three recent testimonials should be sent to the undersigned immediately.

GORDON FASTO Secretary

NEW SUSSEX HOSPITAL FOR WOMEN WINDLESHAM ROAD BRIGHTON

Applications are invited from qualified men for the post of HOUSE SURGEON. Salary at the rate of £100 per annum. To commence duties immediately.

Applicants, in writing accompanied by recent testimonials should be sent to—

TERCY J. SPOONER Secretary

April 14th 1937

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY CHAIR OF BACTERIOLOGY tenable at University College Hospital Medical School Salary £1000 a year Applications (12 copies) must be received not later than first post on May 14th 1937 by the Academic Registrar University of London W.C.1 from whom further particulars should be obtained

COUNTY BOROUGH OF CROYDON PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from qualified Medical Practitioners for the appointment of an Assistant Medical Officer of Health and Assistant School Medical Officer

Applicants must be Medical Men holding a special qualification in State Medicine or a Diploma in Public Health and must have had three years experience of the practice of medicine since obtaining their medical qualification

Preference will be given to applicants who—
(a) Have had some definite experience of School Medical work

(b) Have enjoyed special opportunities for the study of Diseases in Children

(c) Have had experience in Infectious Diseases and

(d) Have held one or more Resident Hospital appointments

The candidate appointed will be required to produce a recent satisfactory medical certificate of health and to devote the whole of his time to the duties of the office

The salary will be £500 per annum rising by annual increments of £25 to a maximum of £700 per annum The post is designated under the Local Government and Other Officers Superannuation Act 1922

Applications, to be made on forms to be obtained by sending a stamped addressed foolscap envelope to the Medical Officer of Health Public Health Department Town Hall, Croydon to whom they should be returned accompanied by copies (not originals) of not more than three testimonials of recent date not later than 10 a.m. on Wednesday May 5th 1937 endorsed Assistant Medical Officer of Health

Canvassing in any form is prohibited

JOHN M. NEVNHAM Town Clerk

Town Hall

Croydon

April 14th 1937

BOROUGH OF LUTON

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOLS MEDICAL OFFICER

Applications are invited for the appointment of Medical Officer of Health and Schools Medical Officer at a commencing salary of £1000 per annum The question of increments will be considered at the expiration of twelve months service A motor-car allowance will be paid by the Council

Candidates must have had a wide practical experience in Public Health Administration including Maternity and Child Welfare and Schools Medical Services The person appointed will be required to devote the whole of his time to the duties of the office and will not be allowed to engage in private practice

The appointment will be subject to the approval of the Ministry of Health and the Board of Education and to the provisions of the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass a medical examination

Full particulars of the appointment and forms of application may be obtained from the undersigned to whom applications together with copies of three recent testimonials enclosed in an envelope and endorsed "Medical Officer of Health" must be delivered not later than May 10th 1937

Canvassing, directly or indirectly will disqualify

Town Hall

Luton

April 21st, 1937

CITY OF SALFORD

ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER PART TIME (REVISÉD)

Applications are invited for the above-mentioned permanent post at a salary at the rate of £2.0 per annum for five sessions per week and £1 11s 6d per session for any extra services required

The post is not pensionable

Form of Application and Conditions of Service may be obtained from the Medical Officer of Health, 141, Reken Road Salford Lancs when the form should be returned accompanied by copies of not more than three recent testimonials not later than Saturday May 8th 1937

J. H. TOMSON

Town Clerk

CITY OF BIRMINGHAM

PUBLIC HEALTH DEPARTMENT—TUBERCULOSIS SECTION

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from single registered male Medical Practitioners for the post of ASSISTANT RESIDENT MEDICAL OFFICER in the Tuberculosis Section of the Public Health Department. The successful candidate will be employed both in a Sanatorium and in a Dispensary

Candidates should have held a resident general hospital appointment or an appointment in some institution set apart for the treatment of those suffering from tuberculosis Experience in the diagnosis and treatment of non-pulmonary forms of tuberculosis is desirable

The commencing salary will be at the rate of £400 per annum rising by £25 to £450 per annum with emoluments valued at £150 per annum

The officer appointed will be required to refund to the Council all fees allowances and emoluments (other than the foregoing) received by him

The successful candidate will be required to pass an approved medical examination to contribute to the superannuation scheme established under the Local Government and Other Officers Superannuation Act 1922 as amended by Section 82 of the Birmingham Corporation Act 1935 (Annuities for Widows) and if under 30 years of age to join the Birmingham Municipal Officers Widows and Orphans Pensions Scheme

The appointment will be terminable by one month's notice on either side

Forms of application and a summary of duties may be obtained from and should be returned with three recent testimonials to the Chief Clinical Tuberculosis Officer 151 Great Charles Street Birmingham 3 not later than May 8th 1937

F. H. C. WILTSHIRE

Town Clerk

Council House,
Birmingham 1

COUNTY OF THE PARTS OF LINDESEY

BOROUGH OF CLEETHORPES

RURAL DISTRICT OF GRIMSBY

ASSISTANT COUNTY MEDICAL OFFICER AND DISTRICT MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified male Medical Practitioners registered in the Medical Register as the holder of a diploma in sanitary science public health or state medicine for the above-mentioned whole-time joint appointment. (Combined area approximately 42,847 acres population 40,830) Candidates must not be over 45 years of age The inclusive salary will be £600 per annum with travelling allowance of £60 per annum and office and clerical assistance

The appointment will be made by the District Councils in accordance with the Local Government Act 1933 the Public Health (Officers) Act 1911 and the Sanitary Officers (Outside London) Regulations 1935 and the appointment under the County Council will be made in accordance with the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations 1930 The appointments of Assistant County Medical Officer and Medical Officer of the Grimsby Rural District will be designated posts under the Local Government and Other Officers Superannuation Act 1922

Applications, on forms obtainable from the Town Clerk of Cleethorpes must be received by him at the Council Offices Cleethorpes with copies of not more than three recent testimonials not later than May 8th 1937

Canvassing in any form will be a disqualification

Dated this thirteenth day of April 1937

ERIC W. SCORER

Clerk of the Lindsey County Council

ALBERT S. BARTER

Town Clerk of Cleethorpes

T. J. HARRISON

Clerk of the Grimsby Rural District Council

KENT COUNTY COUNCIL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Resident Assistant Medical Officer at the County Hospital Dartford (660 beds)

The salary for the appointment is £250 a year with residential emoluments which are valued at £120 a year A superannuation scheme is in operation and the successful candidate will be required to pass a medical examination

The appointment is a whole-time one and will be for a period of one year only and not renewable Forms of application can be obtained from the Public Assistance Officer Tonbridge Road Maidstone to whom applications must be sent by 10 a.m. on Monday May 17th 1937

W. L. PLATTS

Clerk of the County Council

Session House, Maidstone April 19th 1937

LONDON COUNTY COUNCIL

Applications invited from Medical Practitioners of at least one year's standing to under mentioned positions. Candidates must have held resident appointment in a general hospital for at least six months Married quarters not available

ASSISTANT MEDICAL OFFICERS (Grade II)—Salary £350—£425—£425 with board lodging and washing

(a) ST. JAMES' HOSPITAL Out-patient Road

Balham S.W.12—Surgeon's experience essential

(b) ST. STEPHEN'S HOSPITAL, 349 Fulham Road S.W.10—Duties medical experience in anaesthetics desirable

ASSISTANT MEDICAL OFFICERS (Grade III)—Salary £250 a year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions)

(a) BETHNAL GREEN HOSPITAL, Carbridge Road E.2—Duties of a general nature surgical experience desirable

(b) DULWICH HOSPITAL, East Dulwich Grove S.E.22—Medical duties experience in anaesthetics desirable

(c) ST. ALFEOES HOSPITAL, 48 Vauxhall Hill Greenwich S.E.10—Duties those of a casualty officer and charge of one T.B. ward

(d) ST. FRANCIS HOSPITAL (previously Constance Road Institution) East Dulwich S.E.15—Medical duties

(e) ST. GILES' HOSPITAL Brunswick Square S.E.5—Medical duties experience in anaesthetics desirable

(f) ST. NICHOLAS' HOSPITAL Plumstead S.E.18—Duties mainly medical experience in anaesthetics essential

No accommodation for a woman

Application forms obtainable (stamped addressed foolscap envelope, necessary) from Medical Officer of Health Staff Division 24, County Hall S.E.1 returnable by May 3rd

Canvassing disqualifies

LONDON COUNTY COUNCIL

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing for undermentioned positions. Candidates must have held resident appointment in a general hospital for at least six months Married quarters not available There is no accommodation for women

ASSISTANT MEDICAL OFFICERS (GRADE II)—Salary £250 a year together with board lodging and washing Appointment for one year only in the first instance (renewable for a second year under certain conditions)

(a) Archway Hospital Archway Road Highgate N.19 (2 positions)—Duties of both positions mainly medical but in one some surgery will be required

(b) Mile End Hospital Bancroft Road Mile End E.1—Duties mainly medical experience in anaesthetics desirable

(c) St. Andrew's Hospital Devon Road Bow E.3—Surgical duties experience of orthopaedics and ear nose and throat work desirable

(d) St. Luke's Hospital Sydney Street S.W.3—Duties mainly medical experience in anaesthetics desirable

Application forms obtainable (stamped addressed foolscap envelope, necessary) from Medical Officer of Health Staff Division 24, County Hall S.E.1 returnable by May 10th Canvassing disqualifies

BOROUGH OF BECHENHAM

ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications for this appointment are invited from registered Medical Practitioners of not more than 40 years of age commencing salary £500-£600 (according to qualifications and experience) rising (subject to satisfactory service) by annual increments of £75 to a maximum of £700 per annum

Candidates must have had at least three years professional experience and special experience in Ante-natal and Maternity and Child Welfare Work and the work of the School Medical Service The possession of a Diploma in Public Health will be an advantage

The person appointed will be required to devote the whole of his or her time to the duties and not engage in private practice Duties to be performed under the direction of the Medical Officer of Health

The post has been designated as established for the purposes of the Local Government and Other Officers Superannuation Act 1922 and the usual deduction of five per cent will be made from salary The successful candidate will be required to pass a medical examination

Applications must be made on forms obtainable from the Medical Officer of Health Town Hall Bechenham to whom they must be returned (accompanied by copies of three recent testimonials) not later than 12 noon on Tuesday May 4th 1937 in envelopes endorsed "A. M. O. of Health"

Canvassing, directly or indirectly will disqualify

C. L. P. STADDOCK

Town Clerk

Town Hall

Bechenham

April 14th 1937

BURY INFIRMARY (LANCS)
(127 Beds)**APPOINTMENT OF CASUALTY OFFICER (MALE)**

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of an R.S.O. a House Surgeon a House Physician, and a Casualty Officer.

In addition to his duties in the Casualty Department the Casualty Officer is also responsible for the In-patient and Out-patient work in connection with the Eye and Ear Nose and Throat Departments.

The appointment is for six months at a salary at the rate of £150 per annum with board residence, and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible endorsed Casualty Officer.

Further particulars may be had on application
H WILKINSON Supt.

CEN COED HOSPITAL, SWANSEA**(SWANSEA COUNTY BOROUGH MENTAL HOSPITAL)**

Applications are invited for the post of ASSISTANT MEDICAL OFFICER.

Candidates must be under 30 years of age. Commencing salary £350 rising by annual increments of £25 to £450 with emoluments consisting of board lodging laundry and attendance valued at £100 per annum.

The successful candidate will be expected to obtain the diploma in Psychological Medicine upon obtaining which he will receive an addition of £50 per annum. Preference will be given to those candidates who have experience as House Surgeon or House Physician in a General Hospital.

The appointment is subject to the provisions of the Asylums Officers Superannuation Act, 1909 and to certain conditions a copy of which may be obtained from the Medical Superintendent to whom applications giving full particulars, with copies of testimonials should be sent not later than April 28th 1937.

H L LANG-COATH
Clerk to the Visiting Committee.

FERNANAGH COUNTY HOSPITAL
ENNISKILLEN NORTHERN IRELAND**SURGEON/SUPERINTENDENT Required.**

Whole-time Appointment, with Consultation Practice confined to Co Fernanagh.
Salary £750 per annum plus £100 per annum in lieu of a residence.

Qualifications
(1) F.R.C.S. or M.Ch. and at least three years experience in Surgical work in a recognized Clinical Hospital or

(2) Have had five years recent experience as an Operating Surgeon in a recognized Clinical Hospital.

Preference will be given to applicants who are also highly qualified and experienced physicians. Twenty copies of application and testimonials, addressed to The Secretary to be received on or before Monday May 17th.

GROSVENOR SANATORIUM ASHFORD KENT
(35 Beds)

Applications are invited from fully qualified men for the appointment of RESIDENT HOUSE PHYSICIAN.

The appointment is for a period of at least six months at a salary of £100 per annum with board lodging and laundry.

Previous experience not necessary. Applicants stating age qualifications nationality and accompanied by copies of recent testimonials to be sent to the Acting Medical Superintendent.

VICTORIA HOSPITAL FOR SICK CHILDREN PARK STREET HULL.

The Board of Management of the above Hospital requires a RESIDENT HOUSE PHYSICIAN (Lady) at a salary of £170 with Board Residence and Laundry. Applications with copies of recent testimonials stating age qualifications and when at liberty to be sent to the Secretary.

April 16th 1937

DARLINGTON MEMORIAL HOSPITAL
(60 Beds)

Wanted HOUSE SURGEON (male) British fully qualified for the Orthopaedic Ear Nose and Throat, and Children's Surgical Department. Salary £140 per annum with board residence and laundry.

Applications stating age and qualifications together with copies of three recent testimonials to be addressed to the undersigned.

ARTHUR FIDDLE A.C.S.

Secretary S.M.

BETHLEM ROYAL HOSPITAL, MONKS ORCHARD BECKENHAM KENT

RADIOLOGIST Applications are invited for this post. Candidates must be graduates of a British University and have had other hospital experience as a Radiologist.

The officer appointed will be expected to attend at the hospital weekly or as may be required on notification by the Physician Superintendent.

The appointment will carry an honorarium of 150 guineas per annum and will be held for one year subject to annual re-election at the April Court.

For further particulars apply to the Physician-Superintendent at the hospital.

Applications for the appointment must be forwarded to the Clerk to the Governors at his office, as under on or before April 30th.

JOHN L WORSFOLD Clerk etc.

Bethlem Royal Hospital Office,
144, New Bridge Street E.C.4

BETHLEM ROYAL HOSPITAL, MONKS ORCHARD BECKENHAM KENT

CONSULTING SURGEON Applications are invited for this post. Candidates must be fellows of the Royal College of Surgeons of England, Scotland or Ireland. The appointment will be held for one year subject to annual re-election at the April Court.

Recognition by way of honorarium is made. For further particulars apply to the Physician-Superintendent at the hospital.

Applications for the appointment must be forwarded to the Clerk to the Governors at his office as under on or before April 30th.

JOHN L WORSFOLD Clerk etc.

Bethlem Royal Hospital Office,
144, New Bridge Street E.C.4

ROYAL SOUTHERN HOSPITAL, LIVERPOOL, 8**WANTED IMMEDIATELY****HOUSE SURGEON TO THE ORTHOPAEDIC DEPARTMENT**

The salary for the above appointment is £60 per annum with board and residence.

The appointment will be for six months. Applications and copies of testimonials to be sent to the undersigned as early as possible.

FRANK SOLMAN

Superintendent and Secretary

NORFOLK AND NORWICH HOSPITAL, NORWICH (417 Beds)

Applications are invited for the post of RESIDENT SURGICAL OFFICER.

Salary £250 per annum with board residence and laundry. The appointment is for twelve months from June 1st. Preference will be given to candidates holding the F.R.C.S. qualification.

Applicants stating age qualifications and experience, accompanied by copies of recent testimonials should reach the undersigned not later than the first post on Tuesday May 11th 1937.

FRANK INCH

House Governor and Secretary

April 23rd 1937

WEST SUFFOLK GENERAL HOSPITAL
BURY ST EDMUND'S
(112 Beds)

Applications are invited for the post of HOUSE SURGEON. Duties include charge of the Surgical Beds. Salary £180 per annum with Board Lodging and Laundry.

One other resident Medical Officer. Applicants must be registered Practitioners.

Applications stating age experience and nationality with three copies of three recent testimonials to be sent to the Secretary.

The vacancy occurs May 19th 1937.

April 14th 1937

GENERAL INFIRMARY SALISBURY
(Voluntary Hospital 191 Beds now in course of extension to 225 Beds)

HOUSE PHYSICIAN (male) required to commence duty May 15th 1937.

The appointment is for six months with the right of applying for reappointment for a further period of six months. Candidates must be unmarried fully qualified, and registered.

Salary £115 per annum, with board residence. Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained.

WYEMOUTH AND DISTRICT HOSPITAL, WYEMOUTH
(9- B-2 and C-2)

Wanted middle aged MAY HOUSE SURGEON (male) (European) Salary £170 per annum with board residence and laundry. Applications stating age qualifications and copies of testimonials to be sent to the undersigned not later than

April 27th 1937

MORPIS LODGE

Perthshire 22-1-37

MANCHESTER ROYAL INFIRMARY**JUNIOR ASSISTANT MEDICAL OFFICER IN RADIOLOGICAL DEPARTMENT**

The Board of Management invite applications for the above whole-time appointment. Applicants must be registered and hold a Medical and Surgical qualification and the D.M.R.C. or equivalent.

The appointment (non-resident) is for twelve months renewable for a further period of twelve months subject to the provisions of the bye laws as to notice. Salary is at the rate of £300 per annum. Applicants must state age and send twelve copies of their application and testimonials to the undersigned by April 28th 1937.

By Order
W R TINOALE
General Supt and Secretary

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL.

The Committee are prepared to appoint an HONORARY CONSULTING PHYSICIAN who must possess the qualification of M.R.C.P. London. He will be expected to attend at the Hospital on one day a week to see out patients and such in-patients as may be referred to him by the Physicians.

The Committee are prepared to appoint a PATHOLOGIST and to pay him an honorarium of £100 a year. He must possess a registered medical qualification. He will be expected to attend at the Hospital on two days a week and at such other times as may be necessary.

Applications for these positions to be sent with copies of two testimonials to the Secretary Miss Susan Smith South Cliff Kidderminster not later than Saturday May 8th. Further particulars may be obtained from the Secretary.

BRISTOL GENERAL HOSPITAL

The Committee invite applications for the appointment of a THIRD HOUSE SURGEON.

The appointment will be for a period of eight months from June 1st salary at the rate of £80 per annum with Board Residence etc. provided in the Hospital.

Candidates must be registered under the Medical Acts, and produce testimonials of good personal character and ability and must have recent experience in the administration of anaesthesia.

Forms of application and further particulars may be obtained from the undersigned to whom applications must be returned accompanied with copies of testimonials on or before Saturday May 8th, 1937.

THOMAS W GREGG F.C.C.S.

Secretary

THE ROYAL SEA BATHING HOSPITAL, MAROATE.

A MALE HOUSE SURGEON required on June 1st next. The salary is at the rate of £700 per annum with board residence attendance and laundry. Candidates for the post must be legally qualified and registered. The appointment is for six months but may be extended for a further period of six months. There are 370 beds for adults and children which afford special opportunities for the study of surgical tuberculosis.

Applications stating age previous appointments with copies of three recent testimonials should be sent to the Secretary R.S.B.H. Office 15 York Buildings Adelphi London W.C.2 not later than May 3rd next.

THE CORBETT HOSPITAL STOURBRIDGE.
(94 Beds and Special Departments)

Applications are invited for the post of HOUSE SURGEON which will be vacant on May 1st next.

The appointment will be for a period of six months terminable by six weeks notice carry a salary at the rate of £100 per annum with board laundry etc.

The Hospital has a specialist Visiting Staff and Resident Surgical Officer.

Applicants giving full details of qualifications age and experience, accompanied by three copies of testimonials should be addressed to the undersigned forthwith.

W G H WESTON Secretary
The Corbett Hospital Stourbridge

WALSALL GENERAL HOSPITAL.

The Committee invite applications from men or women for the post of HOUSE PHYSICIAN and RESIDENT ASSISTANT PATHOLOGIST. Candidates who must be registered under the Medical Acts must produce three recent testimonials.

The appointment will be for six months salary in the first instance £140 per annum with board and laundry. The Hospital contains 170 beds and is equipped in all Special Departments.

Applications stating age qualifications and nationality to be sent to the undersigned forthwith.

WALTER FRANCOMBE
House Governor

April 13th 1937

COUNTY COUNCIL OF MIDDLESEX NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £250 per annum together with board lodging and laundry. Candidates must be registered Medical Practitioners who have held resident appointments in a general hospital.

The officer appointed will be required to work under the control of the Medical Superintendent and to devote his whole time to his official duties.

The appointment which will be subject to medical examination is for a period of six months in the first instance, may be extended for an additional six months, and is subject to one month's notice on either side. At the expiration of one year's service the successful candidate if considered satisfactory in all respects will be eligible upon recommendation of the Medical Superintendent and subject to confirmation by the Council for promotion to the post of Assistant Medical Officer. If not so appointed he will leave the Council's service.

Application stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 1st. Application forms are not provided. Envelopes must be endorsed Junior Assistant Medical Officer.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z.
Clerk of the County Council,
Middlesex Guildhall,
Westminster S.W. 1
April 6th 1937

CITY OF MANCHESTER

CRUMFALL HOSPITAL. (1,568 Beds.)

The Public Health Committee invites applications from registered Medical Practitioners for the post of RESIDENT ASSISTANT MEDICAL OFFICER at the above-named Hospital.

The salary for the appointment is £200 per annum with board residence and laundry in addition subject to the Manchester Corporation conditions of Service.

The appointment will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter.

Full information and forms of application may be obtained from the Medical Officer of Health, Sunlight House, Quay Street, Manchester 3, and applications for the post must be received by him not later than May 4th.

Town Hall F C WARRECK HOWELL,
Manchester 2, Town Clerk
February 2nd 1937

THE GENERAL INFIRMARY AT LEEDS

(72 Beds)

RESIDENT MEDICAL OFFICER (male) required. Salary £200 p.a. with board residence and laundry etc.

Candidates must be qualified Medical Practitioners and registered and have held a previous Resident Medical post.

The appointment is for twelve months with eligibility for re-election.

Applications together with copies of three recent testimonials should be sent to the undersigned at once.

S CLAYTON FRYERS
House Governor and Secretary

KEETLING AND DISTRICT GENERAL HOSPITAL.

Applications are invited to the following posts: RESIDENT MEDICAL OFFICER and SECOND RESIDENT MEDICAL OFFICER (male). Salaries £160 and £140 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months. Applications, stating age, nationality and qualifications, together with copies of three testimonials to be sent to the undersigned on or before May 1st.

G W JACKSON,
Secretary Surg.

BRIDGWATER GENERAL HOSPITAL BRIDGWATER, SOMERSET

HOUSE SURGEON required immediately. Salary £120 p.a. with board residence. Applications with copies of three recent testimonials should be sent to the undersigned on or before May 1st.

HOUSE SURGEONS (ONE INDOOR ONE OUT) required by THE CLAYTON LARSONS and THROAT HOSPITAL, 11, 12 & 13, Market Street, Bridgwater. Applications with copies of three testimonials should be sent to the undersigned on or before May 1st.

COUNTY OF LINCOLN—PARTS OF LINDSEY

APPOINTMENT OF LADY ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Assistant County Medical Officer from duly registered Women Medical Practitioners holding a Diploma in Public Health who must be under 40 years of age, unmarried and have had at least three years' experience in the practice of their profession since obtaining a registrable qualification.

Applicants must also have had special experience in Maternity and Child Welfare work. Experience in the diagnosis and treatment of errors of refraction in school children is also essential. The successful candidate will work under the control and direction of the County Medical Officer of Health and will not be allowed to engage in private practice.

The salary will be £300 per annum rising by annual increments of £25 to £700. Travelling allowance according to the Council's scale the officer appointed providing her own car.

The post is designated under the Local Government and Other Officers Superannuation Act 1932 and the officer appointed will be required to pass a medical examination. The appointment will be terminable by three months' notice on either side.

Forms of application may be obtained from the undersigned and when completed should be accompanied by copies of not more than three recent testimonials and returned to me not later than May 3rd 1937.

W S H CAMPBELL,
County Medical Officer of Health,
County Offices Lincoln
April 1st 1937

WEST RIDING OF YORKSHIRE MENTAL HOSPITALS BOARD

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER WADSWAY MENTAL HOSPITAL NEAR SHEFFIELD

Applications are invited for the appointment of an ASSISTANT MEDICAL OFFICER (Male or Female) in the Board's service at the above Mental Hospital at a commencing salary of £350 per annum rising by annual increments of £25 to a maximum of £450 together with emoluments (board apartment and laundry) valued at £170 per annum. The Board will allow an extra £50 per annum to the successful candidate who (whilst on this scale) holds or obtains the Diploma in Psychological Medicine for which this Hospital affords special study facilities.

Consideration will be given only to candidates who have had at least one year's (preferably two years') experience in general medicine after qualification.

The appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909, Class 1.

Applications with copies of not more than two recent testimonials stating age and full particulars to reach the Medical Superintendent, West Riding Mental Hospital, Wadsway, Sheffield 6, not later than May 7th 1937.

There is no printed form of application.
G L BANNER,
Clerk of the Board
Board Offices Wakefield April 1937

BOROUGH OF BARKING

ASSISTANT MEDICAL OFFICER.

Applications are invited before May 3rd 1937 from qualified Medical Practitioners with experience in public health work for the designated appointment of Assistant Medical Officer of Health and Assistant School Medical Officer. Preference will be given to candidates who possess a registrable qualification in public health. Salary scale £100-£225-£700.

Particulars of duties and application forms may be obtained from the undersigned.

S A JEWELS,
Town Clerk.
Town Hall, Barking, Essex

CITY OF LEICESTER

RESIDENT MEDICAL OFFICER

For an Assistant Medical Officer (male) required for the City of Leicester Hospital and Sanatorium, Gyles Road. Appointment for a period of six months. Salary at the rate of £100 p.a. with the usual residential emoluments. The officer appointed may be required to carry out other work.

Applications, stating age, nationality and qualifications, together with copies of three testimonials to be sent to the undersigned on or before May 1st.

E K MACDONALD,
Medical Officer of Health

Health Office, Gyles Road, Leicester

CORNELLIA AND EAST DORSET HOSPITAL, POOLE, DORSET (117 Beds)

HOUSE PHYSICIAN

Applications are invited (from single men) for the post of House Physician.

Period six months. Salary at the rate of £150 p.a. with usual emoluments. Reappointment may be applied for and if granted the salary is at the rate of £175 per annum.

Duties to commence on appointment. The Hospital is recognised by the Royal College of Surgeons of England in connection with the Final Examination for the Fellowship.

Applications stating age, nationality, experience, and qualifications, together with copies of three recent testimonials (which will not be returned) should reach the undersigned at the Hospital as soon as possible.

Preference will be given to applicants who have already held a resident appointment in a hospital.

E S FOLEY,
Secretary

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital 191 beds now in course of extension to 225 beds)

RESIDENT MEDICAL OFFICER (male)

required to commence duty June 1st 1937. The appointment is for one year including a three months probationary period with the option of extension.

Candidates must have held at least one appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist, either separately or in conjunction with the former.

He must reside in the Infirmary and devote his whole time to the service of the Infirmary.

Salary £250 per annum with board residence. Applications with copies of testimonials to be sent to the House Governor and Secretary.

COUNTY MENTAL HOSPITAL, WHITTINGHAM PRESTON LANC.

RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER required. Salary £500 rising by annual increments of £25 to £600. No emoluments £50 per annum is paid when the successful candidate obtains the Diploma in Psychological Medicine. The successful candidate will be required to live in the Hospital and charges at the rate of £140 per annum will be made for board, furnished apartments and washing. Candidates must be duly registered under the Medical Act. Applications must be accompanied by not more than 30 qualifications and copies of testimonials, should reach the Medical Superintendent not later than the morning of May 11th 1937. The successful candidate will be required to undergo medical examination. The appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909 and the Regulations of the Lancashire Mental Hospitals Board.

ROYAL CHEST HOSPITAL

City Road E.C.1

(Royal Northern Group of Hospitals)

Applications are invited for the post of RESIDENT MEDICAL OFFICER vacant June 1st for a period of 6 months (subject to re-election). Salary at the rate of £150 p.a. with board residence and laundry.

Applications with copies of testimonials should be sent by April 30th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G PANTER,
Secretary

Royal Northern Hospital,
Holloway London N.

ROYAL CHEST HOSPITAL

City Road E.C.1

(Royal Northern Group of Hospitals)

Applications are invited for the post of HOUSE PHYSICIAN, vacant June 1st for a period of 6 months. Salary at the rate of £100 p.a. with board residence and laundry.

Applications with copies of testimonials should be sent by April 30th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G PANTER,
Secretary

Royal Northern Hospital,
Holloway London N.

FREE EYE HOSPITAL SOUTHAMPTON

The Committee require the services of a qualified EYE SURGEON to commence duties on 15th June 1937. Salary £100 p.a. with board residence and laundry. Applications with copies of testimonials should be sent to the undersigned on or before May 7th 1937.

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B M A House Tavistock Square, W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE (contd)	CONTRACT PRACTICE (contd)
ABERTYSSWG MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OSMORT VALLEY GLAMORGAN (Wynham Colliery Medical Aid Society) (Workmen's Medical Scheme)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
GRANTHAM FRIENDLY SOCIETIES MEDICAL INSTITUTE. (Medical Officer)	NEATH AND DISTRICT (Medical Aid Association)	CARMARTHENSHIRE COUNTY COUNCIL (Assistant County Medical Officer of Health)
	OAKDALE, MON (Medical Officer for Medical Aid Association)	FLINTSHIRE COUNTY COUNCIL (Junior Assistant in the County Council Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B M A House Tavistock Sq, W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NLW SOUTH WALES (All Friendly Societies' Appointments)	The Medical Secretary New South Wales Branch 135 Macquarie St Sydney N.S.W.	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victoria Branch British Medical Association Medical Society Hall Albert St Levellebourne Victoria.	WESTERN AUSTRALIA (Contract and Locum Practitioners)	Hon Sec Western Australia Branch British Medical Association Medical Society 85 St George's Terrace Perth Western Australia
QUEENSLAND (Brisbane Associate Institute Friendly Societies Institute)	The Hon Sec Queensland Branch Medical Association B M A Building, 35 Adelaide St Brisbane				

April 21, 1937

By Order of the Council

G C ANDERSON Medical Secretary

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6 EAST ANGLIA—PARTNERSHIP in old-established country practice about £3,700 p.a. Easy distance of the coast Panel over 2,000 House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale freehold Premium two-fifths share two years purchase Partner must be married aged 35-40 Preliminary Assistantship

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11 EASTERN COUNTY—PARTNERSHIP (after short preliminary Assistantship) in very old-established Practice in market town in hands of Medical Woman Receipts £2,000 House available Applicant must be Medical Man aged 35 and graduate of Cambridge or London preferred

12 W OF ENGLAND—PARTNERSHIP (after short preliminary Assistantship) in old-established non dispensing Practice of £1,800 in residential town Panel 2,000 Fees 3/6 to 10/6 Four tenths share would be sold to suitable man at two years purchase

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16 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well established Practice about £2,500 in Market Town about 100 miles from London Panel 900 Well-built house (5 bedrooms etc) available for sale. One third or two fifths share at two years purchase

17 HOME COUNTIES—Old-established good class easily run PRACTICE in a beautifully situated country district Cash receipts average over £1,570 p.a. Panel just over 500 Visits 3/6 to £1 1s, medicine extra Nice house (6 bedrooms) with main electric light, gas and water 2 garages and 4 acre of garden for sale Premium 2 years purchase Good Hospital in district

18 MIDLANDS—Partnership in old-established Practice averaging over £3,850 p.a. in manufacturing town Panel 3,600 Visits 5/- to £1 1s A suitable house could be obtained A one third share would be sold at first at 2 years purchase Incoming partner must be experienced in general practice and surgery—one preferably holding the F.R.C.S.

19 S OF ENGLAND—Well-established Practice averaging nearly £1,200 p.a. in a seaside resort Panel over 700 Visits 3/6 to 10/6 mostly 5/- Very little midwifery Good corner house (5 bedrooms) with central heating garage and small garden for sale Well-equipped Cottage Hospital Good scope Premium 2 years purchase

20 N WALES WATERING PLACE—Partnership in middle and upper-class Practice averaging nearly £3,800 p.a., including selected panel 245 Fees 5/- to 10/6 without medicine—some £1 1s Detached house (4 bedrooms etc) with good garage and small garden to rent on lease Scope Premium one half share £3,900 to include surgery fitting drugs and book debts Hospital

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22 LONDON SW—Partnership in well-established working-class. Practice nearly £3 150 p.a. in Favourite Suburban District. Panel 3 000. One half share would be sold at two years purchase.

23 SW OF ENGLAND—Partnership in well established mixed Town Practice about £4,200 p.a. Panel 1 950. Visits 2/6 to £2 2s. medicine extra. Detached house (5 bed rooms) with large garden garage etc. for sale. One fourth or one third share at first at two and a quarter years purchase. Applicant who must be experienced in General Practice and major surgery—F.R.C.S. preferred—could be appointed to Staff of Hospital.

24 LONDON, W—Practice of about £700 p.a. in residential district. Panel 500. Large corner house (7 bed rooms) with separate surgery entrance and good garden. Price at least £1 350. Scope. Premium £1 250.

25 MIDLANDS—Partnership in old established increasing Practice in pleasantly situated Country Town. Good appointments and panel. Visits 3/6 to £1 11s. 6d. medicine extra. Suitable house obtainable. Incoming partner must be good Surgeon—English or Scottish—aged 20-35. Small well-equipped Hospital. Share worth £1 250 p.a. at first at two years purchase.

26 S OF ENGLAND—Partnership in old established Practice over £4 800 p.a. in beautifully situated Market Town. Panel over 2 840. Visits 3/6 to £1 1s. medicine extra. Large attractive well built house with electric light, central heating garage and walled in garden for sale. Premium 9/30 share two years purchase.

27 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town. Receipts average £750 p.a. including P.M.S. worth £125 p.a. and panel about 750. Pleasantly situated house (5 bedrooms attics etc.) on main road. Price (freehold) £3 200. Ample scope. Premium one and three-quarter years purchase.

28 E ANGLIA—Partnership in old established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town. Panel 1 850. House to rent at £60 p.a. Good society and sport. Scope. One third share at first. Premium two years purchase.

29 N DEVON—Old-established Practice averaging over £1 050 p.a. in small Watling Place. Panel about 400. Well built semi-detached house (5 bedrooms etc.) garden for sale. Beautiful surrounding country. All kinds of sport. Scope. Premium two years purchase.

30 TASMANIA—Practice doing £1,500 a year, including good appointments. Fees range from 10/6 to £1 1s. House with 2 bedrooms etc. and garden for sale. Par-chaser should be able to do major surgery. Premium £900.

31 ESSEX—Old-established Practice in outlying Suburban District. Receipts average £2,125 p.a. including appointments worth about £260 p.a. and a panel of 1 784. Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance. Garage and fair size garden. Rent £120 on lease. Premium two and a quarter years purchase. Purchaser must be English Scottish or Irish.

32 LONDON N—Well established Practice averaging £450 p.a. in pleasant growing District. Panel about 600.

Well situated house on main road to rent at about £65 p.a. Good scope—building going on. Premium £600 or offer to include surgery fittings and drugs.

33 SURREY—Increasing middle and working-class PRACTICE in thickly populated Suburban District. Receipts 1936 £1 720. Panel 660. Small house. Rent £78 p.a. (branch £55 p.a.) Ample scope. Premium £2 600.

34 ITALIAN RIVIERA—Small well established good-class non dispensing Season PRACTICE. Further particulars on application.

35 SOUTH SUFFOLK—Partnership in sound old-established Practice over £6 000 p.a. in most desirable Country Town. Good appointments and panel over 3 000. Not much midwifery. Choice of suitable houses. One sixth share at first at two years purchase.

36 LONDON N—Medical Woman's Practice in populous district. Receipts average £560 p.a. including panel 470. House (4 bedrooms) to rent at £100 p.a. Premium £850.

37 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3 300 p.a. in Market Town. No panel. Fees 5/- to £1 1s. Suitable house obtainable. Premium one half share two years purchase.

38 CO DURHAM—Well-established Practice about £1 100 p.a. in Residential Colliery District within easy distance of Newcastle. Appointments worth £85 p.a. and panel 840. Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent. Premium one and a half years purchase.

39 N WALES WATERING PLACE—Good-class non panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden. Scope for panel work if desired. Premium one year's purchase.

40 HOME COUNTIES—Old-established Practice of £500 p.a. in first rate town 20 miles from London. Panel over 500. Visits 5s. No midwifery. Modern nine roomed house with garage and attractive garden—about quarter of an acre. Premium freehold house and Practice £2 000.

41 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3 500 p.a. in an important town. Appointments £250. Suitable house available to rent. A one third share would be sold at two years purchase to a suitable man, preferably one holding the M.D. or M.R.C.P.

42 LONDON, S.E.—Old-established Practice of about £1 000 p.a. in outlying residential district. Panel 100. Detached house (4 bedrooms etc.) for sale. Premium two years purchase.

43 MIDLANDS—Old established Practice of about £930 p.a. in country district. Panel 530. House (7 bedrooms etc.) for sale. Premium two years purchase.

44 LONDON, N—Old-established Practice in suburban district. Cash receipts 1936 (10 months) £1 450. Panel 1,240 increasing. Fees 2/6 upwards. Suitable house (9 rooms) to rent at £160 p.a. Premium £3 400.

45 HOME COUNTIES—A small Practice about £400 p.a. in first rate town about 30 miles from London. Panel 149. Visits mostly from 5/- House, with small garden to rent 25s weekly. Excellent scope. Premium one and a half years purchase.

Purchasers for cash are available for Practices with Incomes of £1,250 to £2 000 p.a. Purchasers can raise additional capital for the purchase of approved practices or shares. Particulars will be forwarded on application.

A number of Assistantships can be offered to suitable applicants.

All communications to be addressed to The Manager.

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The maximum commission payable on the sale of any Practice or Partnership in Great Britain placed exclusively in the hands of this Agency is £50 (fifty pounds), which sum covers goodwill, drugs, surgery fittings, fixtures and furniture, instruments and book debts, but not house property. Schedule of Terms will be forwarded on application.

Accountancy and legal services furnished by the Agency where desired, at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 NORTH LONDON—Old-established PRACTICE producing about £700 p.a. including panel of nearly 600 patients. Suitable house ample accommodation and good garden. Garage to rent at £100 p.a. Premium £1,200.
- 2 DEATH VACANCY—SOUTH COAST TOWN—PRACTICE producing about £250 p.a. Five years ago it was doing £1,000 p.a., but has decreased owing to ill health. Modernised house with ample accommodation. Price for freehold and practice £3,150.
- 3 WEST OF ENGLAND—Seaside resort combined with lovely country—good middle and better working-class PRACTICE, established over 50 years. Gross cash receipts average £1,670 approximately. About £650 is derived from panel and P.M.S. Fees 3/6 to 2/1. Well-built house with 3 sitting rooms and 6 bedrooms, good garden, tennis lawn and garage. Can be rented on lease.
- 4 LONDON WESTERN AREA—Mixed class PRACTICE in populous district. Gross cash receipts for last 12 months about £700 but capable of increase. Panel of 500. Well situated house with ample accommodation, will be put into thorough repair. Good garden. Price for Practice and house £2,500. £500 down.
- 5 WELSH BORDERS—Unopposed chiefly agricultural PRACTICE in beautiful district. Average gross cash receipts £913 p.a. (last year 1936). Panel produces about £370 p.a., and appointments worth about £132 p.a. Very low expenses. Suitable house in own grounds with tennis court etc. etc. earning 2 reception, 6 bedrooms, etc. Freehold for sale £1,200. £700 on mortgage. Premium £1,500.
- 6 WEST COAST OF SCOTLAND—Old-established mixed class non-dispensing PRACTICE held by vendor many years. Gross cash receipts average about £1,000 p.a. Panel of 1,213. Appointments worth about £30 p.a. Fees 2/6 to 1/5. Purchaser can choose his own house. Good golf and other sport. Premium 11 years purchase.
- 7 CUMBERLAND—Old-established unopposed PRACTICE held by vendor who is retiring for 30 years. Gross cash receipts average about £800 p.a. including panel worth over £250 p.a., and appointments worth nearly £80 p.a. Suitable 8-room d house with bathroom, surgery dispensary etc., garden garage. Rent £30 p.a. Shooting, fishing golf etc. Premium 11 years purchase.
- 8 LONDON SOUTH WEST—Good mixed-class PRACTICE producing for last 12 months about £800. Panel of 1,200 to 1,300. Fees 2/6 to 2/1. Suitable house in excellent repair. Price £1,400. Premium 2 years purchase or near offer.
- 9 SOUTHERN RHODESIA—Hospital Town on Railway. Beautiful climate and country. Good-class prescribing PRACTICE, easily run. Visits 7/6 to 10/6. Midwifery £10 10s. 0d. Average income for past 3 years £1,900 p.a. Well appointed house with tennis court, garage surgery etc., can be rented or bought. Good operating surgeon will greatly increase practice. Excellent schools. Sport of all kinds, big game shooting fishing etc. Income tax 6d in the £. Premium £2,000 to include drugs, surgery fittings and furniture.
- 10 LONDON SOUTH EAST—Old-established middle and working-class PRACTICE producing for the last 12 months £1,320. Panel of approximately 900 and P.M.S. worth £25. House contains 2 reception, 4 bedrooms etc. Small garden. Leasehold for sale. Premium for practice and house £3,500 or near offer.
- 11 LONDON NORTH—Old-established chiefly working-class PRACTICE. Receipts for last 12 months approximately £1,600 with panel of about 2,700. Suitable accommodation can be rented at £92 p.a.
- 12 LONDON WEST 2—Old-established mixed-class PRACTICE producing £915 for the last 12 months. Panel 1,143. Visits 3/6 to 10/6. Rooms house with small garden can be rented at £130 p.a. Premium 2 years purchase.
- 13 LONDON SOUTH WEST—Well-established mixed PRACTICE averaging £1,100 p.a. Panel of 1,700. Appointments worth about £300 p.a. Fees from 3/6. Good house with large garden can be rented at £100 p.a. Premium £6,000.
- 14 SOMERSET—MARKET TOWN—Established over 50 years, and averaging about £1,000 p.a. Panel of nearly 900 and appointments worth over £100. Non-dispensing with fees from 5/ to 2/1. Midwifery not encouraged. Good house available freehold containing 3 reception, 6 bedrooms, with separate surgery. 11 acres of productive garden and garage for two cars. Theirk light and water. Price £1,500. Premium 2 years purchase.
- 15 EASTERN COUNTIES—COUNTRY PARTNERSHIP—ONE THIRD SHARE available in mixed-class Practice over £2,500 p.a. Including panel of nearly 1,500. House contains 2 reception, 4 bedrooms, large and attractive garden and good garage. Rent £55 p.a. Sport of all kinds. Premium 2 years purchase or near offer.
- 16 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £670. There is stated to be scope for increase as receipts have fallen owing to Vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 17 DEATH VACANCY—YORKSHIRE—Better class PRACTICE in good residential district. Gross cash receipts average about £650. Panel of about 400. Suitable house can be rented at £100 p.a. Offers invited.
- 18 WESTERN DISTRICT OF LONDON—Old-established good mixed class PRACTICE producing between £1,600 and £1,700 p.a., including panel of 1,000. P.M.S. corner house in excellent position with garage. Freehold for sale or rented on lease.
- 19 NORTH LONDON—Old-established mixed class PRACTICE held by vendor many years. Gross cash receipts approximately £2,800 p.a. Panel of over 2,800. Suitable house and branch surgery can be rented on lease.
- 20 LONDON SOUTH EAST—Old-established PRACTICE producing about £1,830 p.a., including select panel of 500. Fees from 3/6. Suitable house available with 2 reception, 5 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 21 LONDON WEST—PARTNERSHIP—ONE THIRD SHARE with increase later is offered in well-established practice producing £2,400 p.a., with scope. Suitable house can be obtained. Premium 2 years purchase.
- 22 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1,100 p.a. Including selected panel of about 350. Fees from 5/. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.
- 23 NORTH WALES—FAVOURITE SEASIDE RESORT—A ONE THIRD SHARE (with increase later) is offered after short preliminary assistantship in old-established better-class practice producing about £3,400 p.a. Panel of 1,100. Suitable flat available for incoming partner who should be experienced. Premium 2 years purchase.
- 24 LONDON NORTH WEST—PARTNERSHIP—A ONE THIRD SHARE is for disposal in steadily increasing middle-class practice producing last year £2,400. Small panel. Fees 7/6 to 2/1. Choice of houses. Premium £2,000.
- 25 DEATH VACANCY—FAVOURITE SOUTH WEST COAST TOWN—PARTNERSHIP WITH SURGICAL SCOPE—A one-third or one-half share is for disposal (owing to recent death of senior of two partners) in good-class non-panel Practice stated to average £3,600 p.a. for past 3 years. Fees 7/6 upwards. Suitable house, with ample accommodation can be rented or purchased. Premium for share 2 years purchase. Incoming partner must be experienced over 35 and able to undertake major surgery.
- 26 LONDON—WESTERN DISTRICT—Well-established very sound mixed-class PRACTICE. Panel of 1,630. P.M.S. 200. Receipts approximately £1,700 p.a. Including large proportion ready cash. Excellent professional accommodation. Suitable bachelor or family of not more than three.
- 27 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing for last 12 months approximately £940. Selected panel of 400 to 450 patients. Visits from 5/. Very nice house in good repair with ample accommodation. Garden. Garage. Price for freehold £2,000. Premium £1,250.
- 28 MIDLANDS PARTNERSHIP—ONE HALF SHARE in mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1,369 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 2 years purchase.
- 29 LONDON—SOUTH EAST—Well established middle class increasing PRACTICE producing for last 12 months £1,270. Panel of 960. Fees 2/6 to 7/6. Scope for development as building is in progress. Good house, in excellent condition, containing 2 reception consulting, 4 to 6 bedrooms, dressing room, etc. Price £500. Premium £2,400.
- 30 MIDLANDS—PARTNERSHIP—A SHARE representing approximately £1,300 p.a., with increase later is offered in exceptionally sound good mixed-class practice averaging about £9,000 p.a. with substantial panel and very good appointments. Excellent scope for major surgery. Suitable house available. Premium 2 years purchase.
- 31 YORKSHIRE—GOOD TOWN WITHIN EASY REACH OF COAST—A ONE FOURTH SHARE, with increase later is offered in very old-established middle-class practice producing for last 12 months nearly £4,000. Substantial panel. Fees 5/0m 3/6. Suitable house with 2 reception, 4 bedrooms, etc. Garage. Stabling and garden. Electric light. Gas. Can be rented at £65 p.a. or freehold purchased. Premium 2 years purchase.
- 32 MIDLANDS—COUNTY TOWN PARTNERSHIP—A ONE-QUARTER SHARE (with increase later) is for disposal in mixed-class practice averaging over £2,500 p.a., including panel of 2,800. Fees from 3/6. Suitable house can be obtained. Preliminary assistantship if wished.
- 33 SOUTH COAST—PARTNERSHIP—ONE THIRD SHARE is offered in old-established non-dispensing practice in favourite town producing last year £3,461. Selected panel of 400. Fees 3/6 to 2/1. Suitable freehold house for sale. Incoming partner must be well qualified and accustomed to better-class work. There are two hospitals and one partner is on the staff.
- 34 RESIDENTIAL DISTRICT WITHIN 7 MILES OF CHARING CROSS—Good middle-class PRACTICE averaging £1,450 p.a. Panel of 750. Very low expenses. Suitable house with 2 reception, 4 bedrooms, etc., separate professional rooms. Garden. Garage. Can be rented at £90 p.a. Premium 2 years purchase.
- 35 DEVELOPING NORTHERN SUBURB—Well-established PRACTICE producing for last year £1,290 including panel of 1,000. Fees 2/6 upwards. Suitable modern flat available above professional accommodation. Includes rental £104 p.a. Rates £15 p.a. Premium 2 years purchase.
- 36 S.E. LONDON—Old-established PRACTICE averaging £2,600 p.a. including panel of about 900. Well-situated house with 2 reception, 4 bedrooms, and professional rooms. Garage. Rent on leave £100 p.a. Premium £4,250.

WANTED TO PURCHASE—Small non-panel PRACTICE in Golden Green or Hampstead area. No midwifery. House or rental. Receipts £200 p.a. or less with scope or lock-up.

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NEAR MANCHESTER—PARTNERSHIP in sound old-established Practice Cash receipts last year £4,900 Panel 3,200 Excellent house, 3 reception, 5 bedrooms, garage and nice garden To rent Premium—2/5th share—(approximately £1,950 p.a.)—2 years purchase—No 944

NORTH WALES—Old-established middle-class PRACTICE in beautiful Seaside and Country district Average cash receipts £1,417 p.a. Panel 415 Well built house in good position 3 reception, 7 bedrooms, garage for 2 cars and garden. Good sport and educational facilities. Premium—Practice—£2,100—No 929

NEAR MANCHESTER—Old-established middle and better working-class PRACTICE in present hands 35 years. Cash receipts last year £1,851 Panel about 800 Good house, 3 reception 4 bedrooms, garage and large garden Premium 1½ years purchase Vendor retiring.—No 850

YORKSHIRE (W.R.)—Very old-established mixed Panel and Private PRACTICE in large City Average cash receipts £1,137 p.a. Panel 1,370 Scope Good corner house 2 reception, 4 bedrooms, garage and small garden. Rent £52 p.a. Premium—1½ years purchase Vendor retiring.—No 948

WIRRAL COAST—PARTNERSHIP in old-established mixed-class Practice Cash receipts last year £2,830 Panel 2,815 Scope Excellent corner house 2 reception, 4 bedrooms garage Premium—1 share—2 years purchase—No 946

NEAR MANCHESTER—Sound middle and working-class PRACTICE Average cash receipts £2,600 p.a. Panel 2,500 Scope Detached corner house 2 reception 4 bedrooms, 3 professional rooms, garage and garden. Premium—1½ years purchase—No 952

NEAR NOTTINGHAM—PARTNERSHIP in practically unopposed mixed-class Practice Average cash receipts £3,500 p.a. Panel over 1,600 Appointments £120 p.a. Attractive house 2 reception, 5 bedrooms, garage and pleasant garden Premium—1/3rd share—2 years purchase—No 953

LANCS TOWN—Well-established Panel and Private PRACTICE. Earnings last year £2,254 Panel 1,750 Good house available Premium—1½ years purchase Partnership if desired—No 920

DERBYSHIRE—Old-established PRACTICE in pleasant district near large town offering great scope for increase owing to building developments Suitable for two men in partnership Cash receipts last year £3,000 Panel 3,359 Two good houses, with ample accommodation and modern conveniences, each with garage garden and tennis court Premium—best offer—No 955

MANCHESTER—PARTNERSHIP in old-established Practice in industrial district Cash receipts last year £5,156 Panel 6,000 and appointments £800 p.a. Vendor may choose own residence Premium—1 share (about £1,280 p.a.)—1½ years purchase—No 944

WELSH BORDER—PARTNERSHIP in well-established Practice in Country district. Panel 2,432. Excellent house, 4 reception, 7 bedrooms, garage and garden of half an acre. Premium—for share worth £800 p.a.—£1,100—No 946

NEAR LIVERPOOL—Well-established middle-class PRACTICE in pleasant district. Ample scope as district developing. Cash receipts £500 p.a. Panel 650 Nice house, 2 reception, 5 bedrooms, and garden. Premium—1 year's purchase Vendor retiring.—No 928

LANCS TOWN—Very old-established mixed panel and private PRACTICE, partly in semi rural district. Average cash receipts £2,596 p.a. Panel nearly 2,000 Scope Nice modern house hall, 3 reception, 5 bedrooms, 2 professional rooms, garage and good garden. Premium—Practice—1½ years purchase—No 925

NORTH STAFFS—PARTNERSHIP in old-established mixed Panel and Private Practice Cash receipts last year £5,521 Panel 7,500 Incoming partner may choose own residence—Premium—2/9th share (about £1,200)—2 years purchase Further share later—No 941

LANCS TOWN—Old-established mixed-class PRACTICE, about 22 miles from Manchester Cash receipts last year £1,084 Panel 1,050 Scope Good house 2 reception 5 bedrooms, 3 reception rooms (separate entrance) garage and garden Premium—1½ years purchase—No 951

EASTERN COUNTY—Partnership in old-established Country PRACTICE with income of about £2,500 p.a. Panel 2,000 Excellent house, 3 reception, 5 bedrooms garage and good garden Rent £60 p.a. Premium—half share—£2,200—No 933

DERBYSHIRE—Old-established mixed-class PRACTICE. Cash receipts last year £765 Panel 662. Scope House 2 reception, 3 bedrooms, garage and garden Rent (including rates) £80 p.a. Premium, best offer—No 947

MANCHESTER—Well-established middle and working-class PRACTICE in suburban district Cash receipts last year £1,650 Panel 1,100 Good house, 2 reception, 6 bedrooms, 3 professional rooms (separate entrance) garden. Rent £60 p.a. Premium—Practice—1½ years purchase—No 913

SHEFFIELD—Old-established mixed-class PRACTICE. Cash receipts last year £1,112 Appointment (transferable) £100 p.a. plus bonus Panel 600 Scope Detached house 2 reception, 3 bedrooms, small garden Rent £52 p.a. Premium 1½ years purchase—No 940

YORKSHIRE CITY—Well established mixed Panel and Private PRACTICE in pleasant town Average cash receipts £2,100 p.a. Panel 2,000 Good house 2 reception 4 bedrooms, garage and garden Rent £60 p.a. Premium—2½ years purchase or near offer—No 950

LANCS TOWN—Mixed panel and private PRACTICE, in present hands 30 years. Cash receipts approximately £1,500 p.a. Panel 1,500 Great scope Good house 2 reception, 4 bedrooms, garage and small garden. Rent £50 p.a. Premium, best offer—No 945

YORKSHIRE (W.R.)—Well-established mixed-class PRACTICE within easy reach of large city Cash receipts last year £1,167 Panel 850 Good house 2 reception 4 bedrooms, and maid's room garage and garden. Premium—Practice house and book debts best offer—No 934

NEAR MANCHESTER—PARTNERSHIP in old-established middle and working-class Practice Cash receipts approximately £2,600 p.a. Panel 2,300 Good detached house 2 reception, 5 bedrooms, garage and garden Rent £50 p.a. Great scope Premium—4/9th share—(about £1,000 o.a.)—2 years purchase—No 949

DERBYSHIRE—PARTNERSHIP in old-established Country Practice near to large town Cash receipts last year £3,238 Panel 1,800 Scope as district developing. Attractive house specially built, 2 reception, 5 bedrooms, garage and large garden. Electric light and main drainage. Rent £80 p.a. Premium—1/3rd share—2 years purchase—No 854

CAMBRIDGESHIRE—Old-established PRACTICE in pleasant Country town. Cash receipts last year £817 Panel 450 Good house 3 reception, 5 large and 2 small bedrooms, garage and garden of one acre Rent £60 p.a. Premium £1,200 Vendor retiring—No 938

MANCHESTER—Middle and better-class PRACTICE in present hands 40 years Cash receipts last year £2,151 Panel over 600 Good house, 3 reception, 6/7 bedrooms, garage and garden. Premium—Practice and house—£3,000 Long introduction if desired. Vendor retiring.—No 858

ASSISTANTS WANTED—OUTDOOR—HULL—£450 p.a. **NR NEW CASTLE**—£500 p.a. and house **BLACKPOOL**—£350 p.a. house and car **MANCHESTER**—£400 p.a. **INDOOR—MIDLANDS** **YORKSHIRE, CHESHIRE, LANCS** etc.—£300 £350 o.a., all found Many other vacancies. Details on request

LOCUM ENGAGEMENTS AND ASSISTANTSHIPS—Medical Men and Women are invited to register for immediate engagements.

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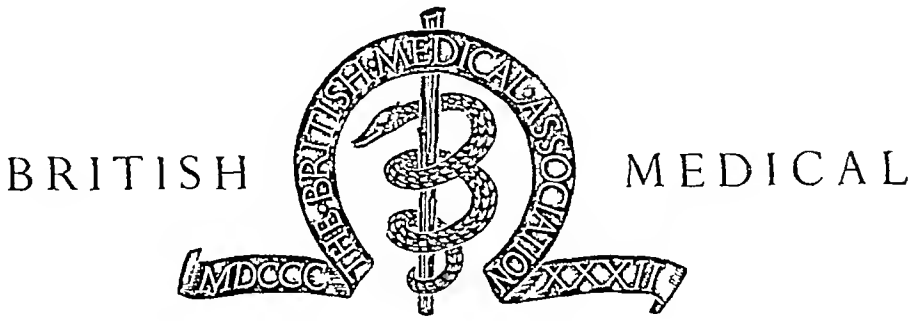
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BRITISH MEDICAL JOURNAL

JOURNAL OF THE



ASSOCIATION

SATURDAY MAY 1 1937

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Fat - - - -	20.0	2.5
Protein - - -	17.0	2.1
Lactose - - -	56.0	7.0
Ash - - - -	3.9	0.5
Citrates etc. -	1.1	0.1
Moisture or water -	2.0	87.8
	100.0	100.0
Caloric value per oz.	137	17.1

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for infants from 3 4 months & onwards.
The full cream food. 16 oz. Sealed Tins

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Fat - - - -	26.5	3.3
Protein - - -	24.9	3.1
Lactose - - -	38.5	4.8
Ash - - - -	5.6	0.7
Citrates, etc. -	1.6	0.2
Moisture or Water	2.9	87.9
	100.0	100.0
Caloric value per oz.	144	18.0

As a prophylactic measure both
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GL 197

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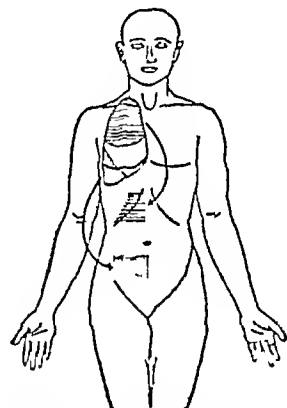
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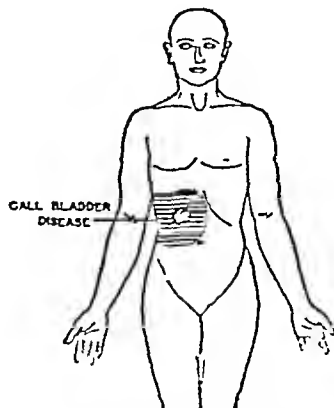
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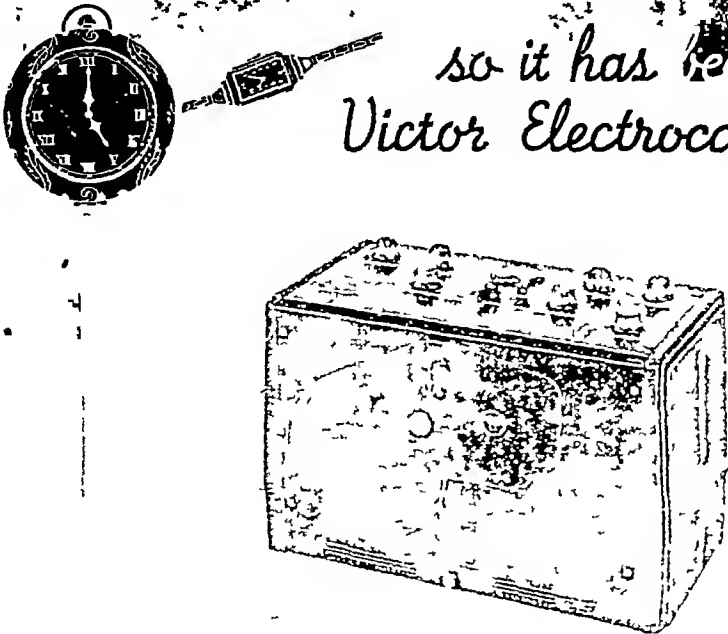
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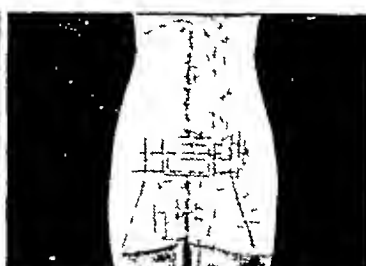
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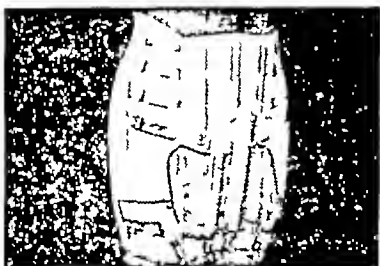
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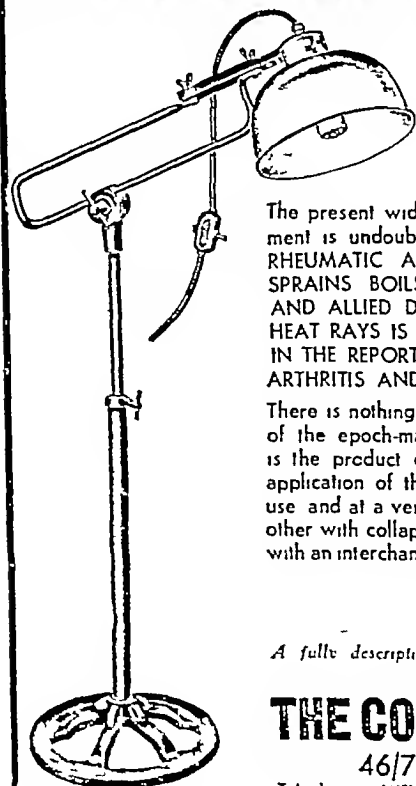
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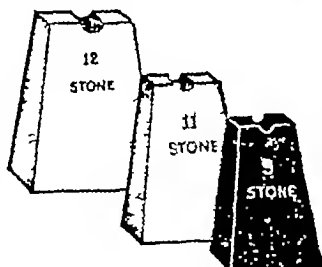
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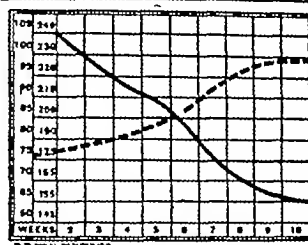
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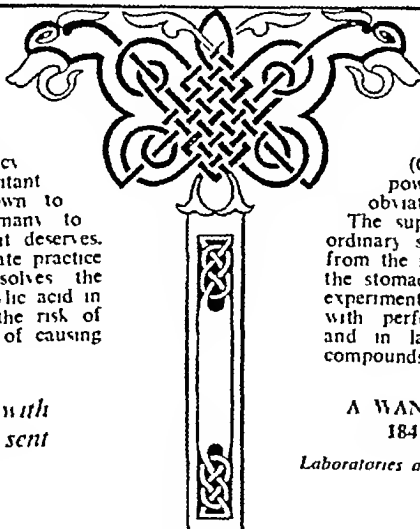
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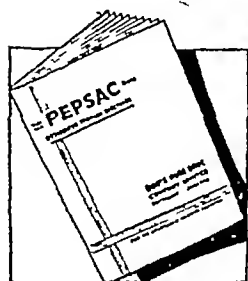
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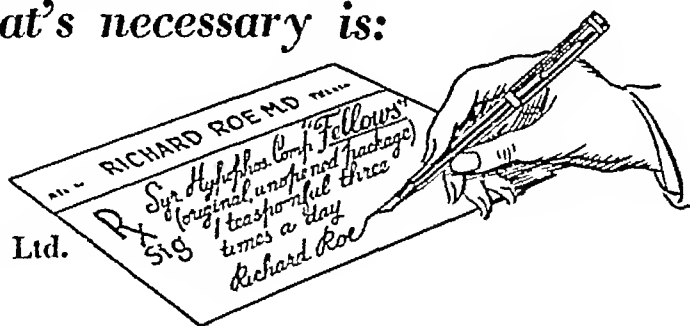
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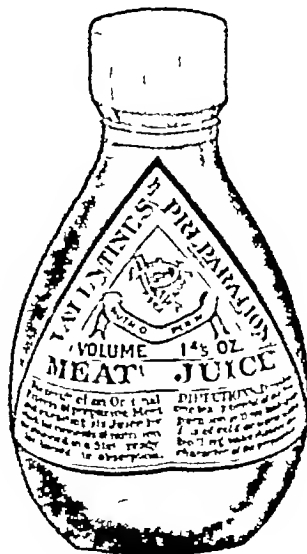
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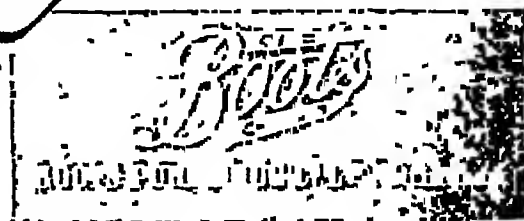
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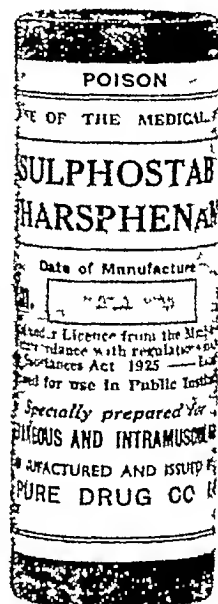
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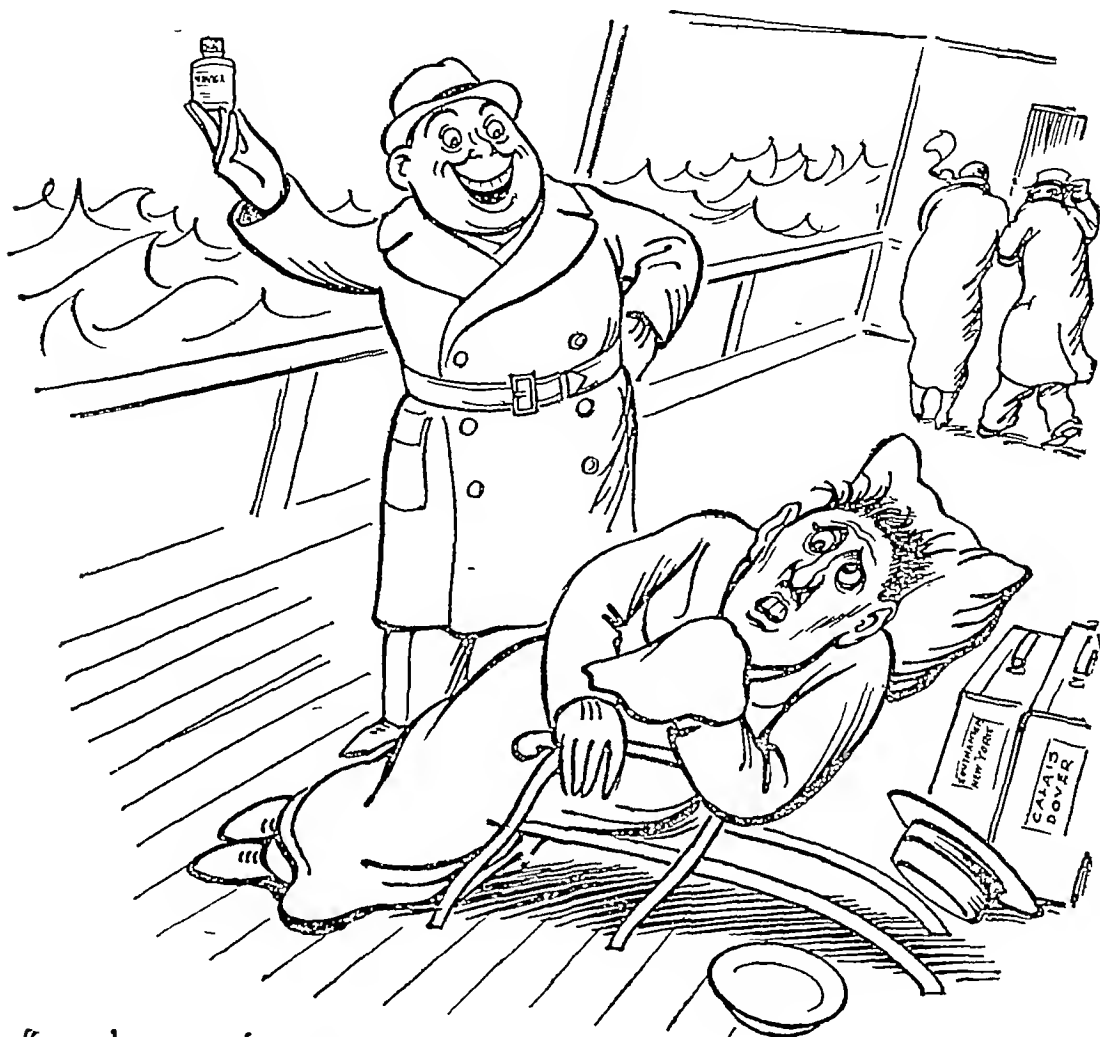
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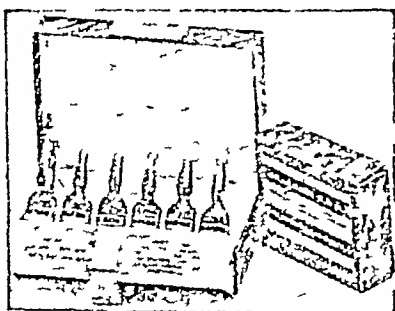
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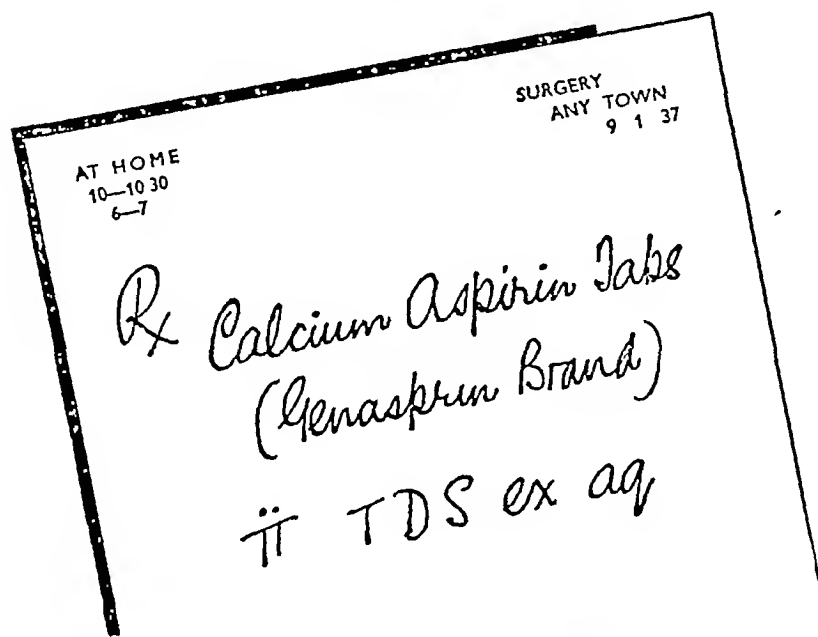


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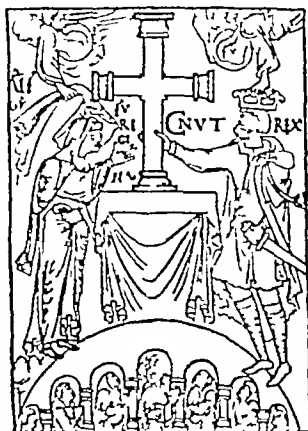
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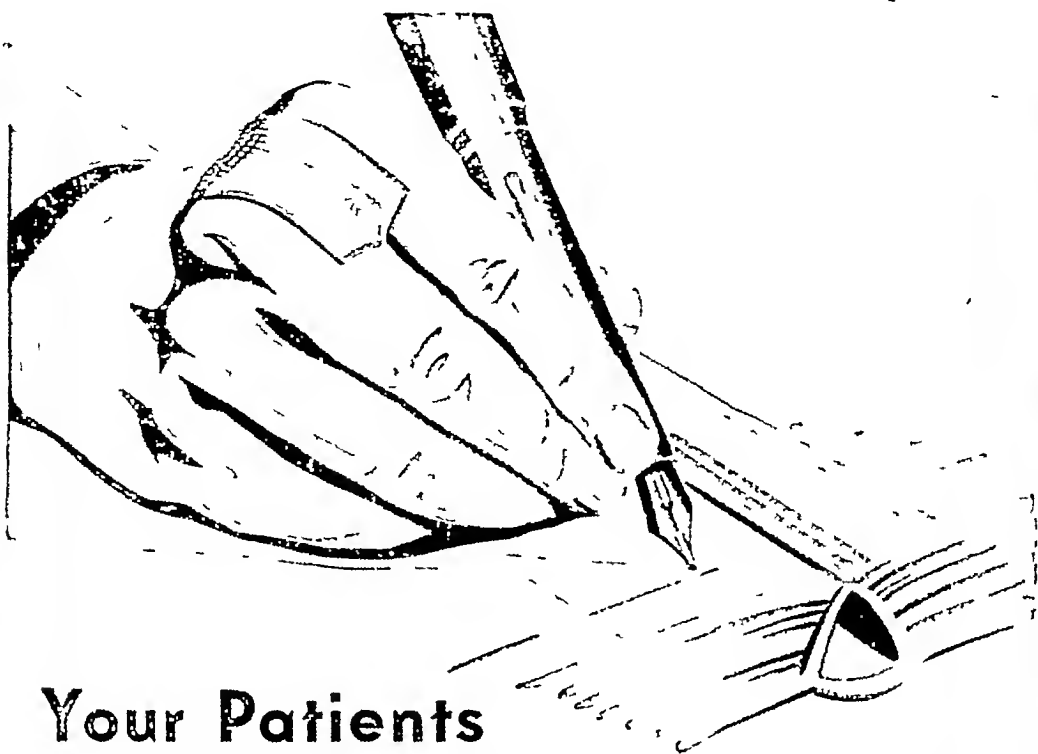
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BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 1 1937

TRANSURETHRAL RESECTION OF THE PROSTATE A REVIEW OF FOURTEEN YEARS' WORK*

BY

KENNETH M WALKER, F R C S

Surgeon to the Royal Northern Hospital and to St Paul's Hospital

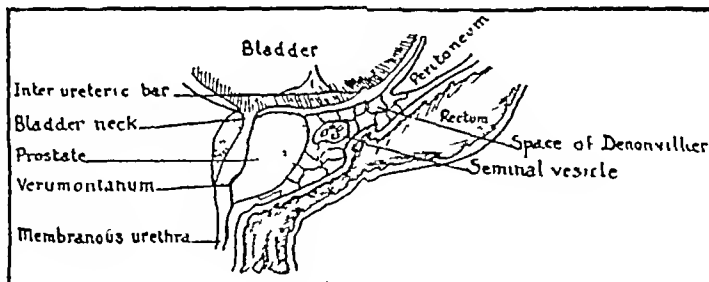
Twelve years have elapsed since I first published in this *Journal* an article on perurethral operations on the prostate. At that time it was necessary to plead that consideration should be given to a method of treatment against which there existed a considerable amount of prejudice. Special pleading is no longer required, for the value of perurethral methods of dealing with prostatic obstruction is now fully recognized. It will be more useful, therefore, to consider perurethral resection in a spirit of criticism and to dwell on its shortcomings, dangers, and limitations rather than its virtues. But if I approach the matter from this standpoint it is not because I am anything but an optimist on the subject of perurethral methods but because I feel that it is helpful at times to stand aside from our work and to look at it with a critical eye recalling where we have failed rather than where we have succeeded what have been our mistakes, and how we may avoid such errors in the future.

Undoubtedly the two complications of perurethral resection most to be feared are haemorrhage and sepsis. Of these, to my way of thinking the latter is by far the more serious. Looking back on fourteen years of perurethral operations on the prostate I can recall only some half-dozen cases in which haemorrhage became sufficiently alarming to necessitate opening of the bladder. Yet in the same period of time sepsis has often proved a serious complication and sometimes one that in the end proved fatal. What is the explanation of my immunity from haemorrhage and my susceptibility to sepsis? Writing as I do in a vein of criticism and relentless examination of methods, I think that if I have made an error—it has lain in the direction of excessive tissue coagulation. J R Caulk to whose pioneer work on perurethral methods urology owes so much is convinced that high frequency currents cause damage to tissues at a far greater distance from the cutting loop than most resectionists believe. I am inclined to agree with him and it is this leaving behind of coagulated tissue as a nidus for infecting organisms that is the chief drawback of the McCarthy operation. Unfortunately it is a drawback inherent in any method of resection in which a cutting current is employed.

Operative Trauma

But in addition to the unavoidable trauma of electrocoagulation there is a trauma over which we have more control—the trauma of instrumentation. When I pause and look back at my failures I see that there is one type of case in which perurethral resection is attended by special dangers. I refer to the patient with small external genitalia and with a urethra so narrow that it offers a considerable resistance to the passage of the resectotome. Naturally these cases crop up most frequently among those elderly patients in whom involution of the genital tract has taken place, the type of senile patient for whom a perurethral operation is otherwise most suitable. At all costs we wish to avoid carrying out on them a

prostatectomy, and yet the smallness of the urethra makes difficult the passage of our instruments. The temptation to use a little extra persuasion is a real one, but I have learned my lesson and am now very cautious about the amount of force I am prepared to exert in attempting to pass the



resectotome. Where I have not shown this caution the results have sometimes been disastrous—in one case extravasation of urine, and in two others severe urethral and vesical sepsis. It must be remembered that the tissues of these elderly patients are exceedingly vulnerable, and even in health offer but a feeble resistance to microbial invasion. After they have been bruised by the passage of an instrument the resistance is reduced to a minimum.

Finally we must consider the trauma due to errors in our technique after the instrument has been passed. Errors of this kind are by no means uncommon, for in no operation is the experience of the operator a factor of greater importance than in perurethral resection of the prostate. Initially welcomed as a minor procedure, the McCarthy operation in the hands of the inexperienced soon proved itself to be fraught with dangers and even when carried out by experts the earlier resections were not always satisfactory. The better results achieved later have indeed been due less to an improvement in our instruments than to more control during the operation. With the cutting loop it is quite easy to do great damage and it is experience that teaches the operator where he may cut in safety and where he must proceed with caution. The figure above represents a vertical section

* Opening Address at the annual general meeting of the Section of Urology Royal Society of Medicine April 22 1937

through the mid line of the bladder and prostate, and shows approximately the thickness of tissues that separate the bladder and posterior urethra from such structures as the peritoneum and rectum. Starting at a point in the bladder above the inter-ureteric bar it will be seen that a single cut at this level would perforate the bladder wall and open up the peritoneum. Fortunately few operators would be capable of making such a mistake. The error of mistaking a hypertrophied inter-ureteric bar for the posterior lip of the vesical outlet is however less unlikely. Should this happen but the misguided operator cut not more than half an inch above the inter-ureteric bar he will miss the peritoneum and open up the space of Denonvillier. At this level the vesicles and ampullae of the vasa are interposed between the bladder and rectum so that the latter is well protected from possible injury. But to open up the space of Denonvillier is sufficiently disastrous for it will result in prolonged and severe infection. The same risk is attached to any cut made in the trigone from the inter-ureteric bar down to the region of the intravesical projection of the prostate. At this lower level the thickness of the prostate is interposed between the loop and the rectum and even without any enlargement gives the operator the safety of an inch. As we pass down into the posterior urethra this margin of safety diminishes rapidly so that at the upper limit of the verumontanum less than half an inch of tissue separates the urethra from the rectum. Lower still in the membranous urethra even this distance is diminished.

Danger Points

From a consideration of these anatomical details it will be seen therefore that there are two chief danger points in carrying out a prostatic resection: (1) the region of the trigone; (2) the posterior urethra. An injudicious cut in the first region will open up the space of Denonvillier and in the second perforate the rectum. Of these two disasters I fear the former more. Two of my patients have passed urine per rectum a few days after resection without being any the worse for their temporary fistula. Some twenty have suffered from severe sepsis following a resection and although I have no definite proof of this I believe that in some of these cases of protracted sepsis the space of Denonvillier has been infected. In order to prevent this when removing tissue at the level of the sphincter the instrument should be kept horizontal and not dipped down into the bladder.

It may be thought that I am over-emphasizing the factor of sepsis in the McCarthy operation. If this be so it is because it has proved to be the chief trouble that I have encountered in my own practice. Some of this sepsis as we have seen is avoidable but some is inherent in the operation. So long as the actual removal of prostatic tissue is accomplished by a diathermy cutting current so long must we leave behind tissue that will form a nidus for infection. That I am not alone in fearing this defect in what is otherwise an excellent operation is shown by a reference to current urological literature. Everywhere we see an increasing realization of the risks of extensive tissue damage and a forsaking of electrical methods of resection in favour of the cold punch of Young. For what is the Bumpus resectome except a Young punch to which has been added a diathermy electrode, an irrigation system and an internal source of illumination? Unfortunately I have not yet had an opportunity of using the Mayo Clinic and of seeing Mr. Thompson at work with his latest pattern of punch. I have however had the pleasure of watching Mr. F. H. O. B. K. Brown use the same technique as S.

Thomas's Hospital and have been very favourably impressed by the ease and rapidity with which he removed a large amount of prostatic tissue. More particularly have I been struck by the moderate amount of haemorrhage that has been provoked by the cold punch and by the ease with which it was subsequently controlled by the use of a coagulating electrode. Certainly in the hands of an expert accustomed to the use of a direct vision cystoscope the Thomson punch is an excellent instrument. The ease of its introduction and the avoidance of coagulation except for the control of isolated bleeding points contribute to render it a less traumatic weapon than is the McCarthy resectotome. Its chief disadvantage to my way of thinking is that it makes use of an optical system to which few of us are accustomed. This is however a deficiency to be overcome in us rather than in our instrument and while learning a new technique we may take comfort in this thought. The punch is a much less dangerous weapon than the loop with a punch it would be difficult to perforate the bladder with a loop it is quite easy to do so.

That the realization of the disadvantages of using the cutting current in prostatic surgery is widespread is also shown by the fact that J. F. McCarthy the inventor of the resectotome most widely employed in this country has recently designed a new instrument on the lines of the Young punch. He has referred to it as supplementary to his other instrument, but that the chief exponent of a cutting current method of resection has moved in the direction of the cold knife is highly significant.

Treatment

So far I have spoken only of the factors that determine the onset of sepsis. It will now be necessary to discuss methods of treatment once it has occurred. In this connection bladder drainage and lavage are of primary importance. This is easily carried out by the indwelling catheter. Where however a severe infection has existed prior to operation where the urethra tolerates badly an indwelling catheter or where the patient is likely to resent catheterization I am more and more inclined to combine resection with a temporary suprapubic drainage. Not only does this allow of the adoption of far more efficient methods of treatment of sepsis but it relieves us of all fear of clot retention following the operation. Moreover these gains are purchased at a very small cost for once the obstruction has been removed the suprapubic fistula will close up in the course of a few days.

Another addition to the technique of the McCarthy operation which I invariably make is vasoligature. An acute epididymitis is a distressing complication but one that is not usually considered serious. Yet I can recall one patient on whom I omitted to carry out vasoligature on the grounds that he was so poor an operative risk that the less that was done to him the better. In spite of severe attacks of angina pectoris he survived my resection but died four weeks later from a suppurative epididymitis.

Indications for Perurethral Resection

A critical survey of perurethral resection of the prostate may well conclude with a discussion of its indications. For what type of case and in what circumstances should resection be substituted for prostatectomy? There are questions to which many answers have been given. How widely these answers vary is shown by a comparison of statistics obtained from six different American urological centres. I quote American statistics because figures available for perurethral resection are much fewer.

than those obtainable in this country. Dr L. M. Orr, in the *Journal of Urology*, states that in six different American clinics the number of resections performed to one prostatectomy was as follows: 80, 19, 9, 17, 15, 0.9 respectively. To his question, "On what type of case do you employ resection?" circularized American surgeons returned answers that ranged from a frank denial that it was of any value to an assertion that it should be employed in every type of case. In England, perhaps owing to our happy genius for discovering middle courses, these extremes of opinion are seldom encountered. The majority of urologists have accepted perurethral resection as a valuable addition to our methods of treating the obstructing prostate and use it in moderation. Each of us may differ in our interpretation of the word moderation but our divergence is not great. Personally I mean by that word that I employ resection in about 20 per cent of all my prostatic cases, reserving it in particular for minor enlargements or for patients in whom, for one reason or another, it would be dangerous to perform a prostatectomy. Because resection can be carried out in cases in which enucleation would be dangerous it appears to me to be the most valuable of recent additions to our methods of treatment. When combined with a temporary suprapubic cystostomy done under local anaesthesia it is by far the safest of all the surgical attacks on the obstructing prostate, and can be carried out on patients who formerly would have been condemned to catheter life or to a permanent suprapubic drainage. It provides therefore, a welcome way out of many a difficult clinical problem.

In conclusion I should like to make a digression. For a long time I have felt that our methods of dealing with prostatic obstruction were in some danger of becoming over-standardized. There is a tendency for us to become champions of one or another particular brand of operation instead of exponents of them all. Personally I am trying to avoid being pro McCarthy, pro-Thomson, pro-Harris, pro Freyer, or pro Thomson-Walker, and employ each method where I believe it to be indicated. Each of these techniques has its place in our surgery, each its advantages and its shortcomings. In the preceding retrospect I have pointed out what in my opinion are the chief disadvantages of the McCarthy operation and have discussed some of the steps that urologists are now taking to remove them.

C. Weysser (*Dtsch. med. Wschr.* February 19, 1937, p. 307) remarks that some sixty different causes of abortion have been identified but that it is very difficult to associate any one of them with a given case. The treatment of threatened abortion has till recently lacked specific direction but now with the recognition of the part played by vitamins and hormones in this matter, it is possible to be more rational and less empirical. The author gives an account of his experience with ninety-six cases of threatened abortion treated with the vitamin D preparation *vigantol*. His rationale was based on the investigations of Poullson who in 1924 drew attention to the favourable effect of cod liver oil on intra uterine development. The *vigantol* was administered three times a day, only one drop at a time. This treatment was continued for several weeks and when possible to term. Other and older remedies for threatened abortion such as opium and rest in bed for at least a week after the cessation of haemorrhage were not neglected. This treatment was successful in about half the cases. The author chooses as controls the records of other gynaecologists whose patients were not treated with vitamin D and whose results varied considerably but were always much inferior to those claimed for vitamin D medication.

BLOOD TRANSFUSION IN OBSTETRICS

BY

MALCOLM D. BLACK, M.B., Ch.B.,
F.R.F.P.S., M.C.O.G.

Lately Registrar to the Glasgow Royal Maternity and Women's Hospital

This article has been written to describe the formation of a blood transfusion service and to give an outline of the indications, method, and dangers of blood transfusion. Among the branches of medicine in which there is a place for blood transfusion obstetrics is pre-eminent, yet this fact has been neglected for many years on the ground that the pregnant or parturient woman stands blood loss better than any other type of patient.

As pointed out by Professor Dugald Baird in a lecture to the Glasgow Obstetrical Society and later published in the *Lancet* (1936), one of the outstanding needs of an efficient maternity hospital is a blood transfusion service. The great difficulty found by most institutions requiring large numbers of transfusions has been to secure a suitable donor promptly. In previous years patients have died after a stay of eight hours in this hospital, during which time twelve donors had been tested and found unsuitable. It is thus desirable to have a list of grouped donors within easy call.

Procedure in the Glasgow Royal Maternity and Women's Hospital

In June, 1936, a service was started in this hospital. Placards had been posted at the entrance to it and in public places in the neighbourhood stating that male donors were urgently required, and that a fee of £1 1s would be paid to anyone giving blood. The prospective donors were asked to leave their names at the inquiry office. At a later date they were requested by postcard to come to the hospital for examination of the heart and lungs, Wassermann reaction, and blood group. If the heart and lungs were normal and the Wassermann reaction was negative the donor was placed on the roll and informed to that effect by another postcard. By this means a roll of 180 donors has gradually been built up. All groups are put on the roll.

Before a donor is sent for the recipient's blood is first grouped to determine the appropriate donor. The policy of the hospital, notwithstanding, is still to use a relative where possible. By this means a saving of universal donors is effected. However, in cases of great urgency a Group IV donor is summoned at the time of the patient's admission. When the occasion arises the motor hirers to the hospital are telephoned given the names and addresses of three donors living in the same locality, and instructed to secure one donor as quickly as possible. In this way a donor can practically always be secured within thirty minutes.

When a donor arrives a rapid direct compatibility test is performed before the transfusion is started. The blood having been withdrawn the donor is kept lying flat for about one hour, given a hot meal and then sent home by taxi. He also receives a form stating that he has given blood, and on production of this form at the house superintendent's office he is paid the fee of £1 1s. Should a donor be called and not used he is paid 5s. This service has been made available for the private practice of the members of the visiting staff of the hospital. Since the commencement of the service fifty donors have given blood and nineteen have been called and not used. By means of this service we hope to prevent as far as possible deaths from haemorrhage in the hospital.

Methods

The test for compatibility is made either by naked-eye examination of a mixture of the donor's corpuscles with the recipient's serum one drop of blood being added to two drops of serum or by making a hanging-drop preparation of equal parts of a fine suspension of the donor's corpuscles one drop of blood in 1 ccm of a 5 per cent citrate solution and the serum of the recipient. Agglutination will take place in five minutes if the bloods are incompatible. The test for agglutination makes unnecessary that for hæmolytic since agglutination always occurs before hæmolytic. In transfusions performed outside the hospital a compatibility test can be performed after waiting about ten minutes for a little serum to separate off from the recipient's blood.

It may be noted here that in certain cases corpuscles from a universal donor from a donor belonging to the same group as the patient or from the patient herself have appeared on a cold slide to be incompatible with the recipient's serum. On warming the slide however the agglutination which has never been absolutely definite disappears. In all cases wherever possible two persons should make independent tests for compatibility.

In this hospital the indirect method of transfusion is always used. The blood is drawn off from the donor in a separate room by means of a French's venesection needle to which is attached a few inches of rubber tubing. The blood is allowed to run into a flask containing 150 ccm of a 5 per cent citrate solution. While the blood is being run into the solution a gentle rotatory movement is maintained to secure proper mixing in the flask. Thus 600 ccm of blood are drawn off so that the flask contains 750 ccm fluid—namely 600 ccm of blood and 150 ccm of 5 per cent citrate solution which gives a final 1 per cent citrate mixture.

Instead of the ordinary tourniquet being applied to the donor's arm the arm piece of a Biomanometer is used. By this method the constricting pressure can be maintained at about 60 mm Hg a figure well below the systolic blood pressure. It is not uncommon to find even in healthy young adults a sudden fall in blood pressure probably of psychic origin soon after the onset of the proceedings. Cutting down on to a donor's vein should never be permitted. It may be noted that the London blood transfusion service has wisely instructed their donors never to allow a surgeon to cut down on to the vein.

After the blood has been secured a simple gravity saline infusion apparatus is used. Cutting down on to the recipient's vein is always advisable as it is surer and quicker in collapsed patients. The vein is first ligatured distally and a single loose knot is tied round the proximal end. The opening in the vein is best made transversely by a pair of sharp scissors and the cannula is inserted some saline being kept running through it during the process. When the cannula has been inserted the knot of the proximal ligature is drawn tight. If difficulty occurs in inserting the cannula the proximal flap of the incision in the vein may be lifted up with fine non-toxic dressing forceps. This method is in our experience the simplest and quickest.

The Kump on Brown method with the flask and bellows has been discarded in this hospital on account of the difficulty in inserting the cannula into the vein and the liability of the cannula to slip out when the patient is restless. The usual amount given is 600 to 1000 ccm. An exception to the gravity method has been made on one occasion the French's venesection needle being used.

In our experience no clotting or other difficulty has been found. Twenty minutes at least should be taken in introducing 600 ccm of blood otherwise an acute dilatation of the right side of the heart may be encountered. In cases of urgency while the operator is securing blood the assistant can cut down upon the recipient's vein and so expedite the transfusion.

In very collapsed patients, such as cases of retained placenta with severe post partum hæmorrhage, it is occasionally almost impossible to keep the patient at rest while inserting a cannula or starting the blood transfusion. In these cases in our experience the best line of treatment is to give the patient a few drops of ether on an open mask. The patient becomes anaesthetized quickly and then lies at rest coincidentally the general condition is much improved owing to the stimulant action of the ether. This procedure has been found to be much safer than an attempt to give a blood transfusion to a struggling patient who has to be forcibly controlled especially since this state of restlessness is often a sign of impending death.

Athrombit Method

This non citrate method has only been used on six occasions in this hospital. It is useful in cases of small blood transfusions such as 300 ccm given to increase the patient's resistance, but it has been found unsuitable for the large transfusions to replace blood loss which are so often required in obstetrics.

Transfusion Outside the Hospital

In cases of extreme urgency it is often preferable to treat the patient by blood transfusion in his own home before transit to hospital. In these cases and in private practice generally the gravity method can be easily performed in the patient's home. It is better to draw off the blood in the hospital and carry it out to the patient but in the case of patients living at a great distance from the hospital or in private practice, the whole procedure may take place in the home.

Indications

The following table shows the various conditions treated by blood transfusion in the years 1935 and 1936 in the Glasgow Royal Maternity and Women's Hospital.

	Retained Placenta & P.P.H.	Placenta Prævia	Accidental Hæmorrhage	Abortion	Obstetric Shock and Others	Total Cases	Total Transfusion
1935	27	19	16	22	8	92	105
1936	49	30	14	29	22	145	165

The main object in obstetrics in giving blood transfusion has been to replace blood loss from hæmorrhage. At times it has been given with a view to increasing the patient's resistance to infection.

Very Collapsed Patients

The question often arises whether it is too late to give a transfusion while the patient is living. It is not too late. To illustrate this point a case may be quoted of retained placenta and post partum hæmorrhage in which just as the blood had been drawn off the patient stopped breathing. The pulse could not be felt and the patient was apparently dead. In rapid succession adrenaline injection, the administration of oxygen and artificial respiration were started at once and the blood transfusion was com-

tinued. At the end of the first 900 ccm the patient was breathing the pulse was just perceptible but she was still unconscious. Since another donor was available more blood was secured, by the time 1,800 ccm had been given the patient was wide awake and conversing freely.

The question of giving intravenous saline solution to a patient requiring blood transfusion while waiting to secure blood requires discussion. If blood is not yet available and the patient is not at the point of death an intravenous saline injection should not be given, otherwise the blood pressure will be raised, the haemorrhage will recur and she will soon be in a worse state than before. On the other hand, if blood will be available within half an hour to one hour, or if the patient be at the point of death, it is better to start giving an intravenous saline injection and to continue it until blood has been secured.

Retained Placenta with Post-partum Haemorrhage

It will be seen from the table that most cases requiring transfusion belong to this class. When the patient has received a transfusion the placenta must be removed by expression or manually otherwise further bleeding will occur coincident with the rise of blood pressure. It is sometimes held that if the patient had previously been in a very collapsed state she should be left for some hours after transfusion before any operative procedure is undertaken. The delay often results in more bleeding however. Many patients will lose nearly as much blood as they have been given and require a further transfusion before operation.

If the patient at the end of the transfusion is still too weak to stand operative intervention more blood must be transfused till the patient is fit, at which time the operation should be undertaken. In some cases in the past when transfusion had been unsuccessful the amount of blood given was insufficient. Hence large quantities of blood are essential, at times up to 2,000 ccm.

Placenta Praevia

Cases of placenta praevia very often require transfusion before operative procedures can be undertaken. Since these patients may lose a great deal of blood during the operation, preparation should be made to give a further transfusion in the course of it or immediately afterwards. As in cases of retained placenta all operative procedures should be undertaken soon after the first transfusion. A very important factor in the fall in the maternal mortality from placenta praevia in the past few years has been the increased use of blood transfusion as an adjunct to operative treatment.

Accidental Haemorrhage

While very few people doubt the efficacy of blood transfusion in cases of placenta praevia many hesitate to recommend it for cases of accidental haemorrhage. Examination of the mortality in cases of accidental haemorrhage reveals that blood loss is often an important factor. Transfusion is thus indicated in these cases. However since there is often such a large element of shock independently of the actual blood loss and especially in the form of accidental haemorrhage associated with utero-placental apoplexy the results cannot be expected to be so good as in cases of placenta praevia and post partum haemorrhage. Similarly, in cases of obstetric shock with no apparent bleeding it is difficult to know if blood transfusion is advisable theoretically.

intravenous saline solution should be sufficient. In practice relatively few cases of obstetric shock occur apart from associated blood loss hence transfusion is usually indicated.

Incomplete Abortion

Many cases of abortion are admitted after great blood loss outside the hospital. The patients are still bleeding and show every likelihood of continuing to do so until the uterus has been emptied. In these cases a blood transfusion should be given and be followed immediately by emptying of the uterus. The latter procedure without preliminary transfusion is often fatal. In the past since death so often occurred in the course of anaesthesia given to permit curetting these fatalities were classified as due to anaesthesia whereas the true cause was haemorrhage and shock.

Dangers

The main dangers are incompatibility haemolysis and acute dilatation of the heart.

Incompatible blood transfusion results in respiratory distress cyanosis mental excitement and coma death occurs usually within two hours. Under hospital conditions it can be avoided by strict adherence to the rule of simultaneous compatibility tests by two different persons as indicated in this article under the heading Methods. If any suspicion of incompatibility arises during the transfusion the procedure must be stopped at once.

Haemolysis will occur if the bloods are incompatible, or it may result from over heating of the blood in the container. The duty of maintaining the blood in the container at body temperature is usually delegated to an assistant. If the assistant allows this blood to get more than a few degrees above the body temperature at any time after collection haemolysis may occur in the recipient's body with the formation of haemoglobin casts in the renal tubules and death from anuria six to twelve days later. If haemolysis is suspected large doses of alkali should be administered to prevent the formation of haemoglobin casts (Baker and Dodds 1925).

Acute dilatation of the heart can be avoided by running the blood in at a proper rate. This complication should be specially watched for in cases with anaemia of some days standing in which fatty degeneration of the myocardium may be present. If acute dilatation of the heart occurs venesection must be performed at once for its relief.

The number of blood transfusions given in the Glasgow Royal Maternity and Women's Hospital were eleven in 1932 twelve in 1933, forty-three in 1934 105 in 1935, and 165 in 1936. The average number of deaths from haemorrhage in the hospital for the five years 1930 to 1934 inclusive was 21.4 per year. In spite of the increased number of transfusions in 1935 sixteen deaths occurred from haemorrhage. The reason for this is that although transfusion was at that time being largely used for haemorrhage cases the worst cases still proved fatal because there was no means of securing suitable donors quickly. Similarly in the first six months of 1936 eight patients died from haemorrhage.

The new transfusion service was started in the middle of June 1936. In the second six months of 1936 only two patients died from haemorrhage. The two deaths from haemorrhage since June 1936 were both in cases of rupture of the uterus one of which was not diagnosed. In the other a blood transfusion was given but at the operation the bleeding points were not secured adequately,

and further unrecognized internal bleeding occurred. On analysis of the deaths from hæmorrhage recently it would appear that of the previous twenty cases annually about fifteen could have been saved by transfusion but about five each year would have died despite transfusion owing to shock or to continued bleeding.

Further Requirements

What is still required is a method of keeping blood in stock similar to the storage of saline solution in bottles for intravenous use. Patients have died within half an hour of admission. An intravenous saline injection can be started within ten minutes of admission and blood transfusion could be started in the same time if blood were kept in storage. I have had no experience of the Russian method.

Conclusion

From the statistics of the hospital about one fourth of the deaths are due to hæmorrhage. Of these deaths from hæmorrhage about three fourths can be avoided by transfusion within one hour of admission to hospital. This has required the organization of a blood transfusion service for this hospital. Blood transfusion services are organized in London and certain other cities but they should be organized by every obstetrical hospital when a public service is not available. These facilities should be extended to patients too ill to be brought into hospital at once and also to private practice in the area. For the smooth working of such a service the concentration of maternity work in a large centre with a highly skilled staff is preferable.

My thanks are due to the entire medical staff of the hospital for their co-operation.

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S. C. Davidson and S. I. Warren (*N.Y. St. J. Med.* February 15, 1937, p. 387) review radiographs of twenty-four patients with infectious arthritis taken before and after treatment. The sole measures used were fever therapy alone or in combination with a hot bath routine. Before treatment each patient was physically examined, septic foci were removed and an electrocardiogram and a radiograph of the chest were taken. No dietetic regulations were enforced with the exception of an additional daily intake of one quart of milk. The patient was placed in a cabinet with the radiation from five 200-watt lamps directed at the trunk and limbs, the head remaining outside. The temperature was raised to 40.5 C. and maintained for four hours. A hot bath routine was carried out throughout the cold months of the year. Of twenty-four patients thus treated three showed no clinical or radiological improvement, six were clinically improved but there was no radiological evidence of definite change in the bony structures round the joint to support this improvement, thirteen showed clinical and radiological improvement. The authors analysed their cases and found that cases of infectious arthritis are resistant to fever therapy (a) when the disease is in the acute stage of soft tissue proliferation and (b) when the cartilage and bone atrophy have developed. These are usually persons under 30 years of age. In the subacute or chronic stage of infectious arthritis with thinning of the cartilage and bone atrophy in persons between 30 and 50 years of age marked improvement resulted. Two cases with definite hyper trophy of the joints showed complete relief from symptoms after fever therapy without any radiological evidence of diminution of bone space.

THE PREVENTION OF CONSTIPATION

BY

E. M. DIMOCK, M.D., B.Ch.

The progress of medicine is towards prevention. Yet constipation, one of the commonest ailments of civilization, receives only remedies. The present attitude of the medical profession towards constipation is deplorable. Students at many hospitals are brought up in an atmosphere where the indiscriminate use of purgatives is condoned. Too often the dose and type of purgative are left to the caprice of the nursing staff, and bear no relation to the experience of the patient. Recently, however, Professor Witts (1937) has shown that the treatment of acute constipation by purgation is irrational and his article should be read by every doctor and nurse. As a general practitioner I treat numerous patients suffering from habitual constipation. I claim that this is a preventable malady and that the continued use of purgatives is irrational.

Why the Abuse of Purgatives Continues

The general practitioner is apt to be discouraged by many obstacles which prevent the effective treatment of habitual constipation. First he is seldom instructed adequately on this subject while at hospital. Secondly the diagnosis of habitual constipation can only be made by the patient who is often misleading. Thirdly no single factor can be blamed as the cause of constipation and effective treatment must take into account all the circumstances in each case. At least four factors are commonly encountered.

1. The ignoring of the bowel habit or its lack of development.
2. Lack of physical activity.
3. Abuse of purgatives.
4. Unsuitable diets or artificially purified foods.

It follows that the treatment of habitual constipation is chiefly instructional. In actual practice this is so difficult that few doctors will make the attempt. Many patients have sedentary occupations while others cannot afford a suitable diet. Moreover there is nothing more difficult than to inculcate a habit into patients who have no use for any advice that requires personal trouble or thought. The rational treatment which at present is accepted by the medical profession does not utilize diet to the fullest advantage and even when applied correctly often fails altogether or only partially succeeds. It is discouraging for the doctor to take the time and trouble necessary to instruct his patients when his advice is not likely to be followed or when utilized is apt to fail. For these reasons the everyday treatment of constipation is largely disowned by the medical profession and is considered as the responsibility of the individual sufferer or parent and patient and physician are all more concerned with the relief of attacks of constipation than with the prevention of their occurrence.

Purgatives appear to offer a simple and effective solution for doctor and patient. Under the term "purgative" I include aperients, salines and all laxatives that are not purely mechanical. Not one of these is mechanical in action. I firmly believe that the treatment of constipation by purgatives is responsible for numerous cases of chronic digestive disorders, headache and nervousness.

Diet in Constipation

As constipation is practically unknown among savage tribes it would appear that a method is required which will overcome the disadvantages of our civilized diets and sedentary occupations. Such a method should aim at increasing the normal reflexes without hurrying food through the intestine before it is properly digested. With this object I have used diets with a high fibre content such as bran. This method of treatment is founded on the theory that the colon does not function normally unless it has a certain amount of cellulose residue in its lumen after the processes of digestion have been completed. Though every normal diet contains some of this residue the major part of it is eliminated by the modern preparation of food. It is the virtue of this treatment that it remedies this artificial deficiency and thus in my opinion prevents the induction of constipation. The advantages I claim for the method are that it is simple, inexpensive, harmless, effective and essentially physiological. As the use of food containing fibre has fallen into undeserved disrepute, and the value of diet for constipation has been grossly underestimated, I propose to give a short elaboration of recent work on this subject.

There is now ample experimental evidence showing that the laxative effect of vegetable foodstuffs depends upon their fibre content. The most important investigations on this subject have been done by G. R. Cowgill and Anderson (1932-3), G. A. Williams (1927), H. Morgan (1934) and W. H. Olmsted (1934, 1935). The type of fibre contained in vegetable food varies in the extent to which it resists the action of bacterial decomposition and the digestive juices. On this fact depends the value of the foodstuffs as a laxative agent. Thus the fibre of green vegetables and ordinary foodstuffs is more readily broken down in the alimentary tract than is that of wheat bran. This explains why the addition of fruit and vegetables to the diet so often fails to prevent constipation.

The Use of Bran

Cowgill (1933) states that the fibre of processed bran resists decomposition to a very considerable degree, and that as the use of bran is not attended with undesirable symptoms of any kind this product may be considered to have special value for constipated patients. Cowgill and Anderson (1932) showed that when a low fibre diet is given to normal people they become constipated, and that a physiological fibre minimum of 90 mg per kilogramme of body weight daily is necessary to prevent constipation in healthy individuals.

There have been repeated statements by clinicians that the foods which contain fibre and bran in particular irritate the alimentary tract. Although no proof has been forthcoming to support these opinions they have been widely accepted. In order to determine this point investigations have been carried out by Murphy and Jones (1926), Frey (1928) and Rose (1932) with various types of diet containing up to 50 per cent of fibre. No evidence of irritation was found. In a summary of literature M. S. Rose (1932) stated that from the use of bran injury to the alimentary tract has not been observed. From my experience of the employment of bran during the last five years I have yet to encounter any signs or symptoms of irritation. I have used it for approximately 250 patients old and young in bed or at work for those liable to peptic ulcer as well as for those with haemorrhoids, mucous colitis, and spastic colon. The only troubles ex-

perienced were with a few patients who disliked eating bran or had difficulty in chewing it or who complained of the lack of variety of these products.

Some writers state that bran distends the intestines, implying stretching of the gut wall to a harmful extent but as bran forms a soft pulpy mass it would require accumulation behind an obstruction to produce abnormal distension. Objections have been raised because of the possibility of intestinal obstruction by bran. This is a bogey when used correctly bran cannot cause obstruction though in rare cases this has occurred when bran has been taken despite stubborn constipation.

Fibre by virtue of its power to retain moisture is a mechanical laxative. Under conditions of intestinal stasis it is gradually dehydrated and therefore is useless for the relief of established constipation. Bran and all dietetic measures relying on the action of fibre should only be used for *prevention* of constipation. I believe clinicians have discredited bran because they have found it to fail when the patient is constipated in other words when this form of treatment is not indicated. The erroneous impressions gathered from the incorrect use of bran has been perpetuated by the labelling of this substance roughage. This term implies a coarse mechanical irritant. The soft moist stools produced when bran is used correctly cannot irritate the mucous membrane. Bran is also labelled indigestible whereas it is merely inert and certainly does not give rise to indigestion. Any person who can eat fruit and vegetables with impunity, can obtain proof of the harmlessness and effectiveness of bran by taking one of the processed products himself. These processed products are not made from the husk or chaff of wheat but from the outer layers of the wheat or rice grain. They are made palatable with malt and sugar, and contain 5 to 15 per cent of fibre.

Technique of Use

The instructions to the patients are given under two headings: (1) treatment of constipation if present, (2) prevention of future constipation.

(1) Most constipated patients know which medicine suits them and how much to take. The practitioner should be prepared to treat each patient as an individual in the matter of laxatives and the patient's confidence will be retained if he is allowed to use the medicine that has been successful on previous occasions. The patient should be instructed to avoid purgation. When mild constipation is present I prefer magnesia or emulsions of liquid paraffin which at first may be given in half-ounce doses morning and night. Senna or a pill such as pil. aloin. co. may be used in moderately severe cases. Glycerin suppositories are also useful. For stubborn cases enemata consisting of plain water or saline are much more satisfactory than large doses of purgatives.

(2) I have used bran as the mainstay of my treatment combined with the use of a laxative as long as is necessary. Bran should not be added to the diet when constipation is actually present. The bran should be taken daily for a minimum period of four weeks and as laxation increases the laxative given may be gradually reduced and finally left off. Bran is usually taken with milk and sugar for breakfast or the evening meal. Some people like to mix it with other breakfast cereals or porridge. The amount taken varies from one tablespoonful to a large cupful. Half a teacupful is an average quantity. In stubborn cases it may be necessary to give bran twice a day before the patient's usual dose of purgatives can be reduced. I have not found that the effect of the bran diminishes with use,

nor that more is required, rather there is a tendency for patients to return to normal bowel habits and for less bran to be necessary

The Patients

Eighty per cent (121 cases) of my patients suffering from habitual constipation have utilized the bran method of treatment. Of the remaining 20 per cent 8 per cent were relieved by increased exercise and vegetarian diet and the omitting of purgatives, and the remaining 12 per cent did not care for the method.

The 121 cases which form the material of my follow up consist of 110 cases of simple habitual constipation, nine of spastic colon, and two of mucous colitis.

Simple Habitual Constipation

The following table gives the men and women under the classification that I have adopted

Type of Result	No. of Women	No. of Men	Total	Per centage
A. Patients who return to normal and do not require bran	28	14	42	38
B. Patients who return to normal, but require a maintenance dose of bran	41	16	57	52
C. Patients who in addition to taking bran regularly occasionally require a laxative	5	—	5	4.5
D. Patients who have not been improved—that is failures	6	—	6	5.5
Total	80	30	110	100

Thus 90 per cent of my patients (Types A and B) have become normal and a further 4.5 per cent approximately normal (Type C).

Type A—Once a patient has succeeded with bran he or she rarely reverts to purgatives again except in an emergency. The patients who become quite normal usually find that a little bran helps them out of any future tendency to constipation. The time taken to attain normality varies considerably. Some are immediately successful and others after a period of years find that bran can be left off.

Type B—Most of the patients in this group have had long standing constipation or have poor musculature and/or sedentary habits. They require a maintenance dose of bran. This group also includes those patients who need bran only once or twice a week and some who have started treatment recently and may be able to leave it off later.

Type C—All these patients were women and had had severe constipation as long as they could remember. No previous method had given them a satisfactory result but they now obtain regularity when taking bran together with a mild laxative such as magnesia. It is significant that although none of these particular patients like eating bran they all continue to take it.

Type D—There were six women patients who did not find bran useful after a prolonged trial. These patients were all in the same age group the youngest being 37 and the oldest 50. It is well recognized that constipation is prevalent and difficult at the time of the menopause also that laxation is affected by the monthly periods. In contrast to the other groups no increase in the amount of stool passed was noticed by these patients. This would tend to support a suggestion by Coe (1937) that in constipated patients fibre is more readily broken down in the alimentary tract than in normal people.

Of fifteen patients who at first disliked eating bran but who were willing to take it, only four have reverted to other methods.

When I divided my patients into two groups—(i) those constipated more than ten years, (ii) those constipated less than ten years—I found all but one of the failures and partial failures had been constipated for more than ten years. Further, those patients who had been constipated for a long time recovered less easily. In contrast to this the apparent severity of the constipation did not influence the prognosis as much as the length of history.

Use of Bran in Special Conditions

1 Haemorrhoids—Seven of my patients had symptoms of haemorrhoids when treatment began and eleven others gave a history of haemorrhoids. When haemorrhoids were present the degree of laxation aimed at was two formed soft stools each day until symptoms disappeared. Otherwise the treatment was similar to that used for uncomplicated constipation. There have been good results in every case the haemorrhoids disappearing without any special or local treatment. In no instance did the use of bran increase the symptoms nor has there been any recurrence. The eighteen patients in this group have been particularly pleased with the bran treatment.

2 Mucous Colitis—The two cases I treated were both attributable to purgatives, they lost all symptoms including mucus, within two months, and have not relapsed during the last two and three years respectively.

3 Spastic Colon—These cases offer an excellent opportunity for preventive medicine. My experience has led me firmly to believe that constipation provokes the attacks in susceptible persons. Almost all of these patients have habitual constipation, I have found this can be prevented by the use of bran and then attacks of spasticity are very unlikely. It is perfectly clear to those engaged in private practice that the attacks are short and the intervals long. Good results from the use of bran are not to be expected when spasticity is present, for the patient is constipated. In my opinion the reason why bran has been regarded as irritating in this condition is because there has been no distinction between the attack and the interval.

Psychology

Everyone who has treated individuals suffering from constipation realizes that a strong psychological element is involved. The patients are apt to think that they are ill and the necessity for taking medicine confirms them in this view. Bran is regarded as a food, not as a medicine by the lay public and the patient who secures satisfactory laxation by the use of bran rapidly ceases to regard himself as a person requiring treatment and his hypochondria diminishes correspondingly. My experience is that patients who are successful with bran have a psychological advantage over those who are successful with laxatives. Bran taken as a cereal at mealtime becomes a habit and does not tax the memory. When established the exact dose is unimportant. A missed day does not give rise to anxiety or call for interference as an enema is certain on the following day. Moreover there is a prolonged hang over action laxation continuing normally several days after the bran has been left off. The great majority of my patients have attained normality and the subject of laxation has then become unimportant.

The improvement in these patients is so striking in the majority of cases that few attend sufficiently often to facilitate a follow up. The value of the treatment

only ascertained at the time of the next ailment. This amnesia does not occur when purgatives and mechanical laxatives are taken. It is necessary to remember to take medicine and to gauge the dosage with the results obtained. It is seldom that they produce the clocklike regularity experienced with bran. Many patients who take purgatives experience symptoms such as flatulence, headaches, colicky abdominal pain and sometimes alternate between constipation and diarrhoea. In such circumstances how can they be anything but colon-minded?

Prophylaxis

Bran may be used as a prophylactic agent to prevent the occurrence of constipation in patients who are (a) constitutionally liable to constipation (b) placed in circumstances which may produce constipation.

(a) Some patients who are liable to attacks of constipation ward them off with bran once a week. Its action gradually diminishes over a period of three to eight days in the patients who find it effective in this way. I believe that bran is a useful prophylactic against the attacks of spastic colon.

(b) Bran can be used during the post operative antenatal and post natal periods. Other laxatives are often necessary as well but it is not difficult to minimize them especially if the patient has used bran previously. As the occurrence of constipation often dates from childbirth or an abdominal operation prevention of constipation is particularly important at these times. The influence of different localities on the laxation of certain people has never been satisfactorily explained. The water supply has been indicted but a recognized authority on water supplies (Thresh, 1932) states that hard water is not known to cause constipation. One of my patients who varies between normality in Hampshire and obstinate constipation in Hertfordshire has obtained no benefit from the use of a water softener. Many people become constipated when travelling and bran as a prophylactic is much superior to the purgatives usually employed.

Summary

The principle for the use of high fibre diets for constipation has not been appreciated. High-fibre diets should be used for prevention and not for treatment.

Investigations have shown that (1) the laxative value of foodstuffs depends upon the type of fibre contained therein (2) the fibre of wheat bran is much more effective than that of fruit and vegetables (3) no evidence of irritation of the alimentary tract by bran has been observed.

The nomenclature in common use has been criticized.

One hundred and twenty-one patients with habitual constipation 80 per cent of the total, were treated with processed bran. The results in 110 cases of simple habitual constipation showed that the treatment was successful in restoring normal bowel habits in 90 per cent of the cases that women were more common sufferers than men in 3 to 1 ratio that the menopausal age is the most difficult and that the prognosis and rapidity of response to treatment depend upon the length of the history of constipation.

The psychological benefit conferred on these patients is contrasted with the outlook of the patient taking laxatives.

The importance of prophylaxis is emphasized.

The results in patients with haemorrhoids were particularly encouraging.

Two cases of mucous colitis due to purgatives were successfully treated by bran.

In spastic colon the importance of the prevention of constipation during the intervals between the attacks is emphasized for it is suggested that constipation induces spasticity in the susceptible person.

The processed bran used in the investigations was Kellogg's All Bran.

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TREATMENT OF CARCINOMA BY INSERTED RADIUM PLAQUES

BY

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Probably the most important factors in the successful irradiation of carcinoma are that the irradiation should be uniform over the whole region under treatment and that its amount should be accurately known. In the possibility of satisfying these conditions lies the real advantage of radiation from a distance whether by large radium units or by x rays.

The insertion of seeds or needles into the tissues however skilfully carried out can only give a very rough approximation to the result desired and in any event there must be a number of points of excessive irradiation and local destruction of tissue. The method which I propose to describe avoids such local damage while retaining the convenience and economy of seeds and needles moreover in the regions where it is applicable it would appear to meet with a high degree of accuracy the conditions we have stated as fundamental.

Method of Procedure

The method consists in the introduction into the tissues of small plaques made of dental wax and carrying within the wax the seeds or needles used as sources of radiation. The latter are so arranged as to give the flattest possible

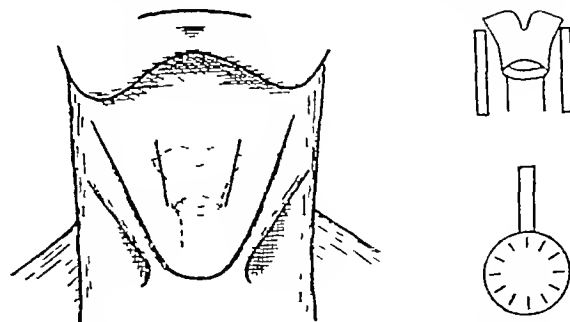


FIG 1—Showing form of plaque and incisions for introduction

field and where it is possible to introduce two opposing plaques these can be so arranged that the whole of the intervening tissue receives an almost uniform radiation.

If introduced into suitable tissue planes the plaques are readily tolerated and if they are removed at the end of four or five days the small wounds made for their introduction heal without difficulty. As no foreign body has been left in the tissues additional radiation from an external source may be at once applied should this be desired.

Application to Post-cricoid Pharyngeal Carcinoma

I shall describe the method in relation to pharyngeal carcinoma in the post-cricoid region to which it is particularly applicable. An incision four or five centi-

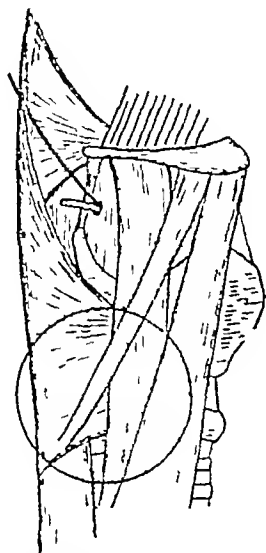


FIG. 2—Outer wall of pharynx exposed by blunt dissection.

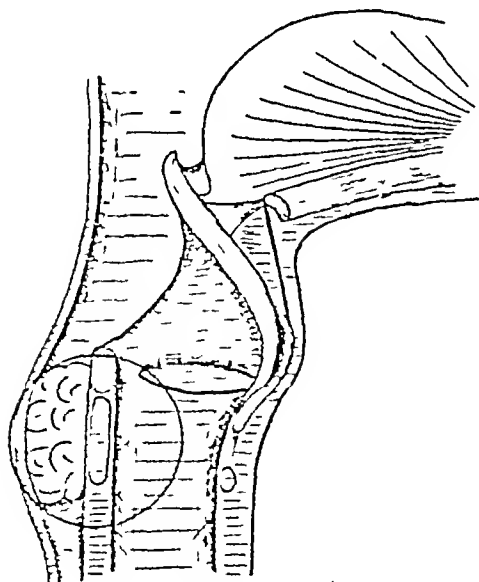


FIG. 3—Internal of larynx and pharynx.

metres in length is made on each side of the larynx dividing the skin and platysma. When it will be found that a fascial space can be opened up between the larynx and the great vessels so that both sides of the larynx and pharynx from the hard bone downwards are exposed

with facility. The only important structure crossing the space is the internal laryngeal branch of the superior thyroid artery and this is divided between ligatures.

Two circular plaques have been prepared three centimeters in diameter and consisting of four layers of dental wax between which the seeds or needles are suitably arranged whilst a piece of tape is inserted to facilitate removal. The plaques are inserted fixing one on either side of the pharynx which is thus subjected to a cross fire resulting in a very uniform field of irradiation. The incisions are closed by a few stitches leaving the tapes projecting. At the end of three days the incisions are reopened the plaques removed and the incisions again sutured. The inconvenience to the patient is remarkably small.

As regards the quantity of radium required if twenty-five radon seeds of 1 millicurie each are distributed radially around the margin of each plaque at the end of three days there will have been 21 millicuries destroyed and if the plaques are four centimetres apart the whole of the intervening tissues will have been subjected to an irradiation of just over 6000 *r* units.

Other Applications

The method as described is applicable to the lower pharynx, the larynx, and the sinus pyriformis. With suitable modifications it may be applied to the tonsil and to the vallecula and the root of the tongue and even to the cervical oesophagus. No doubt it has many other applications but here it appears to be peculiarly suited and to meet effectively cases of a difficult class. The number of cases in which it has been used is too small to justify conclusions but the results have been encouraging and would seem to indicate both the safety and effectiveness of the procedure.

A. Paskiewicz (*Rev. Laryng.* January 1937 p. 40) discusses a special group of foreign bodies in the trachea and bronchi such as beans, peas, maize and soft stones of fruit all of which have the property of expanding when living in contact with the tracheal and bronchial mucous membrane after aspiration. The foreign body may lie in the right bronchus at first. As it expands the coughing efforts sometimes dislodge it and it may come to lie near the bifurcation causing death by obstructing the left bronchus as well. Soft foreign bodies also lead to rapid suppuration of the mucous membrane with the formation of pulmonary abscess as do fish bones and small pieces of wood. Before the invention of the bronchoscope the mortality of expanding foreign body was 52 per cent. At present the mortality is still 27 per cent because bronchoscopy removal presents great technical difficulties. The foreign body often breaks into several parts when seized with the ordinary type of bronchoscopy forceps. Special forceps ends have been invented also hooks which simply dislodge the foreign body without seizing it. After loosening them in this manner they are sometimes coughed up especially if a tracheotomy opening has been made. In infants and children a choice must be made between upper and lower bronchoscopy. For many reasons the author prefers lower bronchoscopy. The endoscopic tube being introduced through a tracheotomy opening. In upper bronchoscopy if the tube has to remain in the larynx of a child it is more than fifteen minutes there is considerable oedema of the glottis. The article includes eight photographs of children with these deaths.

PRESENT-DAY METHODS OF STERILIZING DRESSINGS

BY

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The modern ritual of asepsis enables surgical procedures to be carried out with an almost monotonous freedom from complications caused by infection. Nevertheless from time to time disturbing features arise that have not up to now been satisfactorily explained. A surgeon finds wounds that should heal by first intention breaking down. Cases of tetanus following operation are occasionally reported. The obstetrician has sporadic cases of infection and hospitals and nursing homes are afflicted—fortunately rarely—by epidemic sepsis. For many years my own work has been partly concerned with highly infected labour cases. It was not difficult to imagine that unless the aseptic technique was efficient spread of infection involving 'clean' labour and gynaecological cases was not improbable. This led me five years ago to undertake the investigations outlined in this paper.

The sterilization of boilable articles for fifteen minutes is generally accepted as efficient. The sterilization of dressings although accepted appeared to be something of a mystery. My own knowledge was scanty. I knew that dressings such as abdominal sheets, towels, swabs, wool, overalls, gauze, caps, masks, etc. were packed into drums or bags and placed in a sterilizer into which steam was admitted until a certain pressure was reached. Twenty minutes later the dressings were considered as sterile. I find that the knowledge of many of my colleagues is just as limited. It has always appeared to me somewhat strange that we should accept dressings as bacteriologically sterile merely because they have been treated in a high pressure sterilizer. Under the present methods in vogue there is no proof whatsoever that such dressings are sterile.

Some Disturbing Facts

Inspection of six large hospitals revealed many disturbing facts illustrating the haphazard methods in use. It is assumed that the methods of six different hospitals each under separate administration may be taken as fairly representative. A few examples are as follows:

1. All the surgeons were convinced that their dressings were sterile even though they had no knowledge of the details of the technique of sterilization.

2. In only one case was there any real supervision by a sister. The packing of the drums was performed chiefly by probationers in one instance of one month's seniority. The actual sterilizing was done either by a staff nurse or by a subordinate who could not be classed as responsible.

3. In one hospital the steam inside the sterilizer was raised to a pressure of 20 lb per square inch and then the main steam supply was cut off. After twenty minutes the dressings were said to be sterilized.

4. In only one hospital were dressings intelligently packed. In all others they were simply crammed into drums or bags. At one hospital it was astonishing to see the enormous quantity of cotton wool which had been forced into a drum.

5. In another hospital the dressings after returning from the steam laundry were allowed to lie on an unclean floor.

6. The knowledge displayed by all concerned was either nil in which case they said "We have been taught this way" or else they were simply following the manufacturers' instructions.

Perfect sterilization should be simple. It merely consists in subjecting every part of the dressing to a certain temperature for a definite period. This period must be decided by the bacteriologist and given the correct period of time all bacteria and spores will be destroyed.

Scope of Investigation

It was decided to investigate the following problems:

- (a) What is the temperature and the duration of that temperature required to produce bacteriologically sterile dressings the heat being applied by means of steam under pressure?
- (b) How can it be proved that the necessary temperature is reached and maintained?
- (c) Can steam under pressure penetrate dressings with ease?
- (d) Does the type of material, the method of packing and the type of container affect the penetration of steam?

All these questions are answered by the experiments undertaken and an endeavour is made to lay down a definite technique under accurate control to replace what is considered to be a rule of thumb and inaccurate method. The great variety of results obtained by experiment indicates that the standard method of sterilization at present in general use—that is by steam at a pressure of 15 or 20 lb per square inch for twenty minutes—is far from accurate. (Recently some manufacturers have recommended thirty minutes.) This method is based on the assumption that steam penetrates dressings almost immediately. This is incorrect. Working with steam under pressure at a temperature of 126 °C I have found delay varying from one to seventy-two minutes in reaching a temperature of 115 °C—it is 11 °C less than that of the steam in the centre of a dressing drum. Steam under pressure should no longer be regarded as an agent that has remarkable powers of penetration. Unless certain conditions are observed it penetrates extremely poorly.

It is rarely that dressings are suspected or blamed as the cause of infection. The explanation may be due to the undoubted fact that we all have such implicit faith in a steam sterilizer or that it is impossible ever to carry out any bacteriological tests after the infection has occurred as by that time the dressings will have disappeared. I suggest that it is as logical and necessary to inquire into the efficiency of the sterilization of dressings as it is to swab nurses' throats or to blame the theatre sister or the catgut.

Time and Temperature

Textbooks, although insisting that sterile dressings are a necessary adjunct to successful operations, are somewhat indefinite as to the details of sterilization. Examples are: "in a high pressure steam sterilizer one hour at 10 lb (115 °C) will be sufficient" (Berkeley and Bonney 1935), "use steam pressure" (Blair Bell 1934).

In a steam sterilizer (Crossin 1930) "The information required is clearly—what is the temperature and duration required to kill all vegetative and sporing forms of bacteria?" I suggest that this information should be made available and be inserted in all textbooks in which the sterilization of dressings is mentioned.

It was decided to adopt the standard used by bacteriologists when sterilizing media, etc.—that is:

1. Fifteen minutes exposure to steam at 15 lb per square inch (121 °C) above atmospheric pressure will kill all forms of organisms including the most resistant spores (Mackie and Macartney 1934).

2. For practical purposes, from common knowledge 115 °C for twenty minutes is invariably fatal to tetanus spores (Medical Research Council 1924).

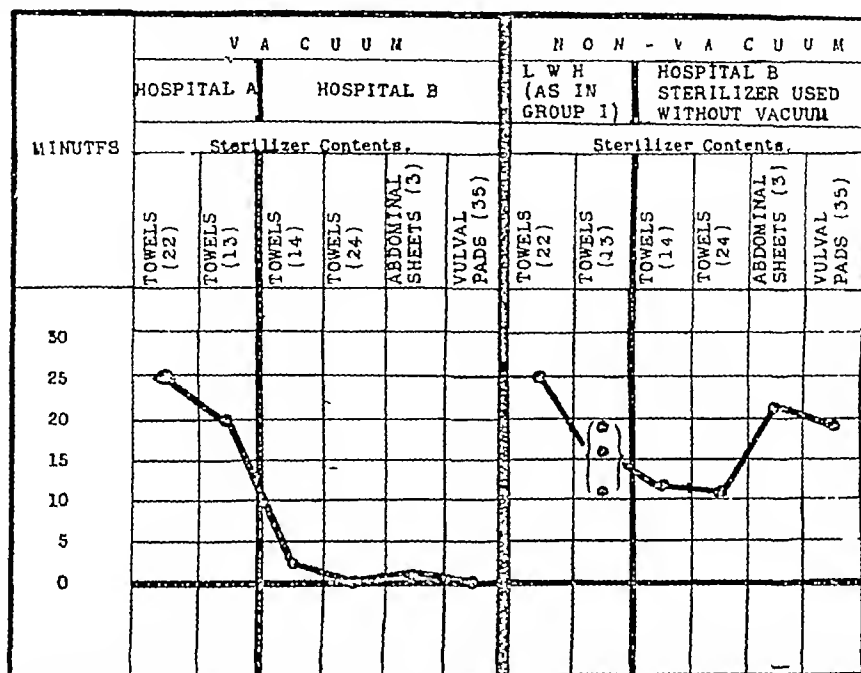
Vacuum and Non-vacuum Sterilizers

The most expensive sterilizers are fitted with a vacuum producing mechanism. The principle involved is that a vacuum is first produced inside the sterilizer, thus withdrawing all air and moisture from the dressings. Steam is then admitted, and as there is a negative pressure, rushes into the interstices of the dressings.

showed again that the tight packing of a sterilizer is a dangerous practice, and it emphasizes, too, the value of a control.

Technique of Dressing Sterilization

As so many factors can influence the efficiency of sterilization, the processes of packing drums and of sterilization should be considered as requiring a definite technique and adequate supervision.



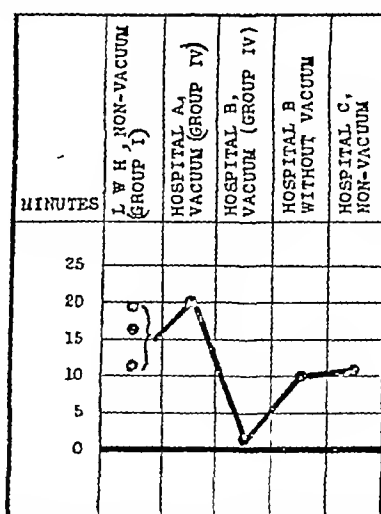
GROUP IV—Experiments to test the efficiency of vacuum and non vacuum sterilizers. 0 = the time when the steam pressure inside the sterilizer reached 20 lb per square inch (126°C)

Theoretically therefore, more efficient penetration is produced by a vacuum sterilizer. Experiments were conducted with a sterilizer of similar size to that used in Group I except that a vacuum apparatus was fitted. The vacuum had no apparent effect in assisting penetration. Further experiments with vacuum sterilizers are shown in the Group IV chart, and these indicate that the large vacuum sterilizer has no superiority over the non-vacuum type. As the number of experiments made on vacuum and non vacuum sterilizers is small no dogmatic conclusion can be drawn but it may be pointed out that whether a vacuum is or is not used an efficient method of control is still necessary. A vacuum can give no extra measure of safety without efficient control.

Group V experiments compare the efficiency of five different sterilizers. The time to reach the temperature when sterilization begins varies from one to nineteen minutes. This again proves the futility of sterilizing for a standard time without control. In tests to find whether a vacuum sterilizer was of greater value when its action was prolonged experiments indicated that in a large sterilizer prolongation of the vacuum action did produce increased efficiency, but prolongation of the time was of no value in small sterilizers.

Further experiments tested the efficiency of khaki-drill bags as containers for dressings. They appeared to be moderately efficient providing that the sterilizer was packed loosely. If however the sterilizer was packed tightly they were definitely inefficient. This experiment

- 1 Perforated drums should be used
- 2 Each drum should be filled in a definite manner which should never be varied. The contents of the drum should



GROUP V—Experiments to compare the efficiency of five different sterilizers, using the same control drum which contained thirteen towels and was unopened throughout. 0 = the time when the steam pressure inside the sterilizer reached 20 lb per square inch (126°C)

then be marked on a label attached to the drum. All articles should be *loosely rolled* and placed end on in the drum.

N.B.—Cotton wool before packing, should be unrolled and exposed to heat. It will then swell to twice its original thickness.

Great care should be taken to pack the drum lightly.

3 The sterilizer should be fitted with a control of the type described.

4 With the control in the centre of the drum each drum should then be tested in order to ascertain the time taken for 115° C to be reached. This time should be recorded on the drum label.

5 When sterilizing the control should always be inserted into the drum of dressings which are the most resistant to steam—as indicated by the time taken to reach 115° C.

6 Supervision by a responsible member of the nursing staff is necessary to (a) see that all drum perforations are open before sterilizing begins (b) see that the perforations

3 A simple control has been devised which accurately indicates when the sterilizing temperature is reached inside a dressing drum.

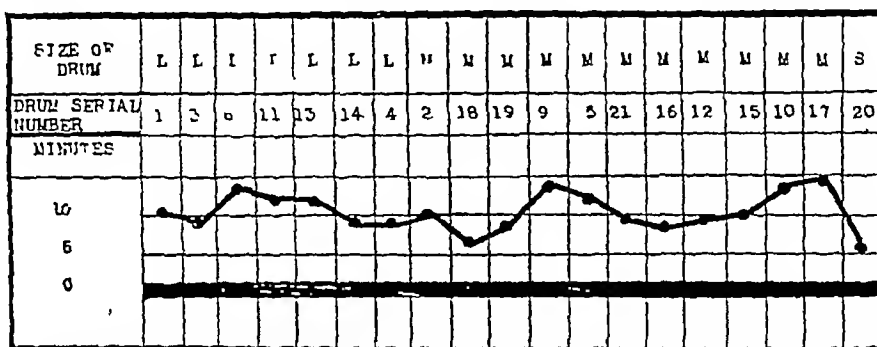
4 Experiments were first made on seven high pressure sterilizers of different types using a liquid control. These experiments are not published as it was considered that the control was not accurate. The results in general showed that sterilization was inefficient.

5 Further experiments were made using the electric control described on four different types of sterilizer. The conclusion is that present day methods of sterilization are inefficient unless a definite technique is adopted.

6 Steam under pressure is not considered as having remarkably efficient powers of penetration.

7 Carelessly packed drums, unperforated drums and tightly packed sterilizers have been shown to obstruct the penetration of steam.

8 A technique of sterilization has been suggested and the necessity for an adequate control indicated.



GROUP VI—Experiments to show the degree of penetration of steam using drums packed according to the technique described and as used in this hospital L.W.H. sterilizer as in Group I. The drums are described as large (L), medium (M) and small (S). 0 = the time when the steam pressure inside the sterilizer reached 20 lb per square inch (126° C).

are closed immediately after sterilization (c) see that a temperature of 115° C. is maintained for at least twenty minutes (d) see that the contents of the drums never vary from the optimum found by previous testing, and that the packing is according to instructions.

Note—To be strictly accurate each drum should contain a temperature control. This is not practicable and it is thus impossible to obviate the human element which might easily result in drums being improperly packed. To overcome this it is suggested that over and above the precaution advised in paragraph 5 above the time of sterilization should be increased by 50 per cent.

The Group VI experiments show the degree of penetration of steam through drums packed according to the standard technique described above. The uniformity of penetration is in marked contrast to that shown in the previous experiments.

NOTE ON STERILIZER CONTROL

The control can be obtained from Messrs Negretti and Zambra High Holborn London. Insulated terminals for the sterilizer door or lid can be fitted by any engineer. The wires connecting the thermometer to the inside terminals should be heavily insulated and covered with silk. The outside connections and indicator board can be made by any electrician.

Summary

1 Experiments have been made to ascertain whether present-day methods of sterilizing dressings are efficient.

2 A standard of sterilization necessary to produce bacteriologically sterile dressings has been adopted.

9 It is suggested that imperfectly sterilized dressings are a likely cause of unexplained wound infections and epidemic and sporadic puerperal sepsis.

My thanks are due to Drs H. B. Dunncliffe and H. W. Sun of the Central Board of Revenue Control Laboratory, Lahore for their kindness in giving me technical advice, carrying out tests, and experimenting with various types of controls, also to Sister Young for supervising the packing of drums and to the hospital mechanics for their laborious work under trying conditions.

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On the occasion of the International Congress of Ophthalmology to be held at Cairo from December 8 to 15 1937 several trips in the Orient have been organized under the auspices of the International Council of Ophthalmology, leaving Marseilles on December 3. The programme giving full particulars of these trips will be sent free of charge on request addressed to the Bureau des Croisières et Voyages Médicaux 29 Boulevard Adolphe Max Bruxelles Belgium. Doctors who are not ophthalmologists may up to the limit of accommodation available register their names for any of the trips so long as their applications are approved by the International Council of Ophthalmology, though they will not be able to take part in the special work of the congress.

GASTRO-ENTERITIS ASSOCIATED WITH
PROTEUS VULGARIS

BY

J D ALLAN GRAY, M.B., B.Sc., F.R.C.P. Ed.,
D.P.H.(From the Preventive Medicine Department University of
Bristol)

An outbreak of acute gastro-enteritis affecting at least eighteen individuals occurred in Avonmouth during the night of September 11, 1936. All the affected individuals had partaken of cockles sold by an itinerant vendor on the evening of that day, and only one person could be found who had eaten some of the cockles and who had not been ill. After an incubation period varying from three to six hours the illness commenced with headache, nausea, abdominal pain, vomiting, diarrhoea, and prostration. There was no pyrexia. With the exception of two cases the individuals affected were not seriously ill and had practically recovered within twenty-four or forty-eight hours. There were no deaths. The two patients who were seriously ill recovered in seven to ten days.

Considerable difficulty was experienced in tracing the vendor of the cockles, but largely owing to the indefatigable efforts of the chief sanitary inspector aided by the police and interested patients he was finally traced. The vendor was in the habit of receiving seven or eight bags of cockles a week from South Wales. On their arrival at his premises his routine procedure was to steep the cockles overnight in water in a pan to which salt had been added. This removed the larger portion of the sand present. The following morning the cockles were placed in a bucket with a perforated bottom and lowered into water boiling in an ordinary washing copper. This reduced the temperature of the water, but as soon as the water boiled again the bucket was removed, emptied, and refilled, and the process repeated. The heating loosened the cockles in their shells and allowed of their being riddled into either a small or large galvanized iron bath containing water and salt. The empty shells which remained in the sieve were discarded.

Close questioning elicited the fact that the vendor, his wife and family were in the habit of performing their personal ablutions in the larger of these two baths when it was not actually being used for the preparation of the cockles. In the process it will be seen therefore that the cockles were washed in three lots of water and that the only heat to which they were subjected was when they were brought to the boil—a procedure occupying at most about two or three minutes. Further, when the bath used for the personal washing of the vendor and his family was employed to hold the cockles the latter were not subsequently subjected to heat or otherwise cleaned before being sold.

The premises in which the cockles were thus prepared consisted of a small cellar nearly completely underground, ill ventilated, and containing an accumulation of litter and rubbish. Both floor and ceiling were defective and the walls were dirty. The vendor, his wife and family of six children all appeared healthy and had no symptoms relating to enteritis. He had carried out the business of selling cockles in different parts of Bristol and the surrounding villages for twelve years, and up till now had not been questioned. Inquiries among practitioners of districts other than Avonmouth where the vendor had sold cockles failed to disclose the occurrence of any cases of enteritis which could in any way be attributed to him.

Bacteriological Findings

Owing to the rapidity with which most of the patients recovered only two samples of stools in the liquid state were obtainable. Vomits were not secured. Throughout the investigation all the faeces examined failed to show the presence of organisms of the enteric, dysentery, or food-poisoning groups.

Case 1 (W.B.)—Faeces examined on September 14 by which time the patient had completely recovered, were hard and contained numerous atypical *B. coli*. *Proteus vulgaris* was not found.

Case 2 (C.W.)—The faeces on September 14 were still very diarrhoeic and contained *Proteus vulgaris* (motile spreading) and late lactose fermenting *B. coli*. A blood culture taken on September 18 was sterile. A serum test on September 18 in dilutions of 1 in 25, 1 in 50, 1 in 125 and 1 in 250 did not agglutinate the Standards Laboratory suspensions of *Bact. typhosum*, *H. Bact. typhosum*, *O. Bact. paratyphosum A*, *Bact. paratyphosum B*, *Bact. enteritidis*, Gaertner *Bact. aertrycke* (sp.) composite non-specific *Salmonella*, *Bact. newport* (sp.), *Bact. sinensis* (para C) (sp.), and *Br. abortus*. The titres for various strains of *Proteus* are given in Table I.

TABLE I—Serum of Case 2

Strain of <i>Proteus</i>	Dilution of Serum			
	25	50	125	250
(1) HXK (Nat. Coll.)	++	±	-	-
(2) OAK "	++	±	-	-
(3) HX2 "	++	+	-	-
(4) OX2	++	++	±	-
(5) OX19 "	++	+	±	-
(6) <i>Proteus mirabilis</i> (N.C.)	-	-	-	-
(7) OX19 (Standards)	++	+	-	-
(8) Case 2's strain	++	++	++	±
(9) Case 3's strain	++	++	++	±

++ = Complete agglutination.
+ = Incomplete agglutination.
± = Trace of agglutination.

The first six strains were obtained from the National Collection of Type Cultures and the seventh from the Standards Laboratory at Oxford. At 1 in 25 and higher dilutions the serum did not agglutinate the atypical *B. coli* from Case 1 and the late lactose fermenting *B. coli* from his own faeces. In a further examination of the faeces on September 23 *Proteus vulgaris* and late lactose-fermenting *B. coli* were not found, but streptococci and *Bact. aerogenes* were present. The serum findings on September 25 were identical with those of the sample obtained on September 18 except that the titre for the patient's own strain of *Proteus vulgaris* had fallen slightly, so that complete agglutination was obtained at 1 in 50 and incomplete at 1 in 125. Almost identical results were secured with the strain of *Proteus* isolated from the bath (see below).

Case 3 (E.W., wife of Case 2)—Faeces examined on September 14 gave a growth of *Proteus vulgaris* (motile spreading). A suspension of the organism was agglutinated by the sera of both Cases 2 and 3 up to but not beyond a dilution of 1 in 25. When fed to mice it had no ill effects. Her serum on September 18 gave reactions similar to those of her husband's serum (see Table II). A blood culture made on September 18 was sterile. From the faeces (September 23) typical *B. coli* only were obtained. In a serum test on September 25 no alterations in the titres of the suspensions of *Proteus*

vulgaris were found and the serum still failed to agglutinate the Standards Laboratory suspensions of enteric and food poisoning organisms

Unfortunately samples of cockles were not obtainable for examination either at the houses of the affected patients or on the premises of the vendor. All the vessels used by the vendor in the preparation of the cockles were therefore rinsed with sterile saline, and the resulting rinsings as well as a sack in which the cockles had been delivered, were examined, without success for organisms of the food poisoning enteric, and dysentery groups. *Proteus vulgaris* (motile spreading) was found in considerable numbers in the bath which had been used for the ablutions of the vendor and his family before and after the final rinsings of the cockles. The organism was

TABLE II—Serum of Case 3

Strain of <i>Proteus</i>	Dilution of Serum			
	25	50	125	250
(1) HAK (Nat. Coll.)	++	++	+	—
(2) OXK "	++	++	++	—
(3) HX2	++	±	±	—
(4) OX2 "	++	++	±	—
(5) OX19	++	++	++	±
(6) <i>Proteus mirabilis</i> (N.C.)	±	±	—	—
(7) OX19 (Standards)	++	++	±	—
(8) Case 2's strain	++	++	++	—
(9) Case 3's strain	++	++	++	—

++ = Complete agglutination.
+ = Incomplete agglutination.
± = Trace of agglutination.

not found in the washings from any of the other vessels or in the sack. The strain of *Proteus* was agglutinated by the sera from Cases 2 and 3 (see above).

"All three strains of *Proteus* isolated—that is from the faeces of the second and third cases and from the bath—liquefied gelatin, produced indole and gave identical sugar reactions. Thus all failed to ferment lactose, dulcitate, and mannite, and all produced acid and gas in glucose, saccharose, maltose, and salicin."

Samples of faeces, blood for blood culture and sera for agglutination were obtained from both the vendor and his wife on September 22. Neither of the faeces yielded *Proteus vulgaris* or other pathogenic organisms, although that of the woman contained some late lactose fermenting *B. coli*. The blood cultures were both sterile and the sera in dilutions of 1 in 25 and higher both failed to agglutinate any of the suspensions of *Proteus vulgaris* or any of the Standards Laboratory's suspensions of enteric or food poisoning organisms.

Discussion

Previous outbreaks of food poisoning for which *Proteus vulgaris* has been held responsible have been recorded by Glücksmann (1899), Silberschmidt (1899), Pfuhl (1900), Demnitz (1926), and Wilson (1929). Usually however the evidence has not been convincing and it is to be noted that the majority of these were reported prior to the obtaining of the more exact knowledge held to day of the *Salmonella* group. In the case recorded by Demnitz, however, the agglutination of the *Proteus* suspension by the patient's serum at a dilution of 1 in 400 considerably strengthened the evidence for attributing the patient's diarrhoea to that organism.

In the investigation of epidemics of acute gastro-enteritis not due to the ingestion of food in itself inherently poisonous or contaminated with a chemical poison, considerable caution must be exercised in attributing responsibility for the outbreak to any organism other than staphylococci or members of the *Salmonella* group. This is especially true when a *Proteus* is suspected for, as Savage (1929) has written, "The evidence that organisms like *B. coli*, *B. proteus*, or Morgan's bacillus can cause food poisoning is slender, and although many outbreaks have been attributed to them critical investigation does not substantiate the association." Bengtson (1919) held a similar view. It is on account of the rarity of cases of food poisoning justifiably regarded as due to *Proteus vulgaris* as well as on account of the hygienic lessons to be learned that this outbreak is here recorded.

It is suggested that the evidence given is sufficient to incriminate *Proteus vulgaris* as the cause of the outbreak. Admittedly the organism may be present though never in large numbers, in the stools of normal individuals and enteric patients (see Wilson, 1929), and the secretion of inflamed surfaces such as enteric and dysenteric ulcers appears to offer a suitable pabulum for its development. It is conceivable, therefore, that the *Proteus* found was an invader secondary to another organism, but the interval for such a sequence of events seems to be unduly short. Further, the serological reactions of Cases 2 and 3 suggest an aetiological significance not only on account of the titre (125 in each case), but also on account of the fall in titre in the second patient from 125 to 50 in one week.

According to a pamphlet issued in June 1936, by the Standards Laboratory the limit of normal agglutination for the strains of *Proteus* OX19, OXK and OX2 is 1 in 50 (Weil-Felix reaction). The titres of the second patient's serum for these suspensions were just within the limits, but the serum of Case 3 had definitely higher titres for the strains of *Proteus* OXK and OX19 derived from the National Collection of Type Cultures. Twelve sera submitted to the laboratory for the Wassermann test gave titres less than 1 in 25 for all the suspensions used.

The original source of the *Proteus* is a matter for speculation. There is no evidence to make one suspect that the cockles were contaminated on arrival at the vendor's premises. Cockles though often contaminated by sewage (Leighton, 1927), are able to grow well on clean, sandy areas. The outbreak was confined entirely to those who had partaken on the one evening only. The evidence suggests a contamination of the particular batch of cockles sold on September 11—some time during or subsequent to their preparation. The use of the final receptacle for personal ablution and the general uncleanness of the premises favour this possibility. Further, the fact that at least one individual who had partaken of the cockles had not suffered therefrom suggests that the contamination of the batch was not of even distribution, and so probably arose at a late stage of the preparation.

Thanks are due to Professor R. H. Parry for permission to publish the details and to Drs L. Roberts, C. D. Preston, J. T. C. Taylor and J. L. W. Davies and Chief Sanitary Inspector I. A. Robinson for supplying information and specimens and to Dr W. M. Scott for helpful criticism. Part of the expenses of the investigation was defrayed by a grant from the Colston Research Grants Committee.

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The first six strains were obtained from the National Collection of Type Cultures and the seventh from the Standards Laboratory at Oxford. At 1 in 25 and higher dilutions the serum did not agglutinate the atypical *B. coli* from Case 1 and the late lactose fermenting *B. coli* from his own faeces. In a further examination of the faeces on September 23 *Proteus vulgaris* and late lactose-fermenting *B. coli* were not found but streptococci and *Bact. aerogenes* were present. The serum findings on September 25 were identical with those of the sample obtained on September 18 except that the titre for the patient's own strain of *Proteus vulgaris* had fallen slightly, so that complete agglutination was obtained at 1 in 50 and incomplete at 1 in 125. Almost identical results were secured with the strain of *Proteus* isolated from the bath (see below).

Case 3 (E.W. wife of Case 2)—Faeces examined on September 14 gave a growth of *Proteus vulgaris* (motile spreading). A suspension of the organism was agglutinated by the sera of both Cases 2 and 3 up to but not beyond a dilution of 1 in 25. When fed to mice it had no ill effects. Her serum on September 18 gave reactions similar to those of her husband's serum (see Table II). A blood culture made on September 18 was sterile. From the faeces (September 23) typical *B. coli* only were obtained. In a serum test on September 25 no alterations in the titres of the suspensions of *Proteus*

GASTRO-ENTERITIS ASSOCIATED WITH
PROTEUS VULGARIS

BY

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An outbreak of acute gastro-enteritis affecting at least eighteen individuals occurred in Avonmouth during the night of September 11, 1936. All the affected individuals had partaken of cockles sold by an itinerant vendor on the evening of that day, and only one person could be found who had eaten some of the cockles and who had not been ill. After an incubation period varying from three to six hours the illness commenced with headache, nausea, abdominal pain vomiting diarrhoea and prostration. There was no pyrexia. With the exception of two cases the individuals affected were not seriously ill and had practically recovered within twenty-four or forty-eight hours. There were no deaths. The two patients who were seriously ill recovered in seven to ten days.

Considerable difficulty was experienced in tracing the vendor of the cockles, but largely owing to the inde fatigable efforts of the chief sanitary inspector aided by the police and interested patients he was finally traced. The vendor was in the habit of receiving seven or eight bags of cockles a week from South Wales. On their arrival at his premises his routine procedure was to steep the cockles overnight in water in a pan to which salt had been added. This removed the larger portion of the sand present. The following morning the cockles were placed in a bucket with a perforated bottom and lowered into water boiling in an ordinary washing copper. This reduced the temperature of the water, but as soon as the water boiled again the bucket was removed emptied and refilled and the process repeated. The heating loosened the cockles in their shells and allowed of their being riddled into either a small or large galvanized iron bath containing water and salt. The empty shells which remained in the sieve were discarded.

Close questioning elicited the fact that the vendor his wife and family were in the habit of performing their personal ablutions in the larger of these two baths when it was not actually being used for the preparation of the cockles. In the process it will be seen therefore that the cockles were washed in three lots of water and that the only heat to which they were subjected was when they were brought to the boil—a procedure occupying at most about two or three minutes. Further when the bath was used for the personal washing of the vendor and his family was employed to hold the cockles the latter were not subsequently subjected to heat or otherwise cleaned before being sold.

The premises in which the cockles were thus prepared consisted of a small cellar nearly completely underground ill ventilated, and containing an accumulation of litter and rubbish. Both floor and ceiling were defective and the walls were dirty. The vendor his wife and family of six children all appeared healthy and had no symptoms relating to enteritis. He had carried out the business of selling cockles in different parts of Bristol and the surrounding villages for twelve years, and up till now had not been questioned. Inquiries among practitioners of districts other than Avonmouth where the vendor had sold cockles failed to disclose the occurrence of any cases of enteritis which could in any way be attributed to him.

Bacteriological Findings

Owing to the rapidity with which most of the patients recovered only two samples of stools in the liquid state were obtainable. Vomits were not secured. Throughout the investigation all the faeces examined failed to show the presence of organisms of the enteric, dysentery, or food-poisoning groups.

Case 1 (W.B.)—Faeces examined on September 14 by which time the patient had completely recovered were hard and contained numerous atypical *B. coli*. *Proteus vulgaris* was not found.

Case 2 (C.W.)—The faeces on September 14 were still very diarrhoeic and contained *Proteus vulgaris* (motile spreading) and late lactose fermenting *B. coli*. A blood culture taken on September 18 was sterile. A serum test on September 18 in dilutions of 1 in 25, 1 in 50, 1 in 125 and 1 in 250 did not agglutinate the Standards Laboratory suspensions of *Bact. typhosum* H, *Bact. typhosum* O, *Bact. paratyphosum* A, *Bact. paratyphosum* B, *Bact. enteridis* Gaertner, *Bact. aertrycke* (sp.), composite non specific *Salmonella*, *Bact. newport* (sp.), *Bact. suispestifer* (para C) (sp.), and *Br. abortus*. The titres for various strains of *Proteus* are given in Table I.

TABLE I—Serum of Case 2

Strain of <i>Proteus</i>	Dilution of Serum			
	25	50	125	250
(1) HXK (Nat. Coll.)	++	±	—	—
(2) OXK "	++	±	—	—
(3) HX2 "	++	++	±	—
(4) OX2 "	++	+	±	—
(5) OX19	—	—	—	—
(6) <i>Proteus mirabilis</i> (N.C.)	++	+	—	—
(7) OX19 (Standards)	++	++	++	±
(8) Case 2's strain	++	++	++	±
(9) Case 3's strain	++	++	++	±

++ = Complete agglutination
+ = Incomplete agglutination
± = Trace of agglutination

The first six strains were obtained from the National Collection of Type Cultures and the seventh from the Standards Laboratory at Oxford. At 1 in 25 and higher dilutions the serum did not agglutinate the atypical *B. coli* from Case 1 and the late lactose fermenting *B. coli* from his own faeces. In a further examination of the faeces on September 23 *Proteus vulgaris* and late lactose fermenting *B. coli* were not found but streptococci and *Bact. aerogenes* were present. The serum findings on September 25 were identical with those of the sample obtained on September 18 except that the titre for the patient's own strain of *Proteus vulgaris* had fallen slightly, so that complete agglutination was obtained at 1 in 50 and incomplete at 1 in 125. Almost identical results were secured with the strain of *Proteus* isolated from the bath (see below).

Case 3 (E.W. wife of Case 2)—Faeces examined on September 14 gave a growth of *Proteus vulgaris* (motile spreading). A suspension of the organism was agglutinated by the sera of both Cases 2 and 3 up to but not beyond a dilution of 1 in 25. When fed to mice it had no ill effects. Her serum on September 18 gave reactions similar to those of her husband's serum (see Table II). A blood culture made on September 18 was sterile. From the faeces (September 23) typical *B. coli* only were obtained. In a serum test on September 25 no alterations in the titres of the suspensions of *Proteus*

vulgaris were found and the serum still failed to agglutinate the Standards Laboratory suspensions of enteric and food poisoning organisms

Unfortunately samples of cockles were not obtainable for examination either at the houses of the affected patients or on the premises of the vendor. All the vessels used by the vendor in the preparation of the cockles were therefore rinsed with sterile saline, and the resulting rinsings as well as a sack in which the cockles had been delivered, were examined, without success for organisms of the food poisoning, enteric, and dysentery groups. *Proteus vulgaris* (motile spreading) was found in considerable numbers in the bath which had been used for the ablutions of the vendor and his family before and after the final rinsings of the cockles. The organism was

TABLE II—Serum of Case 3

Strain of <i>Proteus</i>	Dilution of Serum			
	25	50	125	250
(1) HXK (Nat. Coll.)	++	++	+	—
(2) OXK "	++	++	++	—
(3) HX2 "	++	±	±	—
(4) OX2 "	++	++	±	—
(5) OX19 "	++	++	++	±
(6) <i>Proteus mirabilis</i> (N.C.)	±	±	—	—
(7) OX19 (Standards)	++	++	±	—
(8) Case 2's strain	++	++	++	—
(9) Case 3's strain	±	++	++	—

++ = Complete agglutination.
+ = Incomplete agglutination.
± = Trace of agglutination

not found in the washings from any of the other vessels or in the sack. The strain of *Proteus* was agglutinated by the sera from Cases 2 and 3 (see above)

"All three strains of *Proteus* isolated—that is, from the faeces of the second and third cases and from the bath—liquefied gelatin produced indole and gave identical sugar reactions. Thus all failed to ferment lactose, dulcitol, and mannite and all produced acid and gas in glucose saccharose maltose and salicin

Samples of faeces, blood for blood culture and sera for agglutination were obtained from both the vendor and his wife on September 22. Neither of the faeces yielded *Proteus vulgaris* or other pathogenic organisms although that of the woman contained some late lactose fermenting *B. coli*. The blood cultures were both sterile and the sera in dilutions of 1 in 25 and higher both failed to agglutinate any of the suspensions of *Proteus vulgaris* or any of the Standards Laboratory's suspensions of enteric or food poisoning organisms

Discussion

Previous outbreaks of food poisoning for which *Proteus vulgaris* has been held responsible have been recorded by Glücksmann (1899), Silberschmidt (1899), Pfuhl (1900), Demnitz (1926) and Wilson (1929). Usually, however the evidence has not been convincing and it is to be noted that the majority of these were reported prior to the obtaining of the more exact knowledge held to day of the *Salmonella* group. In the case recorded by Demnitz, however the agglutination of the *Proteus* suspension by the patient's serum at a dilution of 1 in 400 considerably strengthened the evidence for attributing the patient's diarrhoea to that organism

In the investigation of epidemics of acute gastro enteritis not due to the ingestion of food in itself inherently poisonous or contaminated with a chemical poison, considerable caution must be exercised in attributing responsibility for the outbreak to any organism other than staphylococci or members of the *Salmonella* group. This is especially true when a *Proteus* is suspected, for, as Savage (1929) has written, "The evidence that organisms like *B. coli*, *B. proteus* or Morgan's bacillus can cause food poisoning is slender, and although many outbreaks have been attributed to them critical investigation does not substantiate the association. Benington (1919) held a similar view. It is on account of the rarity of cases of food poisoning justifiably regarded as due to *Proteus vulgaris* as well as on account of the hygienic lessons to be learned that this outbreak is here recorded

It is suggested that the evidence given is sufficient to incriminate *Proteus vulgaris* as the cause of the outbreak. Admittedly the organism may be present though never in large numbers, in the stools of normal individuals and enteric patients (see Wilson, 1929), and the secretion of inflamed surfaces such as enteric and dysenteric ulcers appears to offer a suitable pabulum for its development. It is conceivable therefore, that the *Proteus* found was an invader secondary to another organism, but the interval for such a sequence of events seems to be unduly short. Further, the serological reactions of Cases 2 and 3 suggest an aetiological significance not only on account of the titre (125 in each case), but also on account of the fall in titre in the second patient from 125 to 50 in one week.

According to a pamphlet issued in June, 1936, by the Standards Laboratory the limit of normal agglutination for the strains of *Proteus* OX19, OXK and OX2 is 1 in 50 (Weil Felix reaction). The titres of the second patient's serum for these suspensions were just within the limits, but the serum of Case 3 had definitely higher titres for the strains of *Proteus* OXK and OX19 derived from the National Collection of Type Cultures. Twelve sera submitted to the laboratory for the Wassermann test gave titres less than 1 in 25 for all the suspensions used

The original source of the *Proteus* is a matter for speculation. There is no evidence to make one suspect that the cockles were contaminated on arrival at the vendor's premises. Cockles, though often contaminated by sewage (Leighton, 1927) are able to grow well on clean, sandy areas. The outbreak was confined entirely to those who had partaken on the one evening only. The evidence suggests a contamination of the particular batch of cockles sold on September 11—some time during or subsequent to their preparation. The use of the final receptacle for personal ablution and the general uncleanness of the premises favour this possibility. Further, the fact that at least one individual who had partaken of the cockles had not suffered therefrom suggests that the contamination of the batch was not of even distribution, and so probably arose at a late stage of the preparation

Thanks are due to Professor R. H. Parry for permission to publish the details, and to Drs. L. Roberts, C. D. Preston, J. T. C. Taylor and J. L. W. Davies and Chief Sanitary Inspector J. A. Robinson for supplying information and specimens and to Dr. W. M. Scott for helpful criticism. Part of the expenses of the investigation was defrayed by a grant from the Colston Research Grants Committee

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Clinical Memoranda

Paget's Bone Disease in Three Sisters

The exact nature and aetiology of osteitis deformans (Paget's bone disease) are still unknown. The disease is certainly not of syphilitic origin, as was maintained by Lannelongue (1903) and some other French writers, though in rare cases of inherited syphilis in children it may be superficially imitated in a very striking manner, as one of us (F P W, 1908), amongst others, has pointed out.

That at least the liability to the disease may be inherited is illustrated by the family under our present consideration in which three sisters commenced to suffer from typical osteitis deformans in the second half of their lives whilst their nine brothers are said not to have been affected. S Maynard Smith (1905) recorded the case of a man, aged 42 years, who had Paget's disease of three years' duration and whose father, aged 74 years, had had Paget's disease for thirty-five years. The disease therefore commenced both in the father and the son at about 39 years of age. A Chauffard (1894) mentioned a woman, aged 80 years and her daughter, aged 60 years, both of whom suffered from typical Paget's disease and were likewise somewhat mentally unsound. Berger (1903) spoke of an old lady with typical Paget's disease whose son, aged 35 years, had Paget's disease of the tibiae of some years' duration. Dr E A Cockayne tells me that he was recently shown a woman with severe osteitis deformans whose father according to the patient's description had obviously suffered from the same disease. Dr Cockayne says he is sure there have been reports published of two sibs suffering from Paget's disease and he thinks that mere coincidence can hardly account for the family under consideration with three sisters suffering from so uncommon a disease. In fact, either Paget's disease itself or some special liability to it must be inherited.

THE PRESENT FAMILY

A married woman, aged 66 years, was admitted to hospital in March, 1937, saying that for the last four months or so she had noticed a gradually increasing enlargement of the upper part of her skull, more marked on the left side. The patient had enjoyed good health and did not actually feel ill. Radiographs of the skull showed the changes typical of Paget's disease. On further examination of the patient nothing else abnormal was found excepting a radiographic appearance of the ischial bones suggesting slight osteitis deformans there also. Blood serum gave negative Wassermann and both Meinel reactions. Blood serum calcium 10.4 mg per cent.

The patient's eldest sister, born about 1860, is living and healthy according to the patient, excepting that for the last eleven years her shins have been thickened and bent. In August 1927 this sister was an out-patient at the German Hospital under Dr F J Jauch, and radiographs of her skull and right tibia were taken. The radiologist, Dr E J H Roth, reported that the skull and the right tibia showed changes characteristic of Paget's disease.

The patient's only other sister who was born about 1867 and died about 1929 had very decided enlargement of the upper part of her skull for the last few years of her life.

These three sisters had nine brothers none of whom are known to have been affected with Paget's disease.

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Mental Disturbance following Atropine Administration

The case of psychosis associated with atropine administration reported by Drs F Hopkins and J Robyns Jones in the *Journal* of March 27 (p 663) recalls a somewhat similar case which recently came under my notice.

CASE REPORT

A boy aged 10 years was sent by the school medical inspector to the County and City Infirmary, Waterford, to be treated for a convergent strabismus. I decided to prescribe glasses. Three drops of a 1 per cent solution of atropine sulphate were instilled in each eye as a cycloplegic to ascertain the refraction. Half an hour later the nurse in attendance inspected the boy's eyes when the pupils were found to be semi-dilated. Some additional atropine was instilled making the total quantity received approximately five drops in each eye. At the same time the boy's behaviour began to attract attention. It was noticed that his gait had become unsteady and that he had considerable difficulty in walking. He was restless and seemed very frightened. He screamed and said he saw a child beside him and tried to catch hold of this imaginary child. In reply to questions concerning the boy's history his mother who accompanied him, definitely assured me that there had never previously been any mental disturbance. He was kept under observation but as his condition did not improve it was decided to admit him as an inpatient. Directly after admission (1.30 p.m.) he was put to bed. He was confused and did not know where he was or what had happened to him. He thought that there were other children annoying him. At 3.30 p.m. a bed-bath was given. He then became violent and attempted to strike the nurses. Later he became calmer and seemed to lapse into a state of coma. He refused to take any food. At about 7 p.m. he became very restless and made several attempts to leave his bed. He now became so violent that it was necessary to summon one of the medical staff. Dr M Shipsey, who has very kindly given me a report on the boy's condition. He states: "I saw the patient at about 7 p.m. He was then in a wildly delirious state, screaming, and tearing his bedclothes. Three nurses were holding him down. He attacked me with his fists and legs and attempted to bite me. With difficulty morphine 1/6 grain was given and after an interval of twenty minutes he became calmer and within an hour was asleep. He was restless during the night. The next day the boy's behaviour was perfectly normal but he did not remember what had happened on the previous night. The remainder of his stay in hospital was uneventful and he was discharged on the third day after the date of admission."

It would seem reasonable to assume that in this case there was an atropine idiosyncrasy although a confirmatory injection of this drug was not given. Cases of this kind are comparatively rare and I think this experience is worthy of being recorded. I desire to express my indebtedness to Dr M Shipsey for his kind co-operation.

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Reviews

DEPOPULATION

The Menace of British Depopulation By G F McCleary
M D (Pp 148 4s 6d net) London G Allen and
Unwin 1937

If the public is indifferent to the lessons of vital statistics, it is not for want of teachers. Dr G F McCleary's book adds little, if anything to readily available demographic knowledge, but was worth writing because it is informed with a wisdom which ought to inform the writings of an experienced physician and is usually absent from popular treatises on the trend of population. Some authors, more familiar with West End clubs than East End slums denounce the selfishness and lack of patriotism of their neighbours. Others ride economic hobby horses and denounce the Government. All denounce somebody or something. Dr McCleary denounces nobody and has no panacea. He summarizes the facts. The reason for popular indifference could hardly be better expressed than in these sentences:

Nothing will happen to lead people to think that anything important is going on. The spectacle of a queue of workless men waiting to draw unemployment benefit heated discussions of the means test—the receipt of shoals of applications for vacant situations—such things influence public opinion and naturally support the belief that there are too many people in the country. In the early stages of depopulation nothing will happen to upset that belief. There will be no spectacles or discussions suggesting to the ordinary citizen that there are going to be too few people in the country. He may note the appearance in the Press and elsewhere of attempts to convey a warning against depopulation but if he does he will probably be inclined to regard them as the productions of people making a fuss about nothing."

Dr McCleary reviews the economic incentives to produce larger families which have been tried, but is sceptical of their success. It is indeed obvious that none of them even professes to do more than slightly reduce the economic handicap of a family. He estimates that the French system of family allowances in 1932 increased the income of an unskilled worker with four dependent children by from 15 to 20 per cent. If this means, as we presume it does, that a family of six will have one-fifth more money to spend than a family of two (or one) the economic incentive is derisory. Dr McCleary does indeed hold that a more copious and equal distribution of wealth is essential but that 'the problem of depopulation is one not of economics but of spiritual values. We have to deal with a society that has lost, not indeed the power but the will to survive. In other words, we need a new gospel. It may be that the immense power of mass suggestion used to convince whole nations that it is their duty to hate and if possible destroy or subjugate other nations may persuade the citizens not merely to die but to procreate for their national idol. But that is not exactly a message of good tidings. No other psychological incentive has been tried. Dr McCleary does not profess to have a solution. What he has done is to describe the position clearly and fairly. We must await the gospel without much hope that it will be delivered by the next the next but one or the nth Departmental Committee or Royal Commission which will be appointed during this generation.

It is an ominous thought that in the age of Augustus when the shadow of depopulation was beginning to fall across the path of empire not only were there legislative

encouragements of parenthood but a poet, whose influence over the feelings of his countrymen has never been equalled, devoted to the praise of that way of life which is most associated with the ideal of large families, to the lives of peasants, a eulogy of which almost every line is even now a "rig". It had no effect, although one of the recommendations—

At securā quies et nescia fallere vita

was almost true. It is no longer true of any way of life, and that is perhaps the insuperable obstacle to a change of ideal. Without a sense of security little can be expected.

PHYSICAL MEDICINE APPLIED TO OTOLARYNGOLOGY

Physical Therapeutic Methods in Otolaryngology By
Abraham R. Hollender M D F A C S (Pp 442
189 figures 21s net) London H Kington 1937

A general account of the services which physical medicine can render to the practice of otolaryngology is provided in this work by eleven authors under the editorial supervision of Dr Abraham Hollender. The various points of view traverse such a wide field, and arrive at an interpretation of physical therapeutics from such widely different aspects that it is not easy to give a short and comprehensive description of the contents but in so far as the articles are confined to the use of electricity and the various forms of radiation in treatment the book will be found to contain a large amount of well-arranged and well-documented information. It begins with a dissertation on elementary physics a useful reminder of the methods by which electrical currents are produced and the laws which govern them. Next comes a full description of diathermy in all its forms and of electro-surgery. This is followed by a similar full description of radiation in general and in separate detail of phototherapy, ultra-violet irradiation, and of x rays and radium.

It is a striking feature of the book that the authors are not carried away by an over zealous enthusiasm for the methods described, and where these have proved of doubtful benefit or the older simple methods of treatment, either medical or surgical are superior there is no hesitation in saying so. We thus have an assurance that no unworthy claims are being put forward, and that the statements made are correct in substance as well as in the letter. This applies especially to Part II of the book, which deals with the actual application of physical agents in otolaryngology, and a good example is provided by the chapter on ionization in vasomotor rhinitis. It is emphasized that benefit is obtained at the expense of permanent destruction of the ciliated epithelium of the nose and this is clearly demonstrated in a series of photomicrographs. In this part the chapter on laryngeal tuberculosis, which in itself is remarkably good, seems scarcely apposite since treatment is by the electrocautery. The same applies to the later article by Dr Chevalier Jackson on the endoscopic approach to therapy, really a brief description of endoscopic methods.

The treatment of acute rhinitis and of sinusitis, both acute and chronic, perhaps shows the book at its best for the indications and contraindications and the danger of applying physical methods to undrained collections of pus are clearly stated. There is naturally some want of uniformity in a collection of articles by various writers but the book will be found to contain a reasonable statement of a new branch of medicine—a branch subject to continual change and improvement, one whose possibilities the majority of specialists in otology and laryngology still neither fully appreciate nor understand.

DETACHMENT OF THE RETINA

Le D  collement de la R  tine et son Traitement By F Terrien Prosper Veil and M A Dollfus (Pp 164 45 figures 4 coloured plates 40 fr) Paris Masson et Cc 1936

Publications on the operative treatment of detached retina threaten to come in almost as constant a stream as those on colour vision and on squint—the two King Charles's heads of ophthalmology. Following the classical volume by Gonin, French literature has now been enriched by this monograph on detachment of the retina and its treatment, by Terrien, Veil and Dollfus. The authors justify their contribution as representing their personal experiences at the H  tel-Dieu during the past five years. The book is a satisfactory and balanced exposition on the subject and it is not the authors' fault that no final conclusions emerge. It would be too much to expect this when they find themselves compelled to discuss no fewer than thirteen different operative procedures. The subject, though of great and practical importance is yet in too fluid a state to allow dogmatism. Whether it is a sign of strength or weakness in this monograph that no definite teaching emerges from it must be a matter for justifiable difference of opinion, though a little more definite guidance as to the relative value of the different methods would not have been out of place. As a clear account of the present technique of operation the book can be recommended for it is an authoritative guide. The absence of an index is a defect which it shares with most French medical publications but the absence of any references is an incongruity in a work of this kind.

BEDSIDE EXAMINATION

Physical Diagnosis By Ralph H Major MD (Pp 457 427 figures 21s net) Philadelphia and London: W B Saunders Co 1937

The classical methods of physical diagnosis as an important factor in the clinical examination of the patient have during recent years been subject to the competition of instrumental and laboratory developments and at times enthusiasts for the new services have been inclined to disparage the older order. It is a useful enterprise to recall attention to the patient as the central factor in the clinical problem and to show that bedside examination continues to claim a large share of the physician's attention and judgement. In his *Physical Diagnosis* Professor Ralph H Major undertakes this enterprise and his teaching is both pleasantly and effectively presented. While he quotes mainly his own experience he is anxious to pay due regard to previous workers in the same field and he commends many of the original descriptions by authors now recognized as of classical authority. He endorses Osler's advice. Read the original descriptions of the masters who with crude methods of study saw so clearly. Influenced by this pious regard for his medical heroes, and strongly convinced both of the value of systematic physical examination and of a modern tendency to neglect these, Professor Major has produced a book which is both readable and serviceable and which while paying tribute to the ancient learning does not fail to give a place to modern values. He sticks to his text throughout, and applies it to the various regions of the body with a confident judgement. As an illustration of his claim for system and order in physical examination he is inclined to forbid the student even the possession of a stethoscope until inspection, palpation and percussion have been cultivated for a period of six months.

Altogether the book is justified as an assertion of the value of methods which need training and patience to

make them effective and which are perhaps apt in an age of hurry to suffer by comparison with more dramatic proposals. The ancient ways are fortunate in having an advocate so informed and so persuasive as Professor Major. The illustrations in his pages number 427 and while some of them are rather trivial many have high teaching value.

THE PSYCHOLOGIST AS DETECTIVE

The Unknown Murderer By Theodor Reik. Translated from the German by Katherine Jones (Pp 260 12s 6d net) London Hogarth Press, 1936

Psycho-analytical literature has dealt with the prevention of crime and its therapy with punishment and with the reform of penal law. All these studies presume that the criminal is known, psychology cannot deal with an unknown criminal. In finding out who did the murder the detective uses, and must use, material clues such as finger-prints, burnt match-sticks and weapons, and the deductions which he makes from them are a psychological process, of interest to the psychoanalyst. An equally important method of discovering the culprit however is to look for the motive and here the psychoanalyst claims that he can give vital assistance to the policeman. The author ranges widely in his disquisition on the psychology of criminals, detectives and judges but a careful perusal of the book will not enable the ordinary reader to discover any single idea or line of inquiry which binds the whole together. It is essentially a miscellaneous collection of entertaining reflections, some of which are psycho-analytical and some not obviously even psychological. It may be that the trained psychoanalyst will detect the unknown motive of the author where the ordinary reader will fall back perplexed. At all events the translation is capably done, and the translator has fulfilled her most difficult task—that of preventing her prose from suggesting a German original.

THE TIME OF OVULATION

Time of Ovulation in Women. A Study on the Fertile Period in the Menstrual Cycle By Carl G Hartman (Pp 226 72 figures, 13s 6d) London Bailliere Tindall and Cox 1936

The American National Committee on Maternal Health has included this monograph in its series. It is difficult to believe that the author seriously intended this book for medical practitioners, for if so it would hardly be necessary to talk about the egg tube and 'travels of the fertilized egg' or to describe in detail what the kymograph is. It should further be unnecessary to describe the elementary anatomy of the male and female generative organs. It is apparent that the main purpose of the book is propaganda in favour of the safe period popularized by Knaus and Ogino although valuable and interesting information is presented and a useful bibliography is appended. All the evidence which conflicts with the thesis is waved aside in the most airy manner. If the reader looks for a dispassionate debate concerning matters which are with difficulty kept clear of the bias of emotion and the restriction of convention—as he is promised by Dr R L Dickinson in the introduction—he will be disappointed. Were it not for frequent reference to his beloved monkeys it would not be credible that the author was eminent in the field of sex physiology.

The monograph is well worth reading not only because it contains information otherwise difficult to acquire but because it shows how relatively easy it is to be scientific with monkeys and rats and how difficult it is rightly to appraise the vast amount of clinical data which have accumulated.

Notes on Books

A second edition of Mr CHARLES F M SAINT'S *Surgical Note Taking A Booklet for Surgical Dressers and Clerks Commencing Clinical Studies* has been published by H K Lewis and Co (price 3s). A short introduction, dealing mainly with dressing note taking and case investigations to be carried out by the dresser, is followed by some twenty sections each of which is referred to as a scheme and deals with the special features of some clinical condition or group of conditions—for example 'Abdominal emergencies' (scheme V), 'Diseases of the genito urinary tract' (scheme XI), 'Jaundice' (scheme XX). Examples of cases are given with the various schemes. The system of making notes is one which was in use at the Royal Victoria Infirmary Newcastle-on-Tyne but with minor variations it may be made to fall into line with those employed in most teaching hospitals. The author points out in a foreword that for the student beginning clinical work it is understood that the various sheets will be briefly explained to him by his surgical teacher but even so the work in our opinion appears rather too tabulated to make interesting and easy reading. It should prove a useful guide, of a skeletal character to both teacher and student but in a future edition we suggest that the section on some general considerations could be profitably expanded.

A complete summary of present knowledge of complement would be of great value. Such a summary has been attempted by Dr T N B OSBORN in a book entitled *Complement or Alexin* (H. Milford, 7s 6d). He has covered a very wide range of investigation but there are some obvious omissions. For example no mention is made of the work of Dean and of Goldsworthy on the relation of complement-fixation to the ratio of antibody to antigen nor is the curious but theoretically important fact mentioned that complement is not fixed in the reaction between horse anti pneumococcal sera and the specific polysaccharides. The compilation is also somewhat uncritical. The expression 'albumin fraction' meaning the supernatant fluid after precipitation of euglobulin from serum is used without comment the author even speaks of 'the separation of albumin from globulin by dilution with distilled water'. He also states that 'it has never been observed that a mixture of toxin and antitoxin fixes complement *in vitro*'. The unsatisfactory evidence that some form of digestion accompanies the action of complement might have been considered in more detail.

Professor MARCEL METZGER has written a book entitled *Le Chirurgien Devant l'État Puerperal Grossesse Accouchement Suites de Couches* (Masson et Cie 52 fr). It deals with the early and differential diagnosis of pregnancy with ectopic gestation hydatidiform mole abortions tears associated with childbirth, and with injuries to the child. In many instances the views of the author differ widely from those current in this country. Chronic endometritis is held to be a common cause of miscarriage. In the preparation of a patient for removing an ovum it is directed that the buttocks and thighs as far as the knees should be painted with iodine but neither the vagina nor the cervix is to be treated with any antiseptic, yet the author recommends that the urethral orifice should be painted with iodine before a catheter is passed. It is laid down that tears of the vagina occurring during childbirth do not require suture—and it is apparently necessary to advocate that perineal tears should be sutured. Professor Hartman in the preface states how useful the book should be in France where so often the obstetrician is considered to be incapable of any surgical intervention. The advice tendered

however would appear to be too vague to be of much service to a surgeon who is unfamiliar with the emergencies described, and it is unlikely that the book will make any appeal in this country.

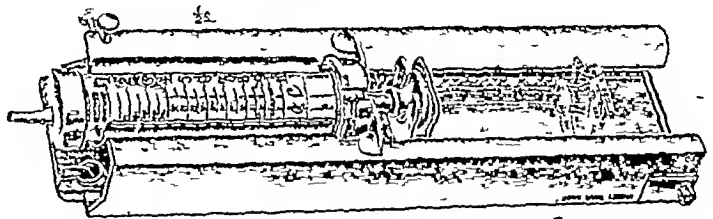
We have received a copy of the *Proceedings*, compiled by Dr Edgard de Cerqueira Falcao, of the congress held on September 5 and 6, 1936 at Santos, Brazil, on the occasion of the centenary of the foundation of the Hospital da Santa Casa da Misericórdia de Santos. The subjects discussed included tuberculosis, ophthalmology, otorhino laryngology, dermatology and venereal diseases, hospital assistance, and obstetrics.

Preparations and Appliances

A VENEPUNCTURE INSTRUMENT

Dr DAVID A HERO (Liverpool) writes

Venepuncture in children frequently presents difficulties such as (1) movement of the limb by the nervous child (2) the tendency to exert too much vacuum in the syringe and thus pull on one's hand which dislodges the needle from the lumen of the vein. To obviate these defects I have designed the device shown in the accompanying figure which is entirely self-contained the suction mechanism being controlled by a ratchet and spring catch.



The device is only seven inches long and is constructed to take a 10 ccm Record syringe. It is operated by releasing the catch (by the index finger of the same hand which holds the device) the other being free to hold the arm or milk the vein if required. The advantage over other suction devices is that a varying vacuum can be obtained to suit individual cases thus the full tension of the spring can be employed or only fractions of it.

This device has been made for me by Messrs Down Bros., Ltd. London.

A MULTIPLE TUBE SEDIMENTOMETER

Dr J W SHACKLE and Dr C L ESTRANGE ORME write

For the past year we have been using a simple form of apparatus for recording sedimentation rates graphically. The large number of cases on which this test had to be carried out, coupled with the irregular and late hours at which the specimens arrived at the laboratory made it necessary to devise an apparatus capable of making a graphic record of a number of tests and sufficiently trustworthy to be able to carry out such tests automatically after the laboratory was closed.

The apparatus is designed to take up to eight full sized Westergren tubes but is easily adaptable to take up to twice that number if desired, or to take any other type of tube used for estimating the sedimentation rate. The Westergren technique was adopted as being that in the most common use for rheumatic cases and the graphs are plotted up to the end of two hours this period being in our experience essential. The results are usually reported in the form of the distance sedimented at the end of one and two hours. The apparatus has been devised to allow tubes to be added to the rack for two hours after the mechanism has been started such addi-

tions are easily made as the apparatus can be used in the open laboratory if not in the direct light from a window.

A standard Westergren tube rack is set up and arranged to run laterally on rollers. These are grooved and run on small rails. The tubes in it are illuminated obliquely from behind by means of a 30-watt strip light (E) such as those used for window or show-case illumination which is the same length as the tube rack. At the top of the rack a mirror is fitted (F) which is also the same width as the rack. The angle of this is adjusted to illuminate the upper ends of the columns of blood. A black background is contrived by means of the black velvet-covered screens (H and I). These are inclined at the angle shown partly in order that no light shall be reflected from their surfaces and partly in order that the screen H in conjunction with the glass screen (G) attached to the tube rack and travelling with it shall deflect warm air away from the Westergren tubes to avoid any possibility of error from heating of the tubes. The mirror and lamp are screened from the camera by the blackened wood screens (Q and R) attached to the uprights of the tube rack. The rack is propelled along the rails by the clock (J). This in our apparatus is a spring clock, the drive being taken from the intermediate pinion between that of the hour and minute hands. In parts of London where alternating current is available an electric clock would be more convenient. At the end of the set time the current is switched off by a mercury tube switch. The camera shutter is also closed and the clock stopped automatically.

The recording is done by means of a camera (A). This is a half plate camera with a lens (C) of 6½-inch focus on a sliding base as we use larger magnifications on individual tubes for research purposes. For the standard technique a fixed focus box camera will do. The half plate dark slide contains a cut film holder in which a sheet of bromide paper (contrast) is placed. Some care is needed in adjusting the light and finding the correct iris opening: the lamp must be rotated in the trough shaped reflector and the mirror (F) adjusted till the maximum light is cast on the blood columns. This is of great importance as the essential feature of the

to continue adding tubes to the rack for two hours after starting the clock and yet obtain at least a two-hour reading on all of them.

As the tube moves a known distance of 6 mm and the millimetre calibrations of the tubes appear on the chart it is easily possible with a divider to measure the equivalent of an hour on the chart without estimating the magnification to do so. Such measurements are only required for the larger

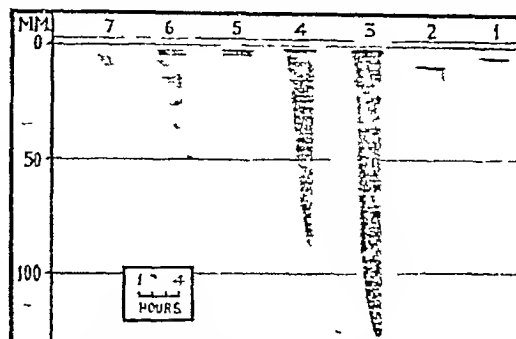


FIG 2—Readings are made by a ruled celluloid scale as described in the text superimposed on each recording in turn and the scale is represented diagrammatically by the line marked hours.

magnifications used for research purposes. For standard technique it is simpler to prepare a celluloid protractor with hour and millimetre rulings to scale on it. Readings at any time interval required can then be obtained at a glance.

It is possible that clinicians in the future will desire to see the actual curve and not a few time readings taken from it. There is no doubt that the form of curve is of considerable importance.

Fig 2 represents a record of tubes from such a standard test (Tubes numbered 1-7). No 3 is from a long-standing case of rheumatoid arthritis with many joints involved. The rate has been over 60 mm in the first hour for two years. The double curvature is quite typical. No 4 gives a rate of 47 mm for the first hour 88 mm for the second hour—a more moderate reading from a case of infective arthritis with improvement under treatment. Nos 1, 5 and 7 are from early cases of infective arthritis. No 6 is from a case of rheumatoid arthritis with an eight years history but the disease is limited to hands. No 2 is a normal reading.

It was noted that in many of the readings a second curve could be seen at the top of the tube. This shows the sedimentation of the opalescent bodies in the serum. This curve bears no relation to the blood sedimentation curve although showing minor variations from case to case thus suggesting that the sedimentation of the blood cells is rather more than a merely physical settling out by gravity. This secondary sedimentation had not been noted until photographic readings by oblique light were studied and it may be that the method as well as being a great convenience in a busy laboratory may also yield further light on the nature of the variations which occur in suspension stability. (We have approached Messrs Hawksley of New Cavendish Street with a view to manufacture.)

COLLOSOL PHOSPHO-MANDELATE

The Crookes Laboratories have produced a new pack for their collosol brand phospho-mandelate. This preparation is now put up in boxes containing two bottles, one with ammonium phosphate and the other with mandelic acid. Each pack contains a supply sufficient for six days' treatment. Further details may be obtained from the Crookes Laboratories, Park Royal, London, N.W.10.

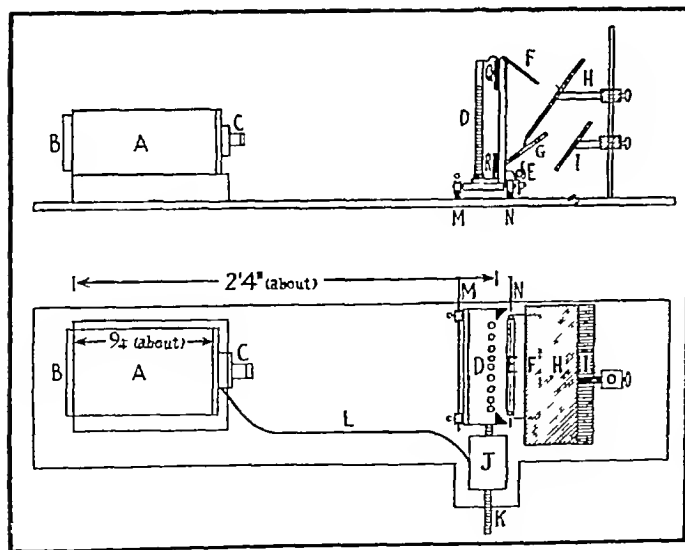


FIG 1—Diagrammatic representation of the multiple tube sedimentometer.

method is that the plasma left when the red cells sediment is opalescent to oblique light and thus shows up as a luminous object which records on the photographic paper as a black image while the red cell columns are non-actinic. In our rack the tubes are placed 25 mm apart and the rack moves 6 mm an hour. In this fashion it is possible to get readings for four hours without the images overlapping or it is possible

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DIFFICULT MIDWIFERY

A book of 440 pages was published in 1894 by G E Herman, obstetric physician to the London Hospital entitled *Difficult Labour*. In this small compass the author assembled the reflections and conclusions drawn by an acute mind from an unusually spacious experience as a teacher and a practitioner of midwifery. Proffered with the object of assisting practitioners and senior students it completely achieved its purpose and earned a well-merited popularity. Many now senior men would acknowledge the debt they owe to Herman's teaching. The illustrations in the manner of the period, were inartistic and poorly executed, consequently they did not distract attention from the text, which was so closely packed with fact and inference as to demand a definite effort of concentration on the part of the reader. The approach of the obstetric author of to-day to this subject is very different from that of Herman. The modern equivalents are four or five times the size of his book, their illustrations are drawn by artists who specialize in this class of work and they undoubtedly form an important factor in market valuation. We have admirable English representatives of this class but the Americans are our keen competitors, and the latest arrival from the "other side" by Dr Paul Titus of Pittsburg, may be said to go one better than its predecessors¹. It is a large and handsomely illustrated book of reference which any obstetrician might be glad to carry on his shelves.

Allowance must be made for the fact that the modern obstetric textbook dealing with difficulties emergencies and operations covers a good deal more ground than was thought to be necessary before midwifery harnessed its wagon to the star of surgery. It must also be remembered that to-day volubility, not conciseness, is the cult to which writers in practically all departments of medicine pay tribute. The fact remains however that obstetric teachers appear to be more concerned than ever before to emphasize the existence of obstetric difficulties and the importance of their proper management. Comparison of the contents tables of the old and the new show that no difficulties

occur to-day which were not known to Herman and his predecessors, but evidence is lacking that recent advances in obstetric practice have brought about any marked diminution in their frequency. Attention has often been called to the discouraging fact that ante-natal supervision, widely though it has been organized, has not resulted in any appreciable fall in the incidence of difficult labour. Great hopes were entertained by Ballantyne and other pioneers of ante-natal work that early recognition of conditions likely to cause difficulty in the birth process would be followed by a lessened incidence of difficult labour, and would thus come to play an important part in prevention. The failure of these hopes must be attributed to inefficiency either in the system itself or in its personnel. There is no more urgent problem in midwifery at the present time than that of extracting from our widespread and expensive ante-natal organization the results which it may reasonably be expected to yield but which have not yet materialized.

Many cases of difficulty arising during labour are admitted as "emergency cases" to our lying-in hospitals. A study of these admissions suggests that the quality of obstetric judgement is an endowment not bestowed upon all who practise midwifery. Slow dilatation appears in many instances to have exhausted not so much the strength of the patient as the patience of the doctor, in consequence forceps were applied before there was room for the head to pass through the cervix, the attempts to deliver being abandoned the woman was sent to hospital as a case of "failed forceps". When in such circumstances the judgement of the practitioner is completely at fault the head may be dragged through imperfectly dilated passages and serious injuries thereby inflicted. These are examples of difficulty created by unwise management. Since Herman's time the management of delay in the stage of dilatation has been so greatly simplified that this condition need no longer be regarded with anxiety. Methods of obstetric analgesia which have been progressively improved in recent years may be said to have reached their full development in the demonstration that the administration of nitrous-oxide gas and air by means of Minnitt's apparatus is devoid of risk and can be continuously employed for long periods and its technique can be readily learned.

It must be admitted that the management of inertia is the only example of definite progress in the control of difficulty in labour which can be recorded. The tendency apparent to-day is not to prevent difficulty by anticipation, or to surmount it by skilful management but to evade it by taking the surgical short-cut of Caesarean section. In con-

¹ *The Management of Obstetric Difficulties* By Paul Titus M D
11 Kimpton (36s)

firmation we may point to the long and still growing list of "relative" indications for Caesarean section, many of which are unassociated with risks of obstruction but are nevertheless potential causes of difficulty in labour. Herman's list of relative indications was very short. He regarded delivery by craniotomy as involving a lower maternal risk than Caesarean section; this would not now be conceded by obstetricians, nor would it be regarded as good midwifery to sacrifice a living foetus unless the alternative of Caesarean section would be attended by maternal risks far above the average.

Difficult labour is admittedly a severe test not only of the strength and fortitude of the mother but also of the skill and judgement of the practitioner. It is comparatively easy to provide all the assistance the mother may need when the likelihood of difficulty has been foreseen or its presence has received early recognition in labour. Skill and judgement in the medical practitioner are therefore the dominant requirements; the former is to be gained only by training and experience, the latter is to some extent a natural endowment springing from an aptitude for taking infinite pains. It may be found lacking on occasions in eminent practitioners. The recognition of its importance perhaps accounts for the emergence, now discernible of a class of practitioners who are attracted to midwifery, who do not find its exigencies intolerable and who may be destined to become an element of growing importance in the midwifery service of the nation.

THE BOREDOM OF REPETITION WORK

In Report No. 77 of the Industrial Health Research Board¹ Messrs S. Wyatt and J. N. Langdon (assisted by F. G. L. Stock) describe a further instalment of their investigations on repetitive work which are being made with a view to reducing the boredom inevitable in most employment of this type. The subject is of great practical importance because of the very large and increasing numbers of industrial operatives engaged on repetition work. Previous investigations by Mr. Wyatt and his collaborators were made on small groups of subjects but the present inquiry is of wider scope, for it relates to 355 experienced persons employed on various occupations (for example packing chocolates, making crackers, feeding machines) at four factories. Each worker was interviewed and tested for a period lasting one to two hours and it might be thought that such a procedure would be rather an ordeal. However

it was voluntary, and almost all the operatives seemed to enjoy it. They were asked a number of questions about the periods when they liked their work best and least when the time seemed to pass most and least quickly, what kind of work they would prefer, and so on. The replies of the girls indicated that a third of them were only slightly bored, rather over a third were moderately bored, 23 per cent suffered severely, and 3 per cent were never free from boredom. Boredom was fairly frequent during the first hour of work, and still more during the second hour, while it decreased considerably as the end of the spell drew near. It was greatly mitigated by day-dreaming, for nine tenths of the workers said that they could think of other things while working and the great majority of them appeared to indulge in reveries which were pleasant and connected with real events. Very few seemed to brood over their troubles. Singing and talking were indulged in to some extent, but the most effective antidote to boredom was found to be gramophone music. The factory was equipped with a gramophone amplifier, and loudspeakers, and series of experiments were made with this for a period of six months. The best system was to play the gramophone for alternate half hours throughout the day. Output then increased 6 to 11 per cent during the music, while the total daily output increased 3 to 6 per cent. One step and foxtrots were the most popular; the workers finding that the music "brightens things up," "takes you out of yourself," and "gives you something to occupy your mind." The beneficial effects appear to bear a direct relation to the degree of monotony associated with the occupation. Practically all the operatives agreed that the music did not interfere with work, though those who had to concentrate their thoughts on their work appreciated it less than the others.

The amount of boredom was found to increase with the degree of intelligence of the operatives and with extrovert temperamental tendencies while it was well marked in those who desired creative as distinct from repetitive work. On applying various psychological tests to groups of the most bored and the least bored subjects, it was found that the former preferred an intelligence test and that the latter preferred a test of insertion (manual repetition work). Hence brief performance tests provide useful indications of suitability for repetition work and offer a promising line of research in vocational guidance. Boredom and discontent were noticeably influenced by most of the conditions under which the work was performed, and an elaborate inquiry showed that

¹ *Fatigue and Boredom in Repetition Work*. H.M. Stationery Office (1s 3d).

the factor to which the women attached the greatest importance of all was security of employment. Next in order of choice came comfortable working conditions, pleasant working companions, and a good supervisor. Then came opportunity for promotion and high wages but shorter working hours came very low on the list, probably because they were thought to imply a reduction of wages. Fatigue was seldom complained of, except by a group of girls who had to feed machines at the rate of four units a second. They naturally had difficulty in keeping the machines supplied with material. Taking the girls as a whole, fatigue was considered to be less a cause of dissatisfaction than the time lost in waiting for material and discomfort due to the workrooms being too hot or too cold.

It is not possible to refer here to more than a fraction of the interesting and important results described in this admirable report. It is to be hoped that all large employers of repetition workers will find opportunity to study it thoroughly. If they apply the suggestions indicated they are likely to benefit not only their workers but themselves, for a reduction of boredom and discontent is almost inevitably reflected in an improved output.

CHRONIC MILIARY TUBERCULOSIS IN CHILDREN

That there is a chronic form of miliary tuberculosis which is not invariably fatal has been asserted by various writers in recent years, a point of view which has for some time been maintained in foreign medical literature. A survey of this literature was given in a leading article in the *British Medical Journal*¹ over two years ago under the heading "La Granulie Froide" a term used by Burnand and Saye. We suggested then that the condition known as chronic miliary tuberculosis was perhaps best described by the somewhat cumbersome but more accurate term "chronic disseminated haematogenous tuberculosis with pulmonary localization." In a recent number of the *Archives of Disease in Childhood*² Dr R. H. Fish describes ten cases of chronic miliary tuberculosis in children treated at the High Wood Hospital for Children at Brentwood. Full clinical details are given with illustrations of the x-ray appearances. Six of these patients died and four have recovered. The diagnosis in five of the six cases was confirmed at necropsy and in three of them the healing process in individual miliary nodules was demonstrated. Although it is true that this final proof of the diagnosis was happily not available in the four patients who recovered the similarity of the radiographic appearances and the isolation of tubercle bacilli from the sputum or from the gastric contents would

seem to establish the diagnosis beyond doubt. In fact it appears certain that chronic miliary tuberculosis is not necessarily a fatal disease. Among the many interesting points discussed by Dr Fish is the frequency of extrapulmonary tuberculous lesions, which could only have arisen by the passage of tubercle bacilli into the blood stream, the dissemination of the bacilli is haematogenous. Even in the four patients who have recovered there were apparent evidences of a recurrent tuberculous bacillaemia, and from this Dr Fish argues that the initial lodging of bacilli in the lungs was the result of a similar bacillaemia. He draws attention to the fact that massive caseous glands are frequently found in the upper mediastinum in the juvenile type of chronic miliary tuberculosis and suggests that these glands may be the focus from which haematogenous spread occurs. Of the four patients who recovered the first was a boy aged 3 years who had miliary tuberculosis of the lungs with osseous lesions and who showed marked improvement after sixteen months' illness. The second a boy aged 8 had miliary tuberculosis of the lungs as had the third a boy aged 3 years in whom it was thought that the liver and the spleen were also affected. The last patient a boy aged 6 had chronic miliary tuberculosis of the lungs with abdominal, cutaneous osseous, and cerebral tuberculous lesions. In discussing treatment Dr Fish stresses that all important factor in the treatment of tuberculosis—the need for absolute rest. "Any child," he says "whose chest skiagram suggests miliary tuberculosis should be kept in bed until the stippling has completely disappeared from the [x-ray] picture. Any earlier termination than this involves risk of disaster." It is evident that it is very difficult to keep a child at absolute rest. In the fourth case of recovery recorded by Dr Fish remarkable improvement took place after the patient had been placed in a spinal frame on account of the bony lesions and he suggests that even in the absence of bony lesions this method of immobilization might be used in the treatment of such patients. All the children were nursed on open balconies and four of them received injections of solganol three of these being patients who recovered. The real risk of course is that during the episodes of tuberculous bacillaemia the meninges may become infected and a fatal tuberculous meningitis result a risk which is diminished if absolute rest can be strictly enforced.

REMEDIES FOR LEPROSY

New treatments for leprosy are innumerable. The remarkable thing is that they generally emanate from those who have little practical clinical experience of the disease itself. Doubtless many promoters of these remedies are themselves persuaded after treating a few cases that they have found a sovereign remedy but it is only those who have studied the disease thoroughly and are familiar with its clinical and pathological features who are qualified to evaluate any remedial method. The signs and symptoms of leprosy are caused not by the bacillus but by the reaction of the tissues to the bacillus. Anything which depresses the

¹ *British Medical Journal* 1934 2 815

² *Ann de Méd.* 1924 15 365

³ *Arch Dis Childh* 1937 12, 1

reacting power of the tissues such as intercurrent disease or even a too vigorous course of injections will often give a clinical appearance of improvement, while all the time the patient's condition is really stationary or possibly worse. The course of injections, however, gets the credit of the apparent beneficial results which are misinterpreted by the physician. Another cause of the fallacy is that exacerbation of clinical lesions is often caused by sensitization of the leprosy germ. There are innumerable drugs which have the power of desensitizing the patient and thereby causing considerably temporary clinical improvement. Among these desensitizers are small doses of the heavy metals and many of the aniline dyes. Here again the apparent improvement following desensitization is mistaken for actual clearing up of the infection. Unfortunately there is a tendency to exploit for commercial purposes some of these apparent leprosy "cures." Those who indulge in this form of commercialism cannot realize the mental distress which their advertisements often cause in the minds of sufferers from this disease, whose hopes are raised on hearing of some wonderful cure, only to be dashed to the ground when its efficacy is disproved.

COMPULSORY PASTEURIZATION FOR GLASGOW

On August 20 1936 the Corporation of Glasgow decided to apply for powers to require that raw milk distributed within the city should in certain circumstances be submitted to compulsory pasteurization. In furtherance of this decision a report¹ has been drawn up by two members of the Health Department giving details of the distribution and quality of the milk supply. There is a great deal of valuable information in this report. Of particular interest in relation to the proposed Bill is the present extent of heat treatment of the milk supply in Glasgow. An average daily quantity of 61,100 gallons is consumed in the homes. Of this 5,600 gallons are sold under the official designation of "pasteurized" milk, rather under 1,500 gallons as graded raw milk, and the remaining 54,000 gallons as ordinary milk. No less however than 85.4 per cent of this ordinary milk is submitted to some form of heat treatment before delivery. Investigation shows that 36.5 per cent is heated in plants of the holder type under licence, 25.9 per cent in non-licensed holder plants and a total of 23 per cent in some other form of heating plant—retarder flash scalding or sterilizing. Such a position must be regarded with mixed feelings. On the one hand it is gratifying to learn that such a high proportion of the milk supply is submitted to some form of heat treatment; on the other hand it is a matter of grave concern that such a relatively small proportion of the milk delivered to the public is under adequate official supervision. This situation which is of course far worse in many other cities must be changed. The scientific arguments in favour of pasteurization are over-

whelming. But if we are to press for compulsory pasteurization we must insist that the quality of the initial supply, the heating process itself and the subsequent care of the milk are under the most rigid official control. No one realizing the extent of preventable milk-borne disease will do other than hope for the success of Glasgow's pioneering effort.

PSITTACOSIS

The discovery of the exact causation of psittacosis and the work which this finding led up to has placed the laboratory in the position of being able to give most valuable aid to the clinician in making a diagnosis of this disease. The demonstration that the mouse was susceptible to this virus first made by Krumweide, McGrath and Oldenbusch in America and Gordon in this country gave us an inexpensive experimental animal, and (what is no less important) an animal in which work with psittacosis virus could be carried out with relatively little risk. In human infections the virus is to be found in the blood, the pleural fluid and the sputum, and its presence there can be demonstrated by mouse inoculation. It is in the sputum more particularly that it should be sought, since, as Rivers and others have shown, it is present in this material in greater quantity and more persistently than elsewhere. Although the picture presented by psittacosis infection in the mouse is fairly characteristic, it is on the microscopical demonstration of the virus in smears made from the spleen that one relies in settling the nature of the infection, the procedure is one which presents few difficulties. Up till now it has been the practice to regard laboratory work with viruses as a matter for the specialist; the technical difficulties—sometimes only imaginary—have been thought to place it beyond the scope of the routine laboratory. But although this reticence has in the past been understandable and even commendable, the time has undoubtedly arrived when some of the diagnostic laboratory virus work could safely pass into routine practice. The diagnosis of psittacosis by the isolation of the virus is a case in point and recognizing this the Ministry of Health has published a report on the subject² in the hope that public health bacteriologists will be encouraged to make themselves familiar with this procedure and add it to their diagnostic repertoire. In this pamphlet all the necessary details are set out clearly and succinctly. The bacteriologist well trained in his subject should have no difficulty in carrying them out, though he would be well advised to observe all possible care in handling this virus, since laboratory infections occur. The necessary safeguards are stressed in this report. At the time of the 1930 pandemic of psittacosis it was thought that the sole source of infection in European countries was importation of birds of the parrot family from South America and that by placing an embargo on these birds the danger of human infection would be abolished. This has proved illusory. In this country and in many parts

¹ *Review of the Milk Supply of Glasgow in Relation to Pasteurization*. By Ian McCracken, M.A. B.Sc. M.B. DPH and Andrew M. Stewart. Corporation of Glasgow Public Health Department, 1937.

² *Reports on Public Health and Medical Subjects*, No. 80. Laboratory Diagnosis of Psittacosis. H.M. Stationery Office, 1936.

of Europe cases of psittacosis have continued to occur and it is now known that the home bred stocks are infected though whether this state of affairs existed prior to the 1930 pandemic or is the result of the introduction of infection at that time it is difficult to say. It is also recognized now that many apparently healthy birds are virus carriers and a potent source of human infection. This is particularly true of the budgerigar in which breed of parakeet infection is often inapparent and results in the setting up of the carrier state. Levinthal¹ has drawn attention to latent infection in home-bred birds in this country and human cases have arisen from this source. Thalheimer² has recently recorded a small outbreak in Paris which had its origin in French-bred birds and in Germany in the first half of 1936 there were almost as many cases of human psittacosis as in the whole of 1930 most of them being attributable to contact with apparently healthy budgerigars. Psittacosis is still with us and in cases of continued fever associated with pneumonic symptoms in individuals who have been associated with cage birds more particularly those of the parrot family the clinician will always have to consider the possibility of psittacosis. And in attempting to arrive at a correct diagnosis he should be able to count on valuable assistance from the laboratory.

HOUSSAY'S WORK ON THE PITUITARY

For twenty five years Professor B. A. Houssay has studied the pituitary glands of amphibians and it has been mainly through his work that the central position of this gland in the endocrine system has become so firmly established. But it is only during recent years that his brilliant work has become widely known. Recognition of this was accorded by his appointment to the Dunham Lectureship at Harvard and his lectures were published in the *New England Journal of Medicine* from May 7 to June 4 last year. Houssay dedicates his first lecture to the humble toad on which so much of his work was carried out. Detailed studies were made of the effects of hypophysectomy on various parts and functions of the body. The re-establishment of the animal to normality after hypophysectomy was demonstrated after implantation of the appropriate tissue and by injection of extracts. It was shown that these therapeutic effects could be produced not only with tissue from the same species but also with tissue and extracts from mammalian pituitary. Although the natural pituitary hormones have not been individually isolated and chemically identified it is becoming clear that the gland could be divided physiologically into the neuro intermediate lobe and the principal lobe the former corresponding to the posterior lobe in mammals and the latter to the anterior lobe. It is interesting to note that in the toad the neuro intermediate lobe lies posteriorly and the principal lobe or pars glandularis anteriorly. A long series of experiments showed that the neuro intermediate lobe is concerned with melanophore control of the arterioles and capillaries

and hence of the blood pressure regulation of the activity of the kidney and of the skin and with water metabolism and that it contains powerful oxytocic substances. The principal lobe was shown to contain or secrete gonadotropic and thyrotropic substances and stimulators of growth. Among many other most interesting effects perhaps the most striking was the intimate connexion found to exist between the pituitary and diabetes. Houssay was the first to demonstrate clearly that in the absence of the "anterior" lobe of the pituitary pancreatic and phloridzin diabetes are attenuated and the animals retain and consume glucose. Conversely extracts of the "anterior" pituitary antagonize insulin and accentuate the diabetic manifestations and further it was observed that "anterior" pituitary extracts can produce diabetes in normal animals. The fact that hypophysectomized animals have a greatly increased sensitivity to insulin is thus readily understood as are also the well recognized glycosuria and hyperglycaemia of acromegaly where an acidophil adenoma of the pars glandularis causes an over-production of the anti insulin hormone. How far human diabetes may be in part due to pituitary over-secretion remains to be seen but recent evidence suggests that the blood of diabetics contains an anti insulin agent. The importance of the pituitary in the proper functioning of the gonads and the thyroid is now well known and the profound structural changes which they undergo after hypophysectomy were clearly demonstrated by Houssay. Evidence was also obtained that in some obscure way the pituitary and the pancreas are necessary for the proper functioning of the parathyroids but more work is required on this subject. The position at present is best summed up in Houssay's own words:

The pituitary is the central organ of the endocrine constellation as it is necessary for the development and maintenance of the anatomical and functional integrity of the other internal secretory organs. The anterior pituitary lobe because of its actions on growth metabolism and the endocrine glands, is necessary for the development and maintenance of the individual in a normal state and because of its actions on the sexual and reproductive systems it is necessary for the maintenance of the species. The posterior or neuro intermediate lobe is inferior functionally to the anterior or principal lobe.

THROMBO-ANGITIS OBLITERANS OF THE CORONARY ARTERIES

The pathological entity of thrombo angitis obliterans which affects in particular the vessels both arteries and veins of the extremities of young or middle aged men is known to be often associated with lesions in the coronary arteries. The nature of these coronary lesions is however not certainly established, though they have for the most part been regarded as the same as those degenerative processes which commonly affect the coronaries in older people—namely arteriosclerosis and atheroma. The question whether the specific lesion of thrombo angitis obliterans (Buerger) can occur in the coronaries can be answered only by histological studies. The early acute stage of the process presents a charac-

Levinthal W (1935) *Lancet* 1 1207

Thalheimer M (1937) *Bull Mem Soc Méd Paris* No 2

teristic picture but in the late healed or organized stage it is less distinctive and more easily confused with arteriosclerosis. What appears to be a proved example of Buerger's disease of the coronary arteries has been reported by O. Saphir¹ who in a preliminary review of the literature of the subject comprising fourteen publications could find no other case supported by conclusive evidence. These fourteen papers dealt with thirty men suffering from peripheral thrombo angitis obliterans and coronary disease and it is an important observation that twelve of these were under 40 years of age at the time of death. Saphir's own patient a man of 35 died suddenly and had had intermittent claudication for six years but no symptoms to suggest cardiac disease. At necropsy extensive and advanced disease of the coronary vessels was demonstrated, and in the myocardium there was a diffuse fibrosis with many old organizing infarcts. On section the changes of various stages of Buerger's disease were found in the coronary vessels and also severe arteriosclerotic and atheromatous processes. The early stages of the former were evident from acute inflammatory changes in all coats of the vessels and within the lumina thrombi containing the characteristic milium foci of polymorphonuclear leucocytes histiocytic cells and giant cells. Such foci may at first be confused with a granulomatous lesion until their situation within the vessels is recognized. In some areas there were apparent transitions between arteriosclerotic changes and those of Buerger's disease. The relation between the two is discussed and the author thinks it possible that the degenerative process develops secondarily on the basis of the inflammation a similar sequence is observed with syphilitic and rheumatic arteritis. The fact that coronary occlusion is found in four out of five necropsies on victims of thrombo angitis obliterans and that twelve of thirty men dying of Buerger's disease and coronary lesions were under 40 is not to be explained by mere coincidence but points to some relation between thrombo angitis and coronary arteriosclerosis. The exact part played by this and other forms of arteritis in the development of ischaemic cardiac disease especially in young people has yet to be discovered.

BODY RESERVES OF VITAMIN A

Recent work in the Nutrition Laboratory at Cambridge on the metabolism of vitamin A has been directed to the question of the reserves stored in the body. The liver appears to contain the main reserve of this vitamin and Moore¹ calculates that the typical reserve in an adult would be sufficient to support life for six months and be roughly equal to the amount of vitamin A secreted in breast milk during nine months lactation. These figures are only rough approximations since the daily requirement of vitamin A for a human being is not known. The "typical" reserve in the liver has been taken as the median of a group of forty persons between the ages of 15 and 59 who died within seven days of an accident the patient being presumed to have

been previously healthy. The figure obtained was 220 international units per gramme of liver which gives a total of 330 000 i.u. if 1 500 grammes is taken as the size of an average liver. But variations in the size of the reserve in these apparently healthy people is wide—namely from 75 to 590 i.u. per gramme of liver. It is recognized by Moore that with such wide variations in the normal no deductions can be drawn by comparisons between individual cases. He has tried therefore by arranging the results from 1 000 cases in broad "disease groups" to see what diseases are associated with low median and with high median reserves. There seemed to be a tendency to low reserves over the age of 60 the median figure being 100 i.u. and patients over this age have therefore been excluded from the study. It has previously been noted that there is no correlation either in man or in animals between the vitamin A reserves and the general nutrition of the individual. It was found that in most diseases there was a median well below that of the healthy group and it is quite apparent that only the very low groups can be singled out as of any special interest. The lowest figure was found in a group of thirteen cases of kidney and bladder infections in which the range was from 3 to 320 i.u. and the median 19 i.u. The next lowest figure was in a series of forty eight cases of chronic nephritis ranging from 5 to 150 i.u. with a median of 25 i.u. Discussing the significance of the low reserves, Moore mentions three main possibilities. The low reserve may be the result of long continued illness. Wolff for example has found a slightly lower mean in a group of chronic than in a group of acute diseases. Secondly there may be an interference with the power of the liver to store the vitamin in certain disorders. Thirdly there is the possibility that the low reserve may represent a low dietary intake which is aetiological connected with the disease. Other possible interpretations are that in some conditions the vitamin is poorly absorbed or that, as in the case of vitamin C and infective diseases it is more rapidly used. It would be rash to attempt to assign the reason for the low reserves observed in the groups quoted until further work has been done. One disease was of interest in showing what is probably a significantly high reserve—namely diabetes with a range from 89 to 870 i.u. and a median of 300 i.u. Numerous observations on record suggest there is some abnormality in the utilization of carotene in diabetes. The figures given by Ellison and Moore¹ in a group of 200 children under 15 years show that the reserves at birth are low and begin to rise appreciably at about 4 months. They conclude that the reserves are low in septic diseases but not in acute infections. It must be remembered that even in the disease groups in which low median reserves were found there were always cases with reserves higher than the lowest recorded in the healthy group.

We regret to announce the death of Major General Sir M. Thomas Yarr late R.A.M.C. who was well known for his work in military ophthalmology.

Amer. Heart J. November 1936 p. 521
Biochem. J. 1937 31 155

Ibid. p. 165

DANGEROUS DRUGS REGULATIONS

Draft Dangerous Drugs Regulations¹ have just been published to amend in certain respects the Dangerous Drugs (Consolidation) Regulations, 1928, and make substantive the provisional rules dated May 1, 1936, which were designed to bring the earlier regulations into conformity with the Pharmacy and Poisons Act, 1933. Some of the new amendments are of interest to medical practitioners. Regulation 9, which relates to the dispensing of prescriptions, has been slightly amended to remove the doubts which have occasionally arisen as to the meaning of the expression "two or three times" in connexion with the repetition of a prescription. The regulation now reads 'a second or third time'. The documents which must be preserved for two years now include signed orders for dangerous drugs given under Rule 7 of the Poisons Rules, 1935. The form of the register of drugs or preparations supplied has been slightly amended by the deletion of the last column—namely the ingredients of the prescription—as it has been found in practice to be unnecessary. The list of drugs for which separate registers or separate parts of the register must be kept has been amended by substituting for dihydro oxycodone and dihydrocodeine the following three groups: dihydrohydroxycodone (commonly known as eucodal) and preparations containing dihydrohydroxycodone, dihydrocodeine (commonly known as dicodide), and preparations containing dihydrocodeine, dihydromorphine (commonly known as dilaide), and preparations containing dihydromorphine.

The general authority granted to certified midwives to be in possession of, and to administer preparations containing opium so far as is necessary for the practice of their profession has now been incorporated in the Dangerous Drugs Regulations in place of the separate authority granted by the Secretary of State in 1921. Persons engaged in testing schemes under the National Health Insurance Acts are now authorized to be in possession of dangerous drugs, and prescriptions issued for such testing purposes are exempted from the Regulations. Similar provision has been made for sampling under the Food and Drugs (Adulteration) Acts. Under the 1928 Regulations prescriptions under the National Health Insurance Acts were not required to specify the address of the persons giving them. This exemption has now been extended to prescriptions given in connexion with the health services of local authorities.

An important amendment has been made in the list of drugs and preparations exempted from the Regulations. In order to bring English legislation into line with the international conventions with regard to exempted preparations, a declaration by His Majesty in Council is to be made with effect from July 1 next, exempting from the Acts, and consequently from the Regulations, all the preparations which have been exempted from the International Opium Convention, 1925, on the recommendation of the Health Committee of the League of Nations. The present Draft Regulations, however, exempt from the Regulations made under Section 7 of the Act only certain other drugs and preparations. Methylmorphine and ethylmorphine are exempted because they are subject to a separate code of regulations, which remains unaltered and certain preparations of these drugs are also included. Cocaine eye drops have been inserted in the list, and pulv. cretae aromat. c. opio B.P. 1932 continues to be exempted.

Draft Dangerous Drugs Regulations 1937 His Majesty's Stationery Office (5d)

Draft Raw Opium, etc. (Consolidation) Regulations² have also been issued under Section 3 of the Dangerous Drugs Act, 1920 for the purpose of consolidating the seven sets of regulations at present in force for controlling and restricting the possession, sale, and distribution of the drugs to which Part I of that Act as amended by the Dangerous Drugs Act, 1925, applies—namely, raw opium, coca leaves, Indian hemp and resins obtained from Indian hemp, and all preparations, other than extract or tincture of Indian hemp, of which such resins form the base.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

Reducing the List of an Overworked Doctor

Among other forms of action which an insurance committee is empowered to take when considering the report of its medical service subcommittee after the investigation of a complaint is that of reducing the doctor's list below the general limit approved for the area. The provision in the regulations is as follows:

If the committee is satisfied that owing to the number of persons included in his list the practitioner is unable to give adequate treatment to all those persons it may after consultation with the Panel Committee impose a special limit on the number of insured persons for whom the practitioner may undertake to provide treatment.

Two or three points of interest may be noted with regard to this provision: (1) that it has appeared in the regulations since the earliest days of medical benefit; (2) it is placed first among the actions which the insurance committee may take; (3) it has rarely been put into operation.

A most interesting discussion arose at the public meeting of the London Insurance Committee last week. The Medical Service Subcommittee had appended to its report on a particular case a recommendation that the doctor be censured and that £20 be withheld from his pay. A member of the committee handed in an amendment proposing that the Insurance Committee should also consider whether a reduction should not be made in the doctor's list. In the discussion which followed it was recognized that it would not be proper then and there for the Insurance Committee to come to a decision on the question whether, and if so what, reduction should be made in the doctor's list. The amendment was therefore properly drafted as one providing for due consideration of the question, including its examination by the appropriate subcommittee. Further, the regulation requires that action should be taken only after consultation with the Panel Committee.

The committee therefore accepted the recommendation of the Medical Service Subcommittee and proceeded to consideration of a separate notice of motion with regard to the question of the reduction of the doctor's list, which was adopted after discussion. The fact that this question is to be examined will be communicated to the doctor and the Ministry of Health when submitting the report of the Medical Service Subcommittee and the Insurance Committee's decision thereon. This will presumably leave the doctor with the right of appeal, not only against the original recommendation but also against any decision that may be reached as to the limit of the numbers on his list.

¹ Draft Raw Opium, etc. (Consolidation) Regulations 1937 His Majesty's Stationery Office (2d)

branch can be obtained from the head office of the society. Payment will be made by the societies only in respect of those members who were in the society during the time that the surplus out of which hospital benefit is payable accrued.

Abandonment of Practice

The following is the report of a case in which an assurance organization which was involved financially in the practice communicated with the insurance committee after the doctor had already abandoned his practice. It will be observed that owing to the rapidity with which the clerk to the insurance committee moved in the interests of the insured persons concerned the insurance company was too late to secure that its interests were conserved, even assuming that it would have been possible for the committee to do anything in this direction.

We have been informed that on February 26, 1937, a telephone message was received that a practitioner had been compelled to leave his house on February 25, 1937, for financial reasons, that his furniture had been stored and that the practitioner who was attending that day for an examination in the Bankruptcy Court, was leaving England. In reply to an inquiry as to what arrangements had been made for the treatment of the insured persons concerned it appears that while negotiations had been proceeding for about a week regarding the sale of the practice nothing had materialized, and that the practitioner had been forced to take the step reported above. The person who spoke was informed that unless something was done immediately it would be necessary as a matter of urgency to issue that day a notice to the insured persons concerned informing them that they might select another practitioner. Later in the day the practitioner attended in person at the office and submitted his withdrawal from the medical list with effect from February 26. In the meantime the notices to the insured persons had been prepared and the fact that the premises of the practitioner were unoccupied had been verified by an officer of the committee. The notices were dispatched on February 26.

On February 27 a telephone message was received from an assurance organization stating that it was somewhat heavily involved financially in the practice which it had disposed of to another practitioner and that it proposed to submit to the committee the former practitioner's withdrawal from the medical list and his nomination which had been completed by the company of another practitioner. In view of the action taken on the preceding day the company was informed that it was too late for the committee to consider any further proposition.

Correspondence

IMPLEMENTING THE POLICY OF THE ASSOCIATION AT THE PERIPHERY

SIR,—There is no doubt in my mind that the implementing of policy and even the dissemination of the knowledge of that policy in the Divisions is in a sad state of neglect.

There can be but two reasons for this—namely, apathy of members and inefficiency of Division secretaries. How to eliminate apathy has always been one of the great concerns of all Division secretaries. By inefficiency of secretaries I do not mean that they are willingly inefficient. Honorary secretaries are doing magnificent work and deserve the thanks of all the members of their Divisions but frequently the secretary is a doctor with a growing practice who cannot afford and has no desire to neglect it. It is not the doctor with plenty of spare time who is elected an honorary secretary of a Division.

Being secretary of a big Division means that most of one's spare time must be given to Association work. This means that during a period such as the one through which we have just passed there is not time to carry out secretarial duties properly. The secretariat at Head Office is always more than willing to help but this solves very little of the honorary secretary's difficulties. The failure to obtain the full quota of medical votes

in the recent University election was due entirely to bad peripheral organization.

The remedy lies in the appointment of regional secretaries who must be adequately remunerated. Such a person should not have the ties of general practice to hinder him. It might be possible to include in his duties the routine work of secretary to the Public Medical Service in his region such as the co-ordination of remuneration rates of subscription and terms of service. He would be able to represent the Association on local committees where the times of those committee meetings make it impossible for the average general practitioner to attend without employing a locum tenens. This would cost a good deal of money but it would be well spent and here I think that the Association (including the Treasurer) must readjust its ideas as to spending money for which it cannot for several years see any tangible return.

It will be impossible to assess for many years to come the work of the recently appointed organizer in the London area and if we have to await the results before the provinces can be served in a similar manner we are losing very valuable time. Paid help with the secretarial work is not sufficient; this merely helps the honorary secretary to keep abreast of work and does not enable him to go forward and keep ahead of possible developments. Recruiting would be increased enormously with a regional secretary, and so help to save some of the cost.

There is but one danger and that is that this scheme might lead to a decrease in the amount and character of the voluntary work done for the Association. The possibility of such a thing happening is remote. The more probable result would be an increased voluntary activity since the honorary secretary would have more time for his part of the work. It is important that the voluntary work should not diminish since this is the most potent force in Association activity—I am, etc.,

Birmingham April 21

ARTHUR BEAUCHAMP

JAUNDICE IN LEICESTERSHIRE

SIR—I note in the *Supplement* of April 24 (p. 230) under Public Health Notes that the type of jaundice in an epidemic mentioned in Dr J. A. Fairer's annual report to the Leicester-shire County Council Education Committee is referred to as infective hepatic jaundice.

This designation is incorrect and in the short account given in Dr Fairer's report it is definitely stated that the disease was of the epidemic catarrhal type. Actually this account embodied a few salient features of an investigation undertaken by me, a report of which was published in the *British Medical Journal* of April 3 (p. 703). I was careful in this article to point out the differences in the various types of jaundice and to give the reasons why I concluded that the recent outbreak in Leicestershire was one of epidemic catarrhal jaundice—I am, etc.,

Leicester, April 26

ARTHUR A. LISNEY
Senior Assistant School Medical
Officer

Dr Barclay Barrowman of Klang Selangor Federated Malay States was recently the recipient of the Malay title Dato Semboh di Raja which means "The Healer" in recognition of his services to the Royal Family of Selangor. Dr Barrowman who graduated M.B. Ch.B. Glasgow in 1922 and D.T.M. and D.T.H. Liverpool in 1927 in addition to private practice in Klang acts in an advisory capacity to the Government of the Federated Malay States on malaria control, and annually conducts international teaching courses on this subject under the auspices of the League of Nations. Since 1930 Dr Barrowman has been physician to the Raja Muda of Selangor and the Royal Family.

Dr Lachlan Grant of Ballachulish chairman of the Highland Development League, has published in pamphlet form his address to the senior scholars of Kinlochleven Public School entitled "Good Education and Well Spent Holidays." He has also contributed to the *Northern Times* of April 8 a thoughtful article on "Development and Reconstruction" discussing various problems of to-day with special reference to the Highlands and Islands of Scotland.

Naval, Military, and Air Force Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Captains C F O Sankey OBE to the *Victory* for Royal Naval Hospital Haslar W H Edgar OBE, to the *Victory* for Royal Naval Barracks E Moxon Browne to the *Queen Elizabeth*

Surgeon Lieutenant Commander F Dolan to the *Colomba*
Surgeon Lieutenants M G Ross to the *Pembroke* for Royal Naval Barracks, J G Vincent Smith to the *Victory* for Royal Naval Barracks, G H C R. Critten to the *Broke*, W Boyd to the *Cairo*

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon-Lieutenant Commander H M Willoughby to the *Southampton*

Surgeon Lieutenant M P Reddington to the *Pembroke* for Royal Naval Hospital Chatham.

ARMY MEDICAL SERVICES

Col C M Drew DSO, late R.A.M.C., having attained the age for retirement has been placed on retired pay
Lieut-Col and Brevet Col J A Manifold DSO., from R.A.M.C., to be Colonel with seniority January 1, 1936

ROYAL ARMY MEDICAL CORPS

Majors F S Gillespie and R R. G Atkins MC., to be Lieutenant-Colonels

Major R J Rosie has been restored to the establishment
The following Lieutenants to be Captains with seniorities from the dates indicated in parentheses R J G Morrison J W Orr and N C Lendon (April 23 1936) C E Watson J A G Carmichael and W G Bateson (October 23 1936) A T Marrable (October 27, 1936) H R. Simon (October 30 1936), A C Byles (January 11, 1937) J A. Hamilton (January 29, 1937)

Lieutenants J Shields C W Maisey W T M Moar K H Harper T M W Darcy M F Kelleber E J Crowe and C McGrath to be Captains

The appointments of the following Lieutenants have been ante-dated to the dates indicated in parentheses under the provisions of Article 36 Royal Warrant for Pay and Promotion 1931 but not to carry pay and allowances prior to April 23 1936 R J G Morrison, J W Orr, and N C Lendon (April 23 1935) C E. Watson J A G Carmichael and W G Bateson (October 23 1935) A T Marrable (October 27, 1935) H R. Simon (October 30 1935) A C Byles (January 11 1936) J A. Hamilton (January 29 1936)

Lieutenants (on probation) R J Niven and S H Gibbs have been restored to the establishment

ROYAL AIR FORCE MEDICAL SERVICE

Wing Commander R S Overton to R.A.F. Depot Uxbridge for duty as Medical Officer

Flight Lieutenants R E Alderson to R.A.F. General Hospital Palestine and Transjordan Sarafand R A Cumming to No 203 (Flying Boat) Squadron Basrah, Iraq J R Cellars to R.A.F. Station Amman Palestine

Flying Officers D F Cameron to Home Aircraft Depot Henlow W T Buckle to No 5 Flying Training School Sealand J D Milne to No 9 Flying Training School Thornaby J C Taylor to No 10 Flying Training School Tern Hill H O B Howat to No 11 Flying Training School Wittering J H Lewis to No 2 Flying Training School Digby S Paul to No 7 Flying Training School Peterborough E S Sidey to No 1 Flying Training School Leuchars

Flying Officer A. R. Sibbald has been transferred to the Reserve Class D

Flying Officer J Conroy has resigned his short service commission

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Captain D S Middleton to be Major

Captain J J McEnery has resigned his commission

Lieutenants R. J Kellar and W G Love to be Captains

INDIAN MEDICAL SERVICE

Captain E. A O'Connor an Officiating Agency Surgeon has been posted as Medical Officer Meshed as from February 20
Captain K. Cunningham has been permitted to resign his appointment as from January 17

The services of Captain L. Dass have been placed temporarily at the disposal of the Government of Madras for employment in the Jail Department

On reversion from foreign service under the Indian Research Fund Association Captain M L Ahuja an officer of the Medical Research Department has been appointed to officiate as Assistant Director Central Research Institute Kasauli

ANNUAL MEETING, BELFAST

HOTEL ACCOMMODATION

All the single rooms in the larger hotels have already been booked, but there are still a few to be had in the smaller hotels Application for these should be made direct to Messrs. Thos Cook and Son, 27, Royal Avenue, Belfast, but applications for private hospitality, lodgings or students hostels should be addressed to the Secretary, B.M.A., Whitla Medical Institute, College Square North, Belfast

ANNUAL DINNER JULY 22.

Reservations of tables for the Annual Dinner, which is being held in the Kings Hall, Balmoral, and is this year taking the form of a dinner-dance, are being made daily and early application is advisable The numbers of the tables already booked are 9, 21, 22, 26, 28, 30, 33, 38 41 44, 47, 48, 49, 50, 51, 52, 56, 57, 60, 63, 66 69, 72, 75 83, 86 87, 89, 90, 93, 95 98 All applications must be accompanied by the correct subscriptions, and an alternative choice of tables should be given (see *Supplement April 10*, p 179)

GARAGE ACCOMMODATION

The following is a list of garages in and around Belfast which has been compiled by the A.A. and the R.A.C.

Stanley Harvey and Co., 20 Adelaide Street
W J McCrum 7 Antrim Road.
J E Coulter Ltd., 40 Antrim Road
O D Cars, Ltd Antrim Road
A. Stringer, 156, Antrim Road
Cowan and Spence, Bedford Street
Jacks and Co 62, Bedford Street.
Victor H Robb Ltd Chichester Street
J B Ferguson Ltd Chichester Street
Isaac Agnew Ltd., 63 Chichester Street
John Hanna 34 Chichester Street
Morrow and Wedgewood, 28 Claremont Street
W J Chambers 104-108 Donegall Pass
W H Connolly Ltd., 118 Donegall Pass.
Harry Ferguson Ltd Donegall Square
W H Alexander Donegall Street.
Leslie Porter Ltd 24-28 Great Victoria Street
Ulster Motor Works, 62 Great Victoria Street.
Stanley Motor Works 19a, Great Victoria Street
Victor Ltd Howard Street
R E Hamilton and Co., Llnenhall Street.
E. L Smyth 166 Lisburn Road
Great Northern Motor Works 348 Lisburn Road
W H. Alexander May Street
Charles Hurst Ltd. Montgomery Street.
Clarence Engineering Co Ltd Ormeau Avenue
W H Reay and Co Ormeau Road
Hutchinson Haddow and Co Ltd Oxford Street
Agnew and Graham Ltd Oxford Street
J W Shaw Ltd Upper Queen Street.
Belfast Car Laundry Victoria Road

BANGOR

R. J Hooke 110-122 Main Street (Telephone 622.)
S C Taylor 2a, Ballyholme Road (Telephone 307)

DONAGHADEE

W E. Macklin Warren Road.

The Malayan Medical Service list for 1937 has just been issued The Service at present includes 133 medical members of whom ninety seven hold appointments on the time scale nine are specialist officers twelve are super-scale medical and health officers and four hold super-grade posts There are seven members at the College of Medicine Singapore and four at the Institute for Medical Research Federated Malay States

Matters Referred to Divisions**BRITISH MEDICAL ASSOCIATION**ANNUAL REPORT OF COUNCIL, 1936-7 (*Continued*)

APPENDIX V

FINANCIAL STATEMENT

FOR THE TWELVE MONTHS ENDING

DECEMBER 31, 1936

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LONDON

BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQUARE, W C 1

BALANCE SHEET

LIABILITIES

1935		1936	
£		£ s d	£ s d
1,046	Creditors for—		
987	Subscriptions, paid in advance	1,187 18 9	
707	Advertisements ditto	1,835 13 7	
356	Publishing ditto	692 16 9	
71	Contributions	379 2 0	
38	Capitation Grants	434 11 0	
76	Engraving	26 5 2	
76	Journal Index	75 1 0	
212	Legal Charges	136 4 9	
105	Library Books, etc	217 11 6	
1,320	Library Postcards	113 19 6	
3 289	Miscellaneous Printing and Paper	687 4 7	
2,187	Machining Journal	3,322 18 2	
2,619	Paper for Journal	3,100 7 11	
49	Postage of Journal	2,648 3 3	
711	Plant and Type	107 14 1	
438	Rates, Taxes, Electricity Gas, and Oil Fuel	903 9 5	
157	Repairs and Decorations	2,149 7 3	
285	Reporting for Journal	166 16 0	
60	Stationery	316 5 2	
342	Sundries	83 15 5	
18	"Archives of Disease in Childhood"	54 6 0	
	"Journal of Neurology and Psychopathology"	26 4 9	
		<hr/>	18,665 16 0
506	Metropolitan Counties Branch		552 13 9
	Estate of late Assistant Medical Secretary (Proceeds of deferred Annuity Bond)		4,025 5 0
	Reserve to meet Dilapidations and Re-decorations—		
	Balance at December 31, 1935	6,838 12 9	
	Less cost of re-decorations, etc., during 1936	1,942 16 2	
		<hr/>	4,895 16 7
6,839	Add Transfer from Income and Expenditure Account	2,000 0 0	6,895 16 7
	Reserve against Commitments for Extension of Premises—		
	Transferred from Reserve for Printing Plant	11,716 5 0	
11,716	Add Transfer from Income and Expenditure a/c	15,000 0 0	
		<hr/>	26,716 5 0
	Sinking Fund—		
	For redemption of Leasehold Premises—		
	Balance at December 31, 1935	13,553 5 10	
13,553	Add Transfer from Income and Expenditure Account	2,433 6 8	
		<hr/>	15,986 12 6
	Reserve to meet loss on transfer of Colonial Subscriptions—		
	Balance at December 31 1935	3,268 0 6	
	Less cost of transferring colonial subscriptions during 1936	1,344 6 6	
		<hr/>	1,923 14 0
3,268	Add Transfer from Income and Expenditure Account	1,000 0 0	2,923 14 0
4 625	Overdraft at Bank		4,443 11 6
	Surplus Account—		
	General Balance at December 31, 1935	277,474 16 6	
	Excess of Income over Expenditure for twelve months ended December 31, 1936	1,612 2 8	
		<hr/>	279,086 19 2

Note—The accounts of the Scholastic, Clerical and Medical Association are separately kept and audited. The dividends received have been brought into account under Interest on Investments, Deposits, etc. the remainder of the profits of that Company have been carried forward in its own accounts.

£359,296 13 6

December 31, 1936

ASSETS

1935 £		1936					
		£	s	d	£	s	d
	Leasehold Premises (at cost less amounts written off)—						
	Tavistock Square and Upper Woburn Place—	265,239	13	5			
	Balance at December 31, 1935	2,878	3	8			
	Add cost of Alterations Tavistock House South						
		268,117	17	1			
	Less amount written off for Depreciation	3,900	0	0			
					265,117	17	1
265,240	Premises held by Feu Charter (at cost less amounts written off)—						
	Nos. 6 & 7, Drumsheugh Gardens Edinburgh, and Contents—	6,020	0	0			
	Balance at December 31, 1935	300	0	0			
6 020	Less amount written off for Depreciation				5,720	0	0
	Investment in Subsidiary Company (at cost)—						
6 083	598 Shares of £10 each, fully paid, in the Scholastic, Cerebral and Medical Association, Ltd				6,083	10	0
	Investments (at cost or under)—						
	£3 200 Bank of England Stock @ 200	6,480	0	0			
	£4,000 London, Midland, and Scottish Railway 4% Guaranteed Stock at 80	3,200	0	0			
	(Market value at date £16,196)				9,600	0	0
	Investments representing Reserve against Commitments for Extension of Premises—						
	£8,318 11s 9d Local Loans 3% Stock (at cost)	7,985	16	11			
	£15 000 Commonwealth of Australia 2½% Stock 1941/43 (at cost)	14,845	6	3			
	£4 174 16s 4d London County Consolidation 2½% Stock 1960/70 (at cost)	4,000	0	0			
	(Market value at date £27 004)				26,831	3	2
	Sinking Fund Insurance Policies—						
	Balance at December 31, 1935	13,553	5	10			
	Add Premiums paid during year—						
	Friends Provident and Century Life Office	1 141	13	4			
	Guardian Assurance Company	645	16	8			
	Scottish Widows Fund	645	16	8			
13 553					15,986	12	6
	Library—						
	Balance at December 31, 1935	2,306	1	4			
	Add Purchase and Binding of Books during 1936	435	2	3			
		2,741	3	7			
	Less Sale of Books	2	14	0			
		2,738	9	7			
	Less amount written off for Depreciation	500	0	0			
2,306					2,238	9	7
	Furniture and Office Equipment (at cost less amounts written off)—						
	Balance at December 31, 1935	5,096	16	7			
	Add Purchases during year	1,182	3	10			
		6,279	0	5			
	Less Sales, etc	2	10	0			
		6,276	10	5			
	Less Amount written off for Depreciation at 15%	941	9	6			
5 097					5,335	0	11
	Plant and Type (at cost less amounts written off)—						
	Balance at December 31 1935	5,089	17	0			
	Add Purchases during year	483	16	10			
		5,573	13	10			
	Less Amount written off for Depreciation at 15%	836	1	1			
5 090					4,737	12	9
122	Paper Stock				415	12	4
3,937	Subscriptions in arrear				4,632	19	10
	Sundry Debtors—						
	For Advertisements	7,542	4	9			
	Less Reserve for Bad Debts and Discounts	2,500	0	0			
5 478					5,042	4	9
808	Publishing				731	8	6
1,480	Rents, etc.				2,598	1	0
	Deposit Account—Deferred Annuity Bond (see Contra)				4,025	5	0
	Cash in Hand—						
	Head Office	4	2	2			
360	Scottish Office	196	13	11			
					200	16	1
					£359,296	13	6

Income and Expenditure Account

		1935			1936					
		£	s.	d.	f	s	d.	£	s.	d.
Journal Account Expenses	Abstract A	71	715	3 5				75,637	3	2
Central Meeting Expenses	, B	7,479	2	0				6,399	1	9
Library Account Expenses	" C	1 573	19	10				1,672	13	9
General Association Expenses	D	9,172	12	2				7,521	2	2
Central Premises Account	" E	11 142	13	8				11,840	15	4
Central Staff Expenses	" F	18 892	15	11				19,431	6	5
Central Printing, Stationery and Postage Expenses	" G	2 980	1	4				2,943	17	2
Scottish Committee Expenses	J	2,078	0	3				2,301	11	10
Irish Committee Expenses	, K	1 083	19	7				1 17	9	
Capitation Grants to Branches		6 915	1	6				7,600	6	9
Subscriptions Written off for Deaths		181	17	3				165	12	9
" " Arrears, etc		3,937	4	1				3,636	7	8
Bad Debts and Allowances written off		62	19	5				—		
		£137,215	10	5				£139,151	16	6
"Archives of Disease in Childhood "	Abstract H	341	16	0				54	6	0
' Journal of Neurology and Psychopathology	I	18	8	1				26	4	9
Reserve Funds—Amounts transferred to—										
Sinking Fund for the redemption of Leasehold Premises		2,433	6	8				2,433	6	8
Amount provided against commitments for Extension of Premises		6 000	0	0				15,000	0	0
Reserve for dilapidations and re-decorations		1 500	0	0				2,000	0	0
Reserve for the Renewal and Replacements of Printing Plant		4,000	0	0				—		
Reserve for Loss on Exchange on Dominion Currencies		1,000	0	0				1,000	0	0
Brokerage incurred in purchase of shares		14	3	1				15	10	6
Depreciation written off—										
		£	s.	d.						
Leasehold Premises Tavistock Square W.C.1		3 000	0	0				3 000	0	0
" " Scottish House Edinburgh		300	0	0				300	0	0
Library		400	0	0				500	0	0
Furniture and Fittings		899	9	0				941	9	6
Plant and Type		898	4	3				836	1	1
		£5,597	13	3				£5,577	10	7
Balance of Income over Expenditure		1,969	8	10				1,612	2	8
		£160,090	6	4				£166,870	17	8

for the Year ending December 31, 1936

	1935			1936		
	£	s	d	£	s	d
Subscriptions for year	87 365	18	10	£8,344	18	11
" for previous year	2,284	9	3	2,278	5	8
" for former years previously written off	461	18	0	494	14	3
Journal Account, Total Receipts	62 319	6	6	66,057	10	5
Rents Received and Accrued	5,102	10	0	6,407	19	8
Interest on Investments Deposits, etc	2,244	6	3	2,746	14	3
Scientific Grants Unused and Returned	—			26	18	5
Refund of Part of the amount paid under guarantee to National Ophthalmic Treatment Board	311	8	6	503	1	8
Sundries		9	0	10	14	5

Abstract A

JOURNAL

(Including Sundry

Income and Expenditure Account for

EDITORIAL	1935			1936		
	£	s	d	£	s	d
Salaries—Editor and Editorial Staff [11]	5 743	4	11	6,102	16	7
Contributions to "Journal"	2,163	0	6	2,263	14	6
Reporting	754	13	11	666	14	11
Fee to Pharmacologist	105	0	0	105	0	0
Fees to Advisers	—			39	7	6
Engraving	256	18	2	166	11	9
Legal Charges	18	9	9	5	19	6
Postages	84	0	0	87	0	0
Travelling, Parliamentary Papers, and Sundries	28	8	0	31	19	4
Compiling Indexes for "Journal" and Supplement"	149	12	7	150	13	9
Editorial Petty Cash	4	17	11	6	11	5
	9,308 5 9			9,626 9 3		

MANAGERIAL

Journal —Compositors and Readers Wages Machining, etc [32]	24 667	5	0	25,373	2	9
" Paper	11,242	18	6	11,358	15	6
" Supplement" —Compositors and Readers Wages Machining, etc.	2,446	14	6	2,754	19	10
" Paper	1 124	5	10	1,262	1	9
Postage for Dispatch of Journal	15 000	10	6	16,132	16	7
Address Bands for Journal	943	10	0	989	0	0
Repairs to Plant and Printers Sundries	131	13	11	107	6	4
Proportion of Managers and Clerks Salaries	4 697	4	0	5,075	18	9
General Postage	363	1	11	367	3	1
Printings—Proofs, Circulars, etc	129	11	3	109	11	9
Advertising—Propaganda Booklets	—			160	7	0
Reprints	560	12	3	651	12	1
Special Reports, Pamphlets, etc	956	1	7	1,019	7	7
Stationery (Ledgers etc)	98	4	6	105	9	10
Insurances	33	1	11	32	18	9
Expenditure in connection with changes in format of Journal"	—			214	10	11
British Medical Journal Board of Directors—						
Railway Fares	—			51	17	5
Fees	—			183	15	0
Printings	—			55	12	0
Reporting	—			2	2	0
Sundries	12	2	0	2	5	0
	62,406 17 8			66,010 13 11		
	£71 715 3 5			£75 637 3 2		

ACCOUNT

Publications)

the Year ending December 31, 1936

	1935			1936		
	£	s	d	£	s	d
Advertisements	53,871	15	10	57,532	8	9
Sundry Sales—Journals	6039	12	3	5,997	18	10
Special Reports Pamphlets, etc	1,132	6	0	849	5	1
Reprints	619	3	8	793	8	8
Covers Blocks etc	52	1	5	75	9	8
Sale of Waste	4	17	1	6	13	10
Discounts on Machining, Paper purchases etc	599	10	3	663	10	11
Royalties on Sales of Publications	—	—	—	133	14	8
	62,319	6	6	65,057	10	5

Comparative table of total number of pages published during
period covered by accounts

	In 1935	In 1936
Literary and Epitome	2,848	2,892
Supplement	620	724
Advertisements	3,284	3,500
	6,752	7,116

Balance from Subscriptions for the cost of production and issue of
the Journal9,395 16 11
£71 715 3 59,579 12 9
£75 637 3 2

Abstract B

Central Meetings Expenses

	1935			1936		
	£	s	d	£	s	d
Annual Representative Meeting—						
Railway Fares	533	17	10	562	11	5
Printings	267	6	11	355	14	2
Sundries	25	17	6	33	15	6
	827 2 3			952 1 1		
Annual Meeting Expenses	1,481 17 7			229 2 6		
(The figures for 1935 Melbourne Meeting, include the balance of fares, etc., for Officers and Secretariat)						
Council—						
Railway Fares	846	8	10	744	12	8
Printings	808	14	8	926	4	8
Sundries	21	9	4	85	4	6
	1,676 12 10			1,756 1 10		
Secretaries Conference—						
Railway Fares	84 16 5			119 1 5		
	COMMITTEES			COMMITTEES		
	£4,070 9 1			£3,056 6 10		
Abortion Committee re Medical Aspects of—						
Railway Fares	41	8	9	53	5	6
Printings	2	12	3	6	7	10
Sundries	3	0	0			
	47 1 0			59 13 4		
Arrangements Committee—						
Railway Fares	30	14	9	105	18	8
Printings	37	0	1	19	16	9
	67 14 10			125 15 5		
Central Ethical Committee—						
Railway Fares	40	15	3	44	13	9
Printings	11	18	3	9	6	8
	52 13 6			54 0 5		
Charities Committee—						
Railway Fares	25	17	6	28	17	9
Printings	7	16	11	6	0	6
	33 14 5			34 18 3		
Compulsory use of Yellow Lights for Motor Cars, Committee re—						
Railway Fares				14	9	
Printings				7	10	
	—			1 2 7		
Consultants and Specialists Committee—						
Railway Fares	93	6	9	43	2	0
Printings	32	14	5	29	0	10
	126 1 2			72 2 10		
Consulting Pathologists Group Committee—						
Railway Fares	19	2	6	12	3	9
Printings	1	6	11	6	1	4
	20 9 5			18 5 1		
Dominions Committee—						
Railway Fares	20	19	9	22	14	6
Printings	3	4	1	16	19	2
	24 3 10			39 13 8		
Emergency Committee—						
Printings	—			3 10 2		
Enquiry into Office Arrangements Committee—						
Railway Fares				5	4	6
Printings				1	0	
	—			5 5 6		
Finance Committee—						
Railway Fares	22	19	3	42	11	9
Printings	68	14	8	78	10	6
	91 13 11			121 2 3		
Fractures Committee—						
Printings	4 13 7			—		
Health Services Committee—						
Railway Fares				74	9	0
Printings				3	4	5
	—			77 13 5		
Hospitals Committee—						
Railway Fares	47	2	6	115	6	0
Printings	40	1	11	61	15	10
	87 4 5			177 1 10		
Indian Medical Service Committee—						
Railway Fares	1	18	9			
Printings		13	11			
	2 12 8			—		
Insurance Acts Committee—						
Railway Fares	264	9	6	404	0	11
Printings	20	6	7	22	4	11
	284 16 1			426 5 10		
Carried forward	£4,913 7 11			£4,272 17 5		

	1935			1936		
	£	s	d	£	s	d
Brought forward	4,913	7	11	4,272	17	5
Journal Committee—						
Railway Fares	87	15	3	60	16	0
Printings	9	12	0	24	15	6
	97	7	3	85	11	6
Legal Actions Committee—						
Printings	—					2 1
Medical Education Committee—						
Railway Fares	7	1	9			
Printings	8	3				
	7	10	0			
Medical Practitioners and Mental Illness Committee—						
Printings		7	0			
Medico-Political and Parliamentary Committee—						
Railway Fares	303	1	7	383	7	1
Printings	52	10	8	63	8	1
Road Traffic Claims Forms	69	15	4	—		
	425	7	7	446	15	2
Miners Nystagmus Committee—						
Railway Fares	31	10	9	40	8	0
Printings	4	12	0	4	10	0
	36	2	9	44	18	0
National Maternity Service Committee—						
Railway Fares		26	5 3			
Naval and Military Committee—						
Railway Fares	23	13	3	33	19	0
Printings	5	16	4	4	4	2
	29	9	7	38	3	2
Nutrition Committee						
Railway Fares	17	12	1			
Printings	8	15	8			
	26	7	9			
Office Committee—						
Fees and Railway Fares	94	10	0	95	17	0
Printings	1	1	2	1	7	0
	95	11	2	97	4	0
Ophthalmic Committee—						
Railway Fares	54	2	6	57	6	9
Printings	8	14	4	6	1	2
Reporting	—			3	17	6
	62	16	10	67	5	5
Organisation Committee—						
Railway Fares	198	2	5	167	14	5
Annual Handbook	47	16	0	81	5	6
Articles and By Laws	—			122	17	6
Medical Practitioners Handbook	496	6	0	—		
Non Members List	107	2	0	70	6	0
Printings etc	203	8	9	159	1	11
Posting and Addressing Propaganda Issue of Journal	105	2	6	171	9	4
Fares of Newly appointed Secretaries visiting H Q	—			25	10	0
Sundries	13	16	9	15	10	0
	1171	14	5	813	14	8
Organisation of the Profession in India, Committee re—						
Railway Fares				1	3	6
Printings				1	1	8
				2	5	2
Parliamentary Elections Committee—						
Railway Fares	3	9	0			
Printings	7	3				
	3	16	3			
Physical Education Committee						
Railway Fares	100	11	0	39	18	3
Printings	46	6	3	18	0	0
Sundries	2	5	0	—		
	149	2	3	57	18	3
Practitioners of Physical Medicine Group Committee—						
Railway Fares	3	17	9	6	2	3
Printings	7	2		1	18	6
	4	4	11	8	0	9
Public Health Committee—						
Railway Fares	161	1	6	134	1	6
Printings	53	1	6	60	16	8
	214	3	0	194	18	2
Radiologists Group Committee—						
Railway Fares				2	7	3
Printings				2	0	
				2	9	3
Relation of Alcohol to Road Accidents, Committee re—						
Railway Fares	12	19	0			
Printings	2	0	3			
	14	19	3			
Carried forward	£7,278	13	2	£6,132	3	0

Central Staff Expenses

	Central Staff Expenses					
	1935			1936		
	£	s	d	£	s	d
Financial Secretariat and Clerical Staff [35]	9,230	19	5			
Less Proportion of Salaries debited to Journal A/c	4,697	4	0			
				4,533	15	5
Medical Secretariat and Clerical Staff [36]				11,111	11	6
Porters and Janitor [9]				1,395	6	3
Premiums of Deferred Annuities for Officials				954	1	4
Contributions to Office Staff Superannuation Fund				706	16	0
Travelling and Subsistence Expenses of Officials and Staff at Annual Meeting, etc.				125	19	3
Fidelity Guarantee and Employers' Liability Insurance				65	6	2
				£18,892	15	11
				9,844	19	3
				5,075	18	9
				4,769	0	6
				10,936	9	1
				1,412	9	2
				1,129	9	11
				730	15	9
				387	18	11
				65	3	1
				£19,431	6	5

Abstract G **Central Printing, Stationery, and Postage Expenses**

	1935			1936		
	£	s	d	£	s	d
General Printing	824	17	4	682	2	3
General Postages						
Finance Department	726	3	10	734	6	2
Medical Department	544	19	7	577	19	7
Stationery	884	0	7	949	9	2
	<u>£2,980</u>	<u>1</u>	<u>4</u>	<u>£2,943</u>	<u>17</u>	<u>2</u>

Abstract J

Scottish Committee

Financial Statement for the Year ending December 31, 1936

1936		£ s d.	£ s d.
To Balance in hand			101 13 1
" Cash from Head Office	2,607	15 0	
Less refunds by N I D T and Rent received direct	<u>211</u>	<u>2 4</u>	
			2,396 12 8
" Rents			395 0 0
" Use of Rooms for Meetings			137 4 0
" Tenants proportion of Cleaning, etc. costs			<u>70 1 8</u>
			£3 100 11 5

1936		£ s d.	£ s d.
By Heating, Cleaning, Lighting, etc.			370 14 3
" Rates and Taxes			240 13 6
" Feu duty			36 17 5
" Fares of Members attending— Scottish Committee	128	18 2	
I A C Subcommittee	19	3 3	
Branch Secretaries (Anti Gas)	6	17 9	
Consultants and Specialists			
Group Committee for Scotland	<u>4</u>	<u>1 3</u>	
			159 0 5
" Fares of Scottish Medical Secretary, including attendance at A R M			113 8 3
" Salaries of Scottish Medical Secretary and Staff including N H L and U Insurance			1,670 6 9
" Fire Insurance			6 7 6
" Printing			117 8 9
" Postages			26 0 0
" Telephones and Telegrams			52 4 3
" Upkeep Renewals, and Repairs			104 9 0
" Auditors Fees			3 3 0
Solicitor's Fee			1 6 0
" Sundry Small Outlays			1 18 5
" Balance, Cash in Hand			<u>196 13 11</u>
-			£3,100 11 5

Office Staff Superannuation Fund

For which the Council of the British Medical Association Acts as Trustee

Income and Expenditure Account for the Year ending December 31, 1936

1936
Dec 31 —To Amount returned to Members retiring from Fund
" Charges incurred in purchase of Stock
" Balance being excess of Income over Expenditure transferred to Balance Sheet

EXPENDITURE	£	s	d	£	s	d
				171	8	6
				4	14	0
				2,602	4	0
				<u>£2,778</u>	<u>6</u>	<u>6</u>

1936
Dec 31 —By Contributions due from Members
" Contributions due from British Medical Association and Medical Insurance Agency
" Interest on Investments
" Refund of Income Tax on Dividends and Interest taxed at source (1935-36)

INCOME	£	s	d	£	s	d
	833	10	9			
	862	18	9	1,696	9	6
				864	3	10
				217	13	2
				<u>£2,778</u>	<u>6</u>	<u>6</u>

Dr

Balance Sheet as at December 31, 1936,

LIABILITIES

To Capital Account—
Balance at January 1st 1936
Add Excess of Income over Expenditure for the year 1936

	£	s	d	£	s	d
	28,144	14	2			
	2,602	4	0	30,746	18	2

ASSETS

By Investments calculated at cost or under—
£250 Bank of England Stock at 200
£2,500 Commonwealth of Australia 3½ per cent R.S. 1936/1961 at cost
" £1,000 Commonwealth of Australia 5 per cent R.S. 1945/1975 at cost (1936)
" £6,455 15s 4d Consolidated 4 per cent Stock at cost
" £1,000 3½ per cent Conversion Loan at cost
" £1,000 India 3½ per cent Stock at 271
" £4,000 London County Consolidated 4½ per cent Stock 1945/1985 at cost
" £500 National Savings Certificates at cost
" £2,900 3½ per cent War Stock 1952 at cost
" £900 London and North Eastern Railway ½ per cent Debentures at conversion price
" £719 London Midland and Scottish Railway 4 per cent. Guaranteed Stock at conversion price
" £387 London Midland and Scottish Railway 4 per cent. Debentures at conversion price
" £1,700 3 per cent. Conversion Loan at cost
" £1,700 Local Loans Board 3 per cent. Stock at cost
" £2,000 London County 3½ per cent. S.S. 1946/70 at cost
" £400 New Zealand 3 per cent. Stock 1945 at 64
" £1,400 London County Consolidated 3 per cent. Stock at cost
" £100 Grand Trunk Pacific 3 per cent. Bonds 1962 at cost

	£	s	d	£	s	d
	500	0	0			
	2,460	7	6			
	981	10	0			
	5,862	19	0			
	1,893	16	9			
	578	15	0			
	3,975	6	10			
	363	15	0			
	2,709	7	7			
	504	0	0			
	575	8	3			
	453	0	0			
	1,951	15	7			
	1,914	18	9			
	236	0	0			
	1,334	5	0			
	297	15	0	29,826	19	0

Market value of Investments at December 31, 1936, was £34,443.

By Cash at Bank

£30,746	18	2
---------	----	---

919	19	2
£30,746	18	2

TRUST FUNDS FOR WHICH THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION ACTS AS TRUSTEE

Stewart Fund*(Holding £579 London, Midland, and Scottish Railway 4% Debenture Stock "D" a/c)*

1936	1936			1936			
	£	s	d		£	s	d
To Balance brought forward at January 1st 1936	15	1	3	By Balance Cash in hand	32	17	4
Interest on Investment and Deposits	17	16	1				
	<u>£32 17 4</u>				<u>£32 17 4</u>		
					<u>£32 17 4</u>		

Francis Fowke Bequest*(Holding £600 3½% Conversion Loan)*

1936		1936	
	£ s d		£ s d
To Balance brought forward at January 1st 1936	6 18 0	By Balance Cash in hand	23 0 11
Interest on Investment	16 2 11		
	<u>£23 0 11</u>		<u>£23 0 11</u>

Middlemore Fund*(Holding £666 London and North-Eastern Railway 3% Debenture Stock)*

1936		1936	
£	s d	£	s d
To Balance brought forward at January 1st 1936	50 7 2	By Prize awarded	50 0 0
Interest on Investment	15 7 2	, Balance Cash in hand	15 14 4
	<u>£65 14 4</u>		<u>£65 14 4</u>

Katherine Bishop Harman Prize Fund*(Holding £1,000 New South Wales 5% Stock, 1945 65)*

1916		1916		£ s. d.			
To Balance brought forward at January 1st 1916	£	s	d	By Prizes awarded	75	0	0
	57	15	0	Balance Cash in hand	20	17	6
Interest on Investment	38	2	6				
	<u>£95 17 6</u>				<u>£95</u>	<u>17</u>	<u>6</u>

Sir Charles Hastings Fund

For which the Council of the British Medical Association acts as Nominal Trustee, the Chairman of the Representative Body,
Chairman of Council, and the Medical Secretary acting as Executive Trustees

(a) GENERAL FUND

1936	By Loans—	£	s	d	£	s	d
	Case A						
	Case B						
	Case C						
	Case D						
	Case E						
	Case F						
	Income Tax on Unpaid Interest and Dividends						
	Balance December 31, 1935—						
	Investments brought forward and calculated at middle market price Decem—						
	181 Greek Government 7 per cent. Refuge Loan of 1924 at 90½	181	0	0			
	130 Greek Government 7 per cent. Refuge Loan of 1924 at 90½	130	0	0			
	131 Chinese Imperial Government 4 per cent. Bond 1898, at 80½	131	0	0			
	300 Phoenix Assurance Co. £1 Shares at 131	300	0	0			
	25 Phoenix Assurance Co. £1 Shares at 131	371	3	4			
	20 Central Mining and Investment Co. B Shares (100 Swedish crowns each at cost)	911	5	0			
	33 Swedish Match Co. B Shares (100 Swedish crowns each at cost)	89	0	0			
	Investments purchased calculated at cost price—	161	18	3			
	1600 Corporation of London 4½ per cent. Stock 1940-85 at 101½	1600	0	0			
	1600 3½ Consolidated 4 per cent. Stock at 99½	1584	0	0			
	Cash at Bank—Current and Deposit Accounts	2,386	6	1			
	*Subscriptions and Donations	512	3	2			
	Interest on Investments and Deposits	73	16	9			
	Refund of Loans	160	0	0			
		£3 152	6	0			

Market value of investments at December 31, 1936 was £2,204 0 5

(b) CHRISTINE MURRELL BEQUEST FUND

1936	By Loans—	£	s	d	£	s	d
	Case A						
	Case B						
	Case C						
	Case D						
	Case E						
	Case F						
	Income Tax on Unpaid Interest and Dividends						
	Balance December 31, 1935—						
	Investments purchased calculated at cost price—						
	1000 National Savings Certificates (3rd series) (with interest)	997	6	1			
	£1 038 17½ 2d Local Loans 3 per cent. at 96	697	3	0			
	Cash at Bank—Current and Deposit Accounts	1,694	9	1			
	Interest on Investments and Deposits	27	2	11			
		£1 721	12	0			

Market value of investments at December 31, 1936 was £1,003 15 9

Central Emergency Fund

For which the Medico Political and Parliamentary Committee of the British Medical Association acts as Trustee

1936	By Loans—	£	s	d	£	s	d
	Case A						
	Case B						
	Case C						
	Case D						
	Case E						
	Case F						
	Income Tax on Unpaid Interest						
	Payments made in connection with Industrial dispute						
	Balance at December 31, 1935 represented by—						
	500 National Savings Certificates (3rd series) (with interest)	512	10	0			
	£1 000 4 per cent. Consolidated Stock (at cost)	345	16	0			
	£1 000 2½ per cent. Consolidated Stock (at cost)	303	7	6			
	Less overdraft at Bank	1,666	13	6			
		56	16	2			
		1,609	17	4			
	Proceeds on sale of 100 National Savings Certificates (3rd series) (with accrued interest)	106	5	0			
	Less book value	102	10	0			
	Subscriptions and Donations	17	16	0			
	Dividends and Interest	38	8	10			
	Interest accrued on National Savings Certificates	56	4	10			
		15	0	0			
		£1 684	17	2			

Market value of investments at December 31, 1936 was £1,893 0 0

British Medical Association Charities Trust Fund

1935 £ s. d. 1936 £ s. d.

£ s. d. 1935 £ s. d. 1936 £ s. d.

1,573 15 4 1,573 15 4

2,148 19 4 2,148 19 4

3,506 12 0 3,506 12 0

715 15 4 715 15 4

1,038 13 11 1,038 13 11

1,872 14 10 1,872 14 10

190 0 0 190 0 0

11 18 0 11 18 0

145 13 2 145 13 2

£5,706 18 0 £5,706 18 0

£ 5 0 723 13 0

£724 11 0

By Amounts distributed to—
(a) Royal Medical Benevolent Fund
(1) Earmarked for Fund
(2) Earmarked for General
(b) Royal Medical Benevolent Fund
(1) Earmarked for Fund
(2) Earmarked for General
(c) Royal Medical Benevolent Fund
(1) Earmarked for Fund
(2) Earmarked for General
(d) Royal Medical Benevolent Fund
(1) Earmarked for Fund
(2) Earmarked for General
(e) Royal Medical Benevolent Fund
(1) Earmarked for Fund
(2) Earmarked for General

1935 £ s. d. 1936 £ s. d.

2,540 15 0 2,473 10 8
2,059 17 6 2,148 19 4
1,074 7 6 1,038 13 11
31 18 0 36 0 9

To Subscriptions and Donations collected—
(a) For distribution at the discretion of B.M.A. Charities Committee
(b) Royal Medical Benevolent Fund
(c) Royal Medical Benevolent Fund Society of Ireland
(d) Royal Medical Benevolent Fund

£5,706 18 0 £5,697 4 8

Medical Representation in Parliament Fund

For which the Council of the British Medical Association acts as Trustee

1936 £ s. d.
711 2 10
9 17 2
3 11 2
£724 11 0

By Income Tax on untaxed interest
Balance at December 1936—
Cash at Bank—Current and Deposits Accounts

1936 Balance of January 1, 1936, brought forward
To Subscriptions and Donations
" Interest on Bank Deposit Account

AUDITORS' REPORT TO MEMBERS OF THE ASSOCIATION

December 31, 1936, and Accounts with the Books and Vouchers of the Association except as regards the Scottish Committee Account and having received all the information and explanations we have required, we report that the Balance Sheet is in our opinion properly drawn up so as to exhibit a true and correct view of the Association's affairs of the Association according to the best of our information and the explanations given to us and as shown by the Books of the Association in favour of the Trust Funds and of the Office Staff Superannuation Fund, and We have inspected the Lease of the New Building and the Disposition of the Trust Funds and of the Office Staff Superannuation Fund, and we have verified the investments of the Association with the Books and Vouchers, of the Medical Funds for whom the Association receives remittances, and we further report that we have examined the Accounts of the Association for the year ended December 31, 1936, and have found them correct.

PRICE WATERHOUSE & CO
3, Frederick's Place Old Jewry E.C. 2

March 11 1937

L FERRIS SCOTT F.C.A.
Financial Secretary and Business Manager

N BISHOP HARMAN, F.R.C.S.,
Treasurer
L KAYE LE FLEMING
Chairman of Council

British Medical Association

OFFICES BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQUARE, W.C.1

Departments

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and
Business Manager Telegrams Articulate Westcent, London)
MEDICAL SECRETARY (Telegrams Medisecra Westcent London
EDITOR BRITISH MEDICAL JOURNAL (Telegrams Atunlogy Westcent
London)
Telephone numbers of British Medical Association and British
Medical Journal Euston 2111 (internal exchange, five lines)
B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumsheugh Gardens
Edinburgh (Telegrams Associate Edinburgh Tel 24361
Edinburgh)
Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare
Street, Dublin (Telegrams Bacillus Dublin Tel. 62550
Dublin)

Diary of Central Meetings

APRIL

30 Fri Organization Committee Grants Subcommittee, 2.30
p.m.

MAY

4 Tues Central Ethical Committee 2 p.m.
5 Wed Hospitals Committee 12 noon.
Medico-Political Committee 2 p.m.
7 Fri Journal Board 10.15 a.m.
Building Committee, 3 p.m.
14 Fri Journal Committee, Epitome Subcommittee 11.30 a.m.
Journal Committee 2 p.m.
Public Health Committee, 2 p.m.
18 Tues Organization Committee 2 p.m.
20 Thurs Committee re Organization of the Medical Profession in
India 2.15 p.m.
21 Fri Naval and Military Committee, 2.30 p.m.
24 Mon Domonians Committee 2.15 p.m.
27 Thurs Subcommittee re Case of Marshall versus Lindsey
County Council, 2.30 p.m.

JUNE

11 Fri Journal Committee Foods and Drugs (Advertisements)
Subcommittee 11.30 a.m.

Group of Psychological Medicine of the Association

Notice is hereby given of the formation by the Council of a Group of Psychological Medicine, which shall be composed of all those members of the Association who are engaged predominantly in the practice of psychological medicine. Every member of the Association coming within this definition is *ipso facto* a member of the Group. Members of the Association who claim to conform to this definition are requested to notify the Medical Secretary, B.M.A. House, Tavistock Square, W.C.1, not later than May 22, 1937. The first general meeting of the Group will be held at a date to be subsequently announced in the Supplement.

April 28

G. C. ANDERSON
Medical Secretary

Scholarships and Grants in Aid of Scientific Research

Scholarships

The Council of the British Medical Association is prepared to receive applications for Research Scholarships as follows: an Ernest Hart Memorial Scholarship, of the value of £200 per annum; a Walter Dixon Scholarship, of the value of £200 per annum; and three Research Scholarships, each of the value of £150 per annum. These Scholarships are given to candidates whom the Science Committee of the Association recommends as qualified to undertake research in any subject (including State medicine) relating to the causation, prevention or treatment of disease. Preference will be given other things being equal to members of the medical profession. Each Scholarship is tenable for one year, commencing on October 1, 1937. A Scholar may be reappointed for not more than two additional terms. A Scholar is not

necessarily required to devote the whole of his or her time to the work of research, but may hold a junior appointment at a university, medical school, or hospital provided the duties of such appointment do not interfere with his or her work as a Scholar.

Grants

The Council of the British Medical Association is also prepared to receive applications for Grants for the assistance of research into the causation, treatment, or prevention of disease. Preference will be given, other things being equal, to members of the medical profession and to applicants who propose as subjects of investigation problems directly related to practical medicine.

Conditions of Award Applications

Applications for Scholarships and Grants must be made not later than Saturday, May 8, 1937, on the prescribed form a copy of which will be supplied on application to the Medical Secretary of the Association, B.M.A. House, Tavistock Square, London, W.C.1. Applicants are required to furnish the names of three referees who are competent to speak as to their capacity for the research contemplated.

Branch and Division Meetings to be Held

BORDER COUNTIES BRANCH—At Cumberland Infirmary Carlisle, Thursday, May 6, 3.15 p.m. Dr Robert Gow McInnes, Mental Health.

EDINBURGH BRANCH SOUTH EASTERN COUNTIES DIVISION—At Royal Hotel, Glasgow, Wednesday, May 5. Annual meeting. Election of officers. Consideration of Annual Report of Council etc.

GLASGOW AND WEST OF SCOTLAND BRANCH LANARKSHIRE DIVISION—At St Enoch Station Hotel, Glasgow, Wednesday, May 5, 3.30 p.m. Dr John D. Comrie (Edinburgh). History of Glasgow Medicine.

HERTFORDSHIRE BRANCH BARNET DIVISION—At Welland House, New Barnet, Tuesday, May 4, 8.30 p.m. Dr A. F. Hurst. The Origin and Treatment of Diseases of the Alimentary Tract.

HERTFORDSHIRE BRANCH EAST HERTFORDSHIRE DIVISION—Thursday, May 6, 2 p.m. Golf competition.

LANCASHIRE AND CHESHIRE BRANCH BURY DIVISION—At Jersey Hall, Bury, Friday, May 14. Coronation dinner and dance.

LANCASHIRE AND CHESHIRE BRANCH ROCHE DALE DIVISION—At Rochdale Infirmary, Friday, May 7, 8.30 p.m. Annual meeting. Election of officers etc. Dr T. Milnes Bide. Some Common Pitfalls in Diseases of the Eye.

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital, Kingsland Road, E., Tuesday, May 4, 9.30 p.m. Mr W. Gilling Ball. "Chronic Infections of the Urinary Tract."

METROPOLITAN COUNTIES BRANCH HAMPSTEAD DIVISION—At Hampstead General Hospital, Thursday, May 6, 8.30 p.m. Consideration of Annual Report of Council and election of representatives and deputy representatives.

METROPOLITAN COUNTIES BRANCH NORTH MIDDLESEX DIVISION—Wednesday, May 5. Annual meeting.

NORTHERN IRELAND BRANCH BELFAST DIVISION—Thursday, May 6, 4.15 p.m. Annual general meeting.

NYASALAND BRANCH—At King Edward VII Memorial Hall, Blantyre, Saturday, June 5, 10 a.m. Scientific meeting.

SOUTH WALES AND MOUNTAINSHIRE BRANCH SWANSEA DIVISION—Thursday, May 6. Consideration of Annual Report and Election of Representative.

SOUTHERN BRANCH PORTSMOUTH DIVISION—At Queen's Hotel, Southsea, Thursday, May 6, 9.30 p.m. Annual general meeting. Preceded by supper at 9 p.m.

SURREY BRANCH CROYDON DIVISION—At Croydon General Hospital, Tuesday, May 4, 8.30 p.m. Annual general meeting.

SURREY BRANCH KINGSTON-ON-THAMES DIVISION—At Kingston and District Hospital, Tuesday, May 4, 8.30 p.m. Annual general meeting. Election of officers. Consideration of Annual Report of Council.

SUSSEX BRANCH BRIGHTON DIVISION—Joint meeting with the Brighton Hive and District Teachers' Association at the Grand Hotel, Brighton, Tuesday, May 4, 8.30 p.m. Dr Norman Maple. Chaos to Cosmos. Preceded by supper at 7.30 p.m.

YORKSHIRE BRANCH WAKEFIELD, PONTEFRAC and CASTLEFORD DIVISION—At Strallford Arms Hotel, Wakefield, Thursday, May 6. Annual general meeting. Preceded by dinner at 7.45 p.m.

Meetings of Branches and Divisions

ABERDEEN BRANCH CITY OF ABERDEEN DIVISION

At a meeting of the City of Aberdeen Division held at Aberdeen on February 18 with Dr J A INNES in the chair a British Medical Association Lecture on 'The Toxaemias of Late Pregnancy' was given by Professor F J BROWNE. Over eighty members and guests were present. Professor Browne classified the toxaemias (1) pre-eclamptic toxaemia and eclampsia (2) nephritic toxaemias (3) essential hypertension, and (4) accidental haemorrhage. Discussing pre-eclamptic toxaemia the lecturer stressed the importance of taking the blood pressure, pointing out how a rise was frequently the first sign of this condition. In mild cases there should be rest, but not necessarily in bed, and a low protein diet with plenty of vegetables, fruit salad and one pint of milk daily. In severer cases with a blood pressure of 150/100 or over with or without oedema or albuminuria rest in bed was essential. If there was oedema a salt free diet and fluid restriction were called for. Moreover the blood pressure and quantity of urine should be recorded daily. If the condition did not become normal in three weeks pregnancy should be terminated to prevent chronic nephritis. If however the foetus was already viable (thirty fifth week) pregnancy should be terminated within a week. In the pre-eclamptic state when the signs were more marked complete starvation was called for and glucose water by the mouth, brisk purgation, and venesection to 10 to 20 ounces should be resorted to. If there was no rapid improvement in a day or two the pregnancy must be terminated in urgent cases by Caesarean section in less urgent cases by bag or bougie.

As regards the nephritic toxaemias it was usually wise to terminate the pregnancy—exceptions to this rule were rare. The best management in these few cases was complete rest in bed till the child was viable and then Caesarean section. It had to be noted that the foetus often died *in utero* from placental infarction in spite of every care. In essential hypertension there was usually no need to terminate the pregnancy. An attempt should be made to keep the blood pressure under 180 systolic and 110 diastolic. The risk of accidental haemorrhage and of foetal death had to be kept in mind. Termination of the pregnancy was therefore often indicated once the foetus was viable. A discussion taken part in by Professor D BAIRD, Mr G S DAVIDSON, Dr G MITCHELL (fnsh) and Dr J CRAIG followed. On the motion of the CHAIRMAN Professor Browne was accorded a very cordial vote of thanks for his lecture.

Problems of Urinary Infection

A further meeting of the City of Aberdeen Division was held at Aberdeen on March 18 with Mr A FOWLER in the chair when Professor J R LEARMONTH gave an address on

Certain Problems of Urinary Infection in Practice. The lecturer enumerated the various routes by which it was possible for organisms to reach the urinary tract. While extension of infection within the tract from kidney to bladder followed the urinary tide the so-called ascending type of infection was less easy to explain. Histological investigations failed to produce evidence that ascending invasion occurred by way of the perireteral lymphatics. One hypothesis suggested that as a result of the irritation of vesical infection there was an upset in the physiological mechanism controlling both the passage of urine along the ureter and its entrance into the bladder. According to this view the uretero-vesical orifice might be opened during the act of micturition and so allow the entrance of infected urine. This was actively propelled to the renal pelvis by peristaltic movements of the ureter of necessity in the opposite direction to the normal. It was pointed out that the majority of bacterial invaders of the urinary tract were derived from a source within the body. Of the haematogenous group cocci were derived from cutaneous and less often from nasopharyngeal lesions, while bacilli of the colon group were from the large bowel. In bacillary infections patients might be divided into three groups: those with definite intestinal lesions; those with constipation; and those without history or signs of intestinal trouble. In an endeavour to find an explanation of the frequency of urinary infections in practice and especially those of the relapsing and chronic types there were two accessory factors—trauma and obstruction to the urinary flow. Though at first each might operate alone in the majority of cases ultimately they are present together.

A classification of the types of cases met with in general practice and which should be useful in everyday work was suggested.

A Urinary infection which did not give rise to clinical features referable to the urinary tract.

B Conditions which clinically aroused suspicion that infection of the urinary tract was present but evidence of this in the urine was lacking.

C Urinary infections in which both the history and the examination of the urine provided the diagnosis.

The importance of obtaining the history of a thorough physical examination of examination of the urine and of radiography and visualization of the urinary tract was emphasized.

In conclusion the lecturer said that every urological condition and particularly every infective condition should be considered primarily in terms of renal function. To-day there were at our disposal accurate methods of ascertaining the data upon which we could form an opinion and we should do our patients less than justice if we failed to utilize these methods.

A discussion followed in which Professors D BAIRD and CRUICKSHANK and Dr R BRUCE took part. On the motion of Mr A MITCHELL, Professor Learmonth was accorded a very cordial vote of thanks for his address.

BIRMINGHAM BRANCH NUNEATON AND TAMWORTH DIVISION

At a meeting of the Nuneaton and Tamworth Division held at Atherstone on March 17 the following officers were elected.

Chairman Dr J V L Grant Joint Honorary Secretaries Drs T H Forrest and P G Horsburgh Representative in Representative Body Dr W Lowson

Plans were then considered for a course of instruction in anti-gas measures and the acting honorary secretary Dr P A V Barford was instructed to make the necessary arrangements.

BIRMINGHAM BRANCH WARWICK AND LEAMINGTON AND RUGBY DIVISIONS

At a joint meeting of the Warwick and Leamington and Rugby Divisions held at Leamington Spa on April 8 Dr C H Gregory of Rugby was elected representative of the two Divisions in the Representative Body and Dr A S Murray of Stratford on Avon was elected deputy representative.

CALCUTTA BRANCH

At the annual general meeting of the Calcutta Branch held at Calcutta on February 12 with the president Lieut.-Colonel E O G KIRWAN I.M.S. in the chair the reports for 1936 of the Branch Council the honorary treasurer and the honorary secretary were read and adopted. The following officers were elected.

President Rai Dr U N Roy Chaudhuri Bahadur Vice Presidents Dr M N De and Lieut.-Colonel E H Vere Hodge I.M.S. Honorary Secretary Dr J P Chaudhuri Honorary Treasurer Dr K Banerjee

Dr S Sinha was appointed convenor of the clinical meetings of the Branch. A resolution was passed recording the appreciation of the members of the Branch of the visit of the Medical Secretary Dr G C Anderson and the secretary was instructed to forward a letter to Dr Anderson informing him of the resolution.

DORSET AND WEST HANTS BRANCH BOURNEMOUTH DIVISION

At a meeting of the Bournemouth Division held at Boscombe Hospital on March 24 with Dr J C A NORMAN in the chair Dr C F PEDLEY read a paper on 'Some Experiences in the Conduct of Maternity and Child Welfare Clinics and Medical Inspection of School Children'.

Discussing the school medical service Dr Pedley said that in Bournemouth there were about 10,000 children to be examined. All these were seen first when they entered school then between the ages of 8 and 12 and again when they left school. Parents had the right to object to their children being examined by a school medical officer; they were also invited to be present at the examination if they so wished and very often they availed themselves of this opportunity. A record card was kept for each child examined on which all defects were noted. The school medical officer kept the general practitioner constantly in mind, nothing being done to interfere with any treatment the latter was carrying out. Dr Pedley did not attach great importance to the weight of a child but rather to the physical development. Mouth breathing, he thought, should always be looked upon as pathological and meant that there were diseased tonsils and adenoids which required operative treatment. The chest was carefully examined at these school inspections and he was of the opinion

that tuberculosis was rare in young children but that chronic bronchial catarrh was common especially in those who had had whooping-cough in early infancy. This chronic bronchial catarrh if neglected, sometimes led to bronchiectasis.

An interesting discussion followed in which the CHAIRMAN Drs RICHARDSON LITHERLAND DIXON GREEN ROOLE CARTER, ASTEN and LUKER took part and a hearty vote of thanks was accorded Dr Pedley for his interesting and instructive paper.

EAST YORKSHIRE BRANCH

Members of the East Yorkshire Branch in association with the Hull Medical Society and the Yorkshire Council of the British Empire Cancer Campaign, attended a meeting at Hull on April 2 to hear Dr A. T. TODD deliver a lecture on "The Medical Treatment of Cancer with Special Reference to Inoperables." He described the use of selenium and lead combined into colloidal lead selenide which was tried only on inoperable cases: good results were obtained, 10 per cent of the cases remaining cured. Experiments were also conducted combining irradiation or deep x-ray therapy with the colloidal treatment. The lecturer advocated the general rather than the local use of cancer therapy. His method was to inject intravenously the colloid—one dose each week—and two days after each injection irradiation was given. Dr Todd described methods for the relief of pain. It was essential that the nutrition of the patient be maintained and that fear be dispelled. He gave statistics of the results obtained. He recommended six months' treatment with selenium and irradiation for operable cases after excision of the growth.

Drs R. GRIEVE, CORBETT, CRIPPS, A. M. MILLAR, and EVE took part in the discussion which followed and a vote of thanks was proposed by Mr J. F. GULL and seconded by Dr D. MACRAE TODD.

On April 7 a party of members of the Branch and their ladies numbering fifty, toured the factories of Messrs T. J. Smith and Nephew Ltd. Hull. The tour lasted one and a half hours, several processes being fully demonstrated and explained. Later tea was provided in the social hall. Dr S. F. FOURACRE proposed a vote of thanks to the management for the very interesting afternoon, and Dr EVE seconded. Mr H. N. Smith briefly responded.

EDINBURGH BRANCH LOTHIAN DIVISION

A meeting of the Lothians Division was held at B.M.A. House, Edinburgh on April 14 when there was a discussion on the Scottish Maternity Services Bill. A small committee was appointed to meet the medical officers of health of Mid Lothian and East Lothian to consider what steps should be taken in those counties. It was unanimously agreed that the fee for services to be rendered under the Bill should not be less than £3 3s.

EGYPTIAN BRANCH

The Egyptian Branch held a very successful meeting on March 30 when Professor F. H. SMITH gave an account of some recent work done in the pharmacology department of the Egyptian University on a blood pressure raising reflex. A discussion followed. Dr ROLAND WILSON who presided, congratulated the speaker on his work and his interesting exposition of it.

FIFE BRANCH

The first clinical meeting for 1937 of the Fife Branch was held at Kirkcaldy Station Hotel on March 11 when the B.M.A. fracture film was shown to a representative audience. Dr G. M. FIFE, president of the Branch, presided and an address on "The Modern Treatment of Fractures" with a commentary on the film was delivered by Mr D. STEWART MIDDLETON (Edinburgh). The lecturer sketched the development of treatment from fixation by wooden splints (often unsatisfactory) preceded by reduction more or less accurate and followed by early passive movement the results usually being prolonged incapacity with atrophy of the affected limb. The reaction to this form of treatment was the method introduced by Lucas Chirpionnière consisting in early massage and passive movements: less attention being paid to accurate reduction and fixation. Except in cases of malunion the lecturer showed how early passive movements tended to defeat their object by straining the injured parts and thus preventing the normal increase of natural mobility while active movement governed by the patient's sensations gave much better results. The modern treatment of fractures required three essentials: (1) accurate reduction, (2) complete immobilization of the fracture, (3) active use of the limb. Complete immobiliza-

tion of the fracture could only be secured by an accurately fitting plaster splint, and this method, as introduced by Böhler was now the one employed. The importance of early active movements or exercises was emphasized the work of the masseur being no longer massage and passive movements but rather the direction of exercises and the encouragement of active movements.

Many members took part in the discussion which followed and a very hearty vote of thanks was accorded Mr Stewart Middleton for his instructive and interesting address.

GIBRALTAR BRANCH

A meeting of the Gibraltar Branch was held on January 21 with Colonel A. N. FRASER, D.S.O. in the chair. Dr A. MC. K. FLEMING, M.C. opened a discussion on "Tuberculosis Control in Gibraltar." He described the organization for the control of tuberculosis as it existed in England, and explained the modifications which would be necessary to make the scheme adaptable to conditions in Gibraltar. The lecturer stated that a sanatorium and dispensary would be built in connexion with the proposed scheme and would be known as the King George V Memorial Hospital. He appealed for the co-operation of the medical practitioners in carrying out the campaign against the disease. A lively discussion followed in which the PRESIDENT Dr GILL, Dr DEALE, Dr DURANTE, Dr GIRALDI and Colonel DIXON took part, and the meeting terminated with a hearty vote of thanks to Dr Fleming for his address.

On April 6 the Branch held a clinical meeting at the Colonial Hospital when in the absence of the president the vice president, Dr A. A. RUSSO, occupied the chair. Several Naval medical officers were present as guests. After tea had been served the members and guests proceeded to the wards where a series of demonstrations were given by the staff. Dr J. LOCHHEAD showed a case of pyaemia and a series of radiographs of a case which had been successfully operated on for coloproctitis due to tethering down of the colon by bands. Dr J. E. DEALE demonstrated: (1) A series of radiographs of severely comminuted fractures in which the degree of comminution was out of all proportion to the severity of the causative violence. (2) Fracture of the lumbar spine successfully treated by hyperextension. (3) Fracture-dislocation of the second cervical vertebra caused by a sudden movement of the head while combing the hair. (4) Radiographs of a case of bilateral renal calculi with abscess formation. Dr GILCHRIST showed a radiograph of ossified nodules of unknown aetiology in the ligamentum patellae and a patient with a haematoma of the testicle. Dr FLEMING demonstrated: (1) Radiographs of pulmonary tuberculosis treated by artificial pneumothorax, (2) a case of headaches associated with an extraordinarily high lymphocyte count in the cerebrospinal fluid, and (3) a case of amyotrophic lateral sclerosis.

A very successful meeting terminated with a unanimous vote of thanks to the lecturers for their interesting demonstrations.

KENYA BRANCH MOMBASA DIVISION

At a special meeting of the Mombasa Division held at the Native Civil Hospital Mombasa on February 24 with Dr S. D. KARVE in the chair, Dr A. R. PATERSON gave an address on "Yellow Fever" in which he urged members of the Division to do their utmost to educate the public on this subject. At the conclusion of the meeting a vote of thanks was accorded Dr PATERSON for his lecture.

LANCASHIRE AND CHESHIRE BRANCH PRESTON DIVISION

A joint meeting of the Preston Division and the Preston Medico-Ethical Society was held at Preston Royal Infirmary on April 13 when through the courtesy of Messrs T. J. Smith and Nephew Ltd., a film entitled "Cellona Film on Fractures" was shown. The film demonstrated the use of cellona chiefly in combination with local anaesthesia for fixation of fractures of the upper and lower extremities. There was a large audience and an interesting discussion took place.

LANCASHIRE AND CHESHIRE BRANCH ROCHDALE DIVISION

At a meeting of the Rochdale Division held at Rochdale Infirmary on March 12, Dr L. KILROE was elected representative in the Representative Body and Drs J. F. KNOX and A. M. McMASTER were elected deputy representatives.

Dr J. F. WILKINSON (Manchester) delivered a lecture on "The Diagnosis and Treatment of Some Common Anaemias." Dr Wilkinson said that he would confine his remarks to the consideration of primary microcytic anaemia and pernicious anaemia. In the examination of a case the clinical history

was of great importance. Next a complete blood count was essential and a fractional gastric analysis should also be done. Having established a diagnosis of microcytic anaemia iron should be administered in adequate doses about 90 grains of ferri et ammon cit or 18 grains of ferrous chloride represented the average daily dose required. The treatment should be controlled by frequent blood counts, and when the case was considered to have reached the stage of cure re-examination at intervals of three or six months was advisable. Pernicious anaemia generally required rest in bed in the early stages of treatment with a full normal diet. Stomach extract or liver extract was essential, care being taken in the case of stomach extract not to administer it in hot fluids as these destroyed the active principles. Symptomatic treatment also required attention. Complications which might be present—for instance hypothyroidism—should be treated independently of the anaemia. Dr Wilkinson illustrated his remarks by lantern slides and diagrams. The lecture was followed with great interest and many members took part in the discussion and questions after the lecture. On the proposal of Dr W. H. BATEMAN seconded by Dr H. N. CROSSLEY Dr Wilkinson was cordially thanked for his lucid and practical address.

At a joint meeting of the Bury Oldham and Rochdale Divisions held at Rochdale on April 9 with Dr J. CURRIE chairman of the Oldham Division in the chair Mr GEOFFREY JEFFERSON (Manchester) delivered a British Medical Association Lecture entitled "An Account of Eight Cases of Operation for Removal of a Frontal Lobe of the Brain with Six Recoveries." Mr Jefferson had originally intended to lecture on the surgical treatment of intractable pain but he explained that he had been moved to change his subject because he had spent the early part of his life in Rochdale, and he wished to make the first communication of this paper to a Rochdale audience. The paper which will appear in due course in the columns of the *Journal* records a most important stage in the history of brain surgery. It represents the first account of any considerable number of successful operations of this nature. Mr Jefferson's audience appreciated the privilege of being the first to hear this communication. Drs C. ROBERTSON WILSON and McMASTER expressed the thanks of the meeting to Mr Jefferson for his lecture.

LINCOLNSHIRE BRANCH LINCOLN DIVISION

At a meeting of the Lincoln Division, held at Lincoln on March 11, Dr R. D. LAWRENCE read a paper on "The Practitioner and Diabetic Emergencies."

Dr Lawrence said that the majority of diabetics were today sent to hospital, where they were put on a diet and given insulin. After they came out however they often became too independent, and in consequence the practitioner was faced with many difficulties. Referring to patients under treatment with insulin Dr Lawrence stressed the fact that sugar in the urine was not serious but that acidosis was. Starvation and vomiting produced the dangerous condition of ketosis. Another cause of trouble was muscular exercise after insulin as the effort involved used up sugar. Any illness tended to make diabetes worse and necessitated an extra dose of insulin but if vomiting was marked it was as well to cut down the insulin by half. Dr Lawrence next dealt with the differential diagnosis of hyper and hypoglycaemia when in doubt it was best to give sugar.

In the treatment of true coma repeated insulin with ample sugar was necessary and many cases would need large quantities of saline, four to eight pints by the continuous intravenous drip method.

Questions were asked by Drs H. C. BARLOW LEVIS G. C. WELLS-COLE, A. C. FRASER, MAIDEN and SHARRARD.

In replying Dr LAWRENCE gave an outline of treatment with zinc protamine insulin.

A hearty vote of thanks was accorded Dr Lawrence for his address on the motion of Dr BARLOW seconded by Dr F. ALCOCK.

METROPOLITAN COUNTIES BRANCH GREENWICH AND DEPTFORD DIVISION

The Greenwich and Deptford Division held a dinner and dance at Chiesman's Restaurant on March 11. This was the first event of the kind and there was a most gratifying response, no fewer than 121 people sitting down to dinner. Dr W. B. SILAS the chairman of the Division presided with Sir Walter and Lady Langdon Brown as the principal guests. The toast of "The Division" was proposed by Dr HAROLD PRITCHARD and the CHAIRMAN replied. The toast of "The

Guests" was proposed by Dr W. SMITH. Sir WALTER LANGDON BROWN replying. After dinner there was dancing, which continued until 1 a.m.

NORTH OF ENGLAND BRANCH MORPETH AND BLYTH DIVISIONS

A joint meeting of the Morpeth and Blyth Divisions was held at Ashington on March 19, when Mr J. K. STANGER (Newcastle upon Tyne) delivered an interesting lecture on "Back Injuries." Mr Stanger confined himself to injuries of the muscles and to fractures of the spine. His address was illustrated by lantern slides showing the method of treatment of a fractured spine and by radiographs of various cases. On the motion of Dr A. A. BONAR, seconded by Dr M. BRUCE a hearty vote of thanks was accorded to Mr Stanger for his address.

The following officers of the Morpeth Division were then elected:

Chairman Dr T. S. Blaiklock Vice-Chairman Dr Murdo Maclean
Honorary Secretary Dr Dugald Revie Charities Secretary Dr W. Stephenson Golf Secretary Dr Bonar

NORTHERN IRELAND BRANCH BELFAST DIVISION

A meeting of the Belfast Division was held in the Whitla Medical Institute Belfast, on April 15 with Dr S. E. A. ACHESON in the chair. The Division had the pleasure of welcoming Dr G. C. Anderson Medical Secretary of the Association who gave an interesting and stimulating address entitled "The British Medical Association and Future Medical Practice."

Dr Anderson began by outlining the objects and activities of the B.M.A. touching briefly on its contributions to medical education and scientific advance to the ethical aspect of practice and to the maintenance of the interests of medical practitioners in public services. The Association had contributed to the promotion of national health and its scheme for a General Medical Service advocated an extension of the principles of national health insurance to everyone who conformed to certain standards of income and to their dependants, together with specialist benefits. As it was unlikely that such an extension could take place for some years, the B.M.A. was leading the profession in forming its own Public Medical Service on lines comparable with the national health insurance schemes. It was however entirely controlled by medical men. Passing to the hospital problem Dr Anderson spoke of the change which had taken place in the hospital system. Formerly a service for the very poor it was now resorted to by almost all classes of the community and all but the poorest were now asked to contribute. The consulting staff however still gave their services free and this was from every point of view a mistake. In country areas especially the absence of remuneration restricted the supply of consultants below what was necessary. Referring to the maternity services Dr Anderson reminded the meeting how the reduction in maternal mortality hoped for after the introduction of ante-natal clinics had not taken place. This was because there was no continuity of care. Advance would only result when the general practitioner formed an integral part of any maternity service. A cordial vote of thanks was accorded Dr Anderson on the motion of Professor R. J. JOHNSTONE, seconded by Dr JOHN ARMSTRONG.

SOUTH WESTERN BRANCH PLYMOUTH DIVISION

A meeting of the Plymouth Division was held at the Central Police Station Plymouth on March 17 when Dr S. NOY SCOTT was in the chair. The large number of members present were divided into parties each party being under the care of one of the staff of the C.I.D., who demonstrated various phases in the detection of crime. Members were very much impressed by the high standard of efficiency attained by the C.I.D. of Plymouth and could have continued to ask questions until a much later hour. At the conclusion of the demonstration members were entertained most generously to a buffet supper the Chief Constable acting as host ably seconded by Superintendent W. T. Hutchings and his colleagues. This hospitality was a complete surprise to the Division and was thoroughly enjoyed. A vote of thanks to the Chief Constable and Superintendent Hutchings was proposed very eloquently by Dr E. WORDLEY who said that as compared with the life of police the life of the average doctor was one of peace and joy. The vote of thanks was seconded by the honorary secretary Mr C. F. MAYNE and carried with acclamation. The Chief Constable in reply said that he and his colleagues were very happy indeed to welcome the members of the

British Medical Association and emphasised that anything which brought his Department into closer collaboration with the medical profession was much to be encouraged

STIRLING BRANCH

A clinical meeting of the Stirling Branch was held at Stirling Infirmary on March 31 when Dr P F MacFARLAN described the injuries to the internal semilunar cartilage of the knee-joint and illustrated the method of treatment with two cases. Two cases of tuberculosis of the spine in children treated by an Albee operation with excellent results were also shown. Dr W B G Angus described and illustrated a case of advanced tabes dorsalis with Charcot's joints multiple fractures and other parasyphilitic lesions. Dr EVA CAIRNS illustrated the value of pronitosis treatment in three cases of puerperal fever and showed how x-ray examination and the Aschheim Zondek test for pregnancy had been employed in the diagnosis of an obscure case of early pregnancy complicated by dermoid cyst. Dr G L REID described how ganglionectomy could be used for the relief of pathological conditions, and illustrated his remarks with a case of bilateral removal of the stellate ganglion for Raynaud's disease, and a case of lumbar sympathectomy for the relief of pain in advanced rheumatoid arthritis of the hip-joint.

After a vote of thanks to those who had demonstrated cases the meeting proceeded to the election of Dr C Melville as representative in the Representative Body.

SUDAN BRANCH

At a meeting of the Sudan Branch, held at the Kitchener School of Medicine on February 8 the president Dr F S MAYNE, read a paper entitled "A Review of Methods Used for Extension in Fractures of the Lower Limb." Dr Mayne described the six principal methods as strapping, Sinclair's glue, Hamilton Russell parallelogram of forces, Steineman's pins, Pearson's ice tong calliper and Kirschner wires and stirrups. The advantages and disadvantages of the various methods were discussed and a number of slides were shown. Reference was also made to the Smith Petersen nail for fractured neck of the femur and slides were shown illustrating how it can be inserted by the use of Kirschner wire guides and portable x-ray apparatus. A vote of thanks was accorded to Dr Mayne for his address, and the meeting adjourned.

SURREY BRANCH KINGSTON-ON-THAMES DIVISION

At a meeting of the Kingston-on-Thames Division held at the Kingston and District Hospital on March 9 with Dr A S HOLLIS in the chair Dr R D LAWRENCE gave an address on "Diabetic Emergencies and the General Practitioner." The lecturer started by explaining in detail the reasons for the fluctuations in the blood sugar which controlled the onset of diabetic and hypoglycaemic coma. The differential diagnosis between the two states he said might cause great difficulties but it should be remembered that insulin coma usually came on suddenly frequently at noon or midnight when the blood sugar reached its lowest curves and was dramatically cured by sugar and that diabetic coma had a gradual onset occurred at the times when the blood sugar was highest and did not react to sugar. Where there was doubt the urine could be withdrawn by catheter it might contain sugar in both conditions but a further specimen in 10 minutes would be sugar free in hyperglycaemia and loaded in diabetic coma. The test administration of two lumps of sugar would not do material harm in cases of hyperglycaemia but would cause rapid improvement in early cases of insulin coma. In answer to questions Dr Lawrence stated that there was no satisfactory oral substitute for insulin. Zinc protamine insulin was a hopeful new form which required only one injection a day but was not as yet really out of the experimental stage. The meeting closed with a vote of thanks proposed by the CHAIRMAN.

SURREY BRANCH RICHMOND DIVISION

At a meeting of the Richmond Division held at Richmond Royal Hospital on March 12, with Lieut.-Col. E. L. GOWLAND D.S.O. in the chair Dr ROBERT FORBES read a paper on "Medico-Legal Problems on General Practice." Dr Forbes began by urging practitioners to be accurate in making out certificates, and told of the risks of not having an x-ray examination of every injury due to a fall or blow. He referred to the duties of medical practitioners in cases of illegal operations and abortion. A long and interesting discussion followed in which most members present took part. On the motion of the CHAIRMAN a hearty vote of thanks was accorded Dr Forbes for his address.

VACANCIES

- ABERDEEN ROYAL INFIRMARY—(1) Surgical Registrar Salary £200 p.a. (2) Second Hon Ophthalmic S
- ANNIE MCCALL MATERNITY HOSPITAL Jeffreys Road S.W.—M.O (female) Salary £100 p.a.
- ASHFORD GROSVENOR SANATORIUM—R.H.P. (male) Salary £100 p.a.
- BARNSELY BECKETT HOSPITAL AND DISPENSARY—C.O. (male) Salary £150 p.a.
- BATH AND WESSEX CHILDREN'S ORTHOPAEDIC HOSPITAL—H.S. Salary £120 p.a.
- BECKENHAM BOROUGH—Assistant M.O.H. and School M.O.
- BEDFORD COUNTY HOSPITAL—Second H.S. (male unmarried) Salary £150 p.a.
- BELFAST SAMARITAN HOSPITAL FOR WOMEN—Hon Junior Assistant Visiting S
- BENEDEN NATIONAL SANATORIUM—Medical Superintendent Salary £600-£50-£750 p.a.
- BIRMINGHAM CITY—A.R.M.O. (male unmarried) for the Tuberculosis Section Salary £400-£25-£450 p.a.
- BIRMINGHAM QUEEN'S HOSPITAL—R.S.O. Salary £150 p.a.
- BOLINGBROKE HOSPITAL Wandsworth Common S.W.—(1) C.O. (2) H.S. Males unmarried Salaries £120 p.a. each
- BOURNEMOUTH ROYAL NATIONAL SANATORIUM—A.R.M.O. (male, unmarried) Salary £200 p.a.
- BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN—H.S. (male) Salary £120 p.a.
- BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL—H.S. (male) Salary £150 p.a.
- BRISTOL ROYAL INFIRMARY AND BRISTOL GENERAL HOSPITAL—Two Hon Radiologists
- BURY INFIRMARY—(1) Third H.S. (2) C.O. Males Salaries £150 p.a. each
- BURY ST EDMUNDS WEST SUFFOLK GENERAL HOSPITAL—H.S. Salary £180 p.a.
- CARDIFF WELSH NATIONAL SCHOOL OF MEDICINE—Temporary full-time Junior Assistant in the Medical Unit Salary £250 p.a.
- CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL Gray's Inn Road W.C.—(1) Third R.H.S. (male) Salary £75 p.a. (2) Second Assistant and (3) Third Assistant for the Outpatient Department
- CHILDREN'S HOSPITAL Hampstead N.W.—R.M.O. Salary £150 p.a.
- COLCHESTER ESSEX COUNTY HOSPITAL—H.P. (male) Salary £150 p.a.
- CONNAUGHT HOSPITAL Walthamstow E.—C.O. (male) Salary £100 p.a.
- COVENTRY AND WARWICKSHIRE HOSPITAL—R.C.O. Salary £125 p.a.
- CROYDON COUNTY BOROUGH—Assistant M.O.H. and Assistant School M.O. (male) Salary £500-£25 £700 p.a.
- DARLINGTON MEMORIAL HOSPITAL—H.S. (male) Salary £150 p.a.
- DORCHESTER DORSET COUNTY HOSPITAL—H.S. (male, unmarried) Salary £150 p.a.
- DUOLEY GUEST HOSPITAL—Second H.S. (male) Salary £120 p.a.
- EAST HAM MEMORIAL HOSPITAL Shrewsbury Road E.—H.S. to the Special Departments and C.O. (male) Salary £120 p.a.
- GREAT BARR PARK COLONY—J.A.R.M.O. (male) Salary £275 p.a.
- HAINSTED GENERAL AND NORTH WEST LONDON HOSPITAL Havestock Hill N.W.—(1) Casualty M.O. and (2) Casualty S.O. for the Outpatient Department, Bayham Street Females unmarried Salaries £100 p.a. each
- HOSPITAL FOR TROPICAL DISEASES Gordon Street, W.C.—(1) Pathologist Salary £750 p.a. (2) Hon Assistant P
- HOVE GENERAL HOSPITAL—(1) Senior R.M.O. (2) J.R.M.O. Males Salaries £150 p.a. and £120 p.a. respectively
- HULL ROYAL INFIRMARY—Second C.O. (male) Salary £150 p.a.
- HULL VICTORIA HOSPITAL FOR SICK CHILDREN—R.H.P. (female) Salary £120
- ILFORD KING GEORGE HOSPITAL—(1) Hon Chief Clinical Assistant to the Orthopaedic and Fracture Department (2) R.S.O. Salary £250 p.a. (3) Medical Registrar Salary £150 p.a. (4) Two H.S.'s Salaries £100 p.a. each Males
- KETERING AND DISTRICT GENERAL HOSPITAL—(1) R.M.O. (2) Second R.M.O. (male) Salaries £160 p.a. and £140 p.a. respectively
- LEEDS GENERAL INFIRMARY—(1) Hon P. (2) Resident Anaesthetic Officer Salary £149 p.a. (3) Junior Resident Anaesthetic Officer Salary £100 p.a. (4) Radio-Surgical H.S. Salary £100 p.a. (5) R.M.O. (male) Salary £200 p.a.
- LEICESTER CITY MENTAL HOSPITAL Humberstone—Locumtenens A.M.O. (male) Salary £10 10s. per week
- LONDON COUNTY COUNCIL—(1) A.M.O.s for mental services Salaries £470-£225-£570 each (2) A.M.O.s (Grade II) to (a) Archway Hospital Highgate N., (b) Mile End Hospital (c) St. Andrew's Hospital Bow E. (d) St. Luke's Hospital Sydenham S.W. Salaries £250 p.a. each Unmarried (a) (b) (c) and (d) are male appointments only. (3) Temporary District M.O. for Area X District H (Woolwich) Provisional salary £250
- LONDON JEWISH HOSPITAL Stepney Green E.—(1) R.M.O. and H.P. (2) H.S. (3) C.O. Males Salaries £150 p.a. £100 p.a. and £100 p.a. respectively
- LONDON UNIVERSITY—University Chair of Bacteriology tenable at University College Hospital Medical School. Salary £1,000 p.a.
- LUTON BOROUGH—M.O.H. and School M.O. Salary £1,000 p.a.

MAIDSTONE WEST KENT GENERAL HOSPITAL—H.S. (male) Salary £175 p.a.

MANCHESTER CITY EDUCATION COMMITTEE—Part time Psychiatrist for Child Guidance Work Salary £500 p.a.

MANCHESTER ROYAL INFIRMARY—Assistant Surgical Dental Officer (non resident) Salary £35 p.a.

MARKET DRAYTON CHESHIRE JOINT SANATORIUM—Resident Locum tenent (male) Salary £6 6s per week.

MIDDOLESBROUGH NORTH RIDING INFIRMARY—C.O. (male unmarried) Salary £150 p.a.

MIDDOLESEX COUNTY COUNCIL—J.R.A.M.O. for Hillingdon County Mental Hospital Uxbridge Salary £250 p.a.

MIDDOLESEX HOSPITAL W—(1) J.M.O. (male) for the Radiotherapy Department. Salary £300 p.a. (2) Whole time Assistant (male) for the Physical Medicine Department Salary £300.

NEWCASTLE THROAT NOSE AND EAR HOSPITAL—H.S. Salary £125 p.a.

NORTHAMPTONSHIRE COUNTY COUNCIL—Temporary Assistant County M.O. (male) Salary £500 p.a.

NORWICH NORFOLK AND NORWICH HOSPITAL—R.S.O. Salary £250 p.a.

NOTTINGHAM GENERAL HOSPITAL—(1) H.S. to the Ear Nose and Throat Department (2) R.C.O. (male) Salaries £150 p.a. each.

OLDHAM COUNTY BOROUGH—R.A.M.O. (unmarried) for the Municipal Hospital Salary £200 p.a.

OXFORD EYE HOSPITAL—H.S. to the Ophthalmic Department Salary £150 p.a.

PLAISTOW MATERNITY HOSPITAL—(1) R.H.S. Salary £75 p.a. (2) Consulting Paediatrician Honorarium £20 and a fee of £2 2s per lecture.

PLYMOUTH PRINCE OF WALES HOSPITAL, Greenbank Road—H.S. Salary £120 p.a.

PRESTON COUNTY BOROUGH—Medical Superintendent (male) to Sharoe Green Hospital Salary £850 £1 062 10s p.a.

PRESTON COUNTY MENTAL HOSPITAL Whittingham—R.J.A.M.O. Salary £500 £25 £600 p.a.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue W—(1) H.S. (male) Salary £120-£150 p.a. (2) Hon Ophthalmic S.

RAOULIN INSTITUTE Riding House Street, W—R.M.O. (male, unmarried) Salary £250 p.a.

READING ROYAL BERKSHIRE HOSPITAL—(1) C.O. (2) H.S. to the Special Departments Males Salaries £150 p.a. each.

ROYAL CANCER HOSPITAL (FREE) Fulham Road S.W.—(1) Non resident H.S. to the Radium Department (2) H.S. Salaries £200 p.a. and £100 p.a. respectively.

ROYAL FREE HOSPITAL Grays Inn Road W.C.—Assistant P.

ROYAL NORTHERN HOSPITAL Holloway N.—(1) H.P. (2) H.S. Salaries £70 p.a. each.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S.E.—R.C.O. (male) Salary £150 p.a.

RUNWELL HOSPITAL FOR NERVOUS AND MENTAL DISORDERS—H.P. Salary £150 p.a.

ST BARTHOLOMEW'S HOSPITAL E.C.—Assistant Aural S.

ST PANCRAS METROPOLITAN BOROUGH—A.M.O. for Maternity and Child Welfare Fee £1 11s 6d per session.

SALFORD CITY—Part time Assistant Maternity and Child Welfare M.O. Salary £250 p.a.

SALISBURY GENERAL INFIRMARY—R.M.O. (male) Salary £250 p.a.

SALVATION ARMY MOTHERS HOSPITAL Lower Clapton Road, E.—J.R.M.O. (female) Salary £80 p.a.

SHERBURY ROYAL SALOP INFIRMARY—R.H.S. (male unmarried) Salary £160 p.a.

SIMLA MEDICAL COUNCIL OF INDIA—Secretary Salary Rs 1,200-75 1 500 per mensem.

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL—(1) Senior H.S. Salary £200 p.a. (2) H.P. (3) H.S. (4) Resident Anaesthetist and H.S. to the Ear Nose and Throat Department (5) C.O. Salaries £150 p.a. each Males, unmarried.

STIRLING DISTRICT MENTAL HOSPITAL Larbert—Third A.M.O. (female) Salary £250 p.a.

STOCKTON-ON-TEES DURHAM COUNTY MENTAL HOSPITAL—Locum tenent A.M.O. Salary £1 1s per day.

STOKES-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.

STROUD GENERAL HOSPITAL—R.M.O. Salary £160 p.a.

SURREY COUNTY COUNCIL—Whole time Resident Medical Superintendent (male) for Botleys Park Colony near Chertsey Salary £1 000-£50 £1 175 p.a.

SWANSEA GENERAL AND EYE HOSPITAL—C.O. (male unmarried) Salary £150 £175 p.a.

SWINDON AND NORTH WILTS VICTORIA HOSPITAL—(1) H.P. (2) H.S. Males. Salaries £150 p.a. and £125 p.a. respectively.

TUNBRIDGE WELLS KENT AND SUSSEX HOSPITAL—H.S. (male) to the Ear Nose and Throat Department Salary £150 p.a.

WALLASEY VICTORIA CENTRAL HOSPITAL—J.H.S. (male) Salary £150 p.a.

WEST SUFFOLK COUNTY COUNCIL—Assistant County M.O. and Assistant School M.O. Salary £500-£25 £700 p.a.

WHITEHAVEN AND WEST CUMBERLAND HOSPITAL—H.S. (female) Salary £150 p.a.

WOVERHAMPTON COUNTY BOROUGH—R.A.M.O. (male unmarried) for New Cross Hospital Salary £200 p.a.

WOVERHAMPTON ROYAL HOSPITAL—H.S.s (unmarried) Salaries £100 p.a. each.

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill F.E.—(1) Surgical Registrar Honorarium £100 p.a. (2) Three Hon Anaesthetists.

WORTHING HOSPITAL—H.S. (male) Salary £130 p.a.

CERTIFYING FACTORY SURGEONS—The following vacant appointments are announced. *Pewsey* (Wiltshire) Redcar (Yorkshire North Riding). Applications to the Chief Inspector of Factories Home Office, Whitehall S.W.1 by May 11.

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings.

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 49 50 51 52 53 54 55 59 and 60 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 56 and 57.

APPOINTMENTS

KERR A. K. M.R.C.S. L.R.C.P. Admiralty Surgeon and Agent for St Ives.

ODLUM DONIS M., M.R.C.S., L.R.C.P., D.P.M., Honorary Psychiatrist to Psychiatric Department, Elizabeth Garrett Anderson Hospital, Honorary Senior Psychiatrist to Department for Nervous Disorders Royal Victoria and West Hants Hospitals Bournemouth co-opted member of Mental Hospitals Committee, London County Council.

LONDON COUNTY COUNCIL—The following appointments are announced at the hospitals and institutions indicated in parentheses. *Medical Superintendents* William Gunn, M.B., B.S., D.P.H. (North Western) J. McN. Milloy F.R.C.S. (Archway), H. O. West, M.D. F.R.C.P., D.P.H. (Queen Mary's, Carshalton). *Divisional Medical Officer* R. G. Henderson M.D., D.P.H. (Central Administrative Staff). *Deputy Medical Superintendent Grade I* J. P. Aiken, M.B. B.Ch. (Dulwich). *Deputy Medical Superintendents Grade II* J. C. Evans, M.R.C.P. (Bethnal Green). *Medical Officers Grade I* D. Wilkie, M.D. F.R.C.S. (St Pancras). R. A. V. Lewys Lloyd M.B. B.S., D.P.H. (St Nicholas). *Senior Assistant Medical Officers Grade II* A. Wilkie M.B., Ch.B. (Heatherwood), R. A. Hill F.R.C.S. (St Charles), R. G. Thomas F.R.C.S. (St George-in-the-East), A. F. R. Dewar M.D. (St Stephen's), Elizabeth M. Moore M.B. B.Ch. (Mile End). *Assistant Medical Officers Grade I* J. B. Arthur, M.B., Ch.B. and T. F. R. Griffin F.R.C.S. (Bethnal Green), A. K. Boyle M.B. Ch.B. (St Peter's), T. A. Fraser M.D. (Mile End), G. Melton, M.D. (Lewisham), O. A. Savage M.R.C.S. L.R.C.P. (Grove), J. C. Hogarth, M.B., Ch.B. (Eastern), R. W. Nichol, M.R.C.S. L.R.C.P. (St Charles), J. V. Osborne M.D. (St Mary Abbots), G. Muzels, M.B. Ch.B. (Dulwich), F. R. Leonard F.R.C.S. (St Algece), C. Holson, F.R.C.S. (Lambeth), D. J. Bradley M.B., B.Ch., and Elizabeth B. Kay M.B. Ch.B. (Queen Mary's Carshalton), Margaret F. Coveney, M.B., Ch.B. (White Oak). *Assistant Medical Officers Grade II* D. C. Clark M.B. B.S. and E. Blair M.D. (St Mary Islington), Mary E. Nevin, M.B. B.Ch. (White Oak), Elspeth W. Smellie B.M., B.Ch. (Queen Mary's Carshalton), Kathleen M. N. Vickers L.R.C.P. (Norwood Children's), E. A. E. Palmer M.B. B.Ch. (St Andrew's), Evelyn E. Mitchell M.B. Ch.B. and Katharine C. Rogers, M.R.C.S. L.R.C.P. (St Giles), Mary H. Mayeur, M.D. (St James), H. Baker M.B. Ch.B. and T. M. Smith, M.B. Ch.B. (Bethnal Green), P. G. Dowling M.B., B.S. and P. A. Byrne M.B. Ch.B. (Lambeth), A. L. W. Bell M.R.C.S., L.R.C.P. (Queen Mary's Sidcup), G. Rogers, M.R.C.S. L.R.C.P. (St Peter's). *Temporary Visiting Medical Officer (Part time)* F. R. Martin M.D. D.P.M. (Sutton Training Centre).

CERTIFYING FACTORY SURGEONS—F. E. Higgins M.R.C.S. L.R.C.P., for the Sudbury District (Suffolk). O. Pitt M.R.C.S., L.R.C.P., for the Swinton District (Lancashire).

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue.

BIRTH

REED—On April 10 at Batu Gajah F.M.S. to Penelope wife of Dr J. G. Reed a son.

MARRIAGE

WHITEHEAD-CHAPMAN—On April 8 1937 at St Paul's Church, Mill Hill James Edward son of the late John Kay Whitehead of Royston Lanes and Mrs Whitehead to Marjorie Beatrix younger daughter of Charles W. Chapman M.D. M.R.C.P., and Mrs Chapman of Highwood Coombe Mill Hill N.W.7.

DEATH

PHILIP—On April 21 at 45 Charlotte Square Edinburgh Elizabeth wife of Sir Robert Philip M.D. F.R.C.P. (Please no flowers).

ENDOCRINES IN THEORY AND PRACTICE

This article is one of a series on Endocrinology contributed by invitation

THE PARATHYROID GLANDS

BY

DONALD HUNTER, M.D., F.R.C.P.

The parathyroid glands are the smallest known endocrine organs in the body. Usually there are four glands, a superior and an inferior on each side but in about 7 per cent of subjects five or six are found, the additional glands being distributed equally between the upper and lower positions. The superior glands are found on the middle third of the posterior border of each lateral lobe of the thyroid, and the inferior glands are placed very close behind the lower pole. About 10 per cent of parathyroid glands are within the thyroid capsule, but it is very rare indeed to find them buried within the substance of the gland. In 22 per cent of subjects one or more parathyroids occur in the upper pole of the main thoracic thymus or its involuted remains but in about only 1 per cent of subjects is the gland actually within the thorax. A normal parathyroid has been found as low as 11 cm beneath the lower pole of the thyroid embedded in the thymus opposite the auriculo-ventricular groove. A normal parathyroid has been observed above the level of the upper pole of the thyroid in the carotid sheath 2 cm below the bifurcation of the common carotid artery.

The colour of the parathyroid glands is pinkish- or brownish yellow contrasting sharply with the deep red brown of the thyroid. The normal glands are always difficult to distinguish at operation. After partial thyroidectomy identification of parathyroid tissue in the thyroid removed is very difficult and an experienced surgeon may prove to be correct only in 5 per cent of cases when checked by histological methods.

In adults over 20 the average weight of the four parathyroid glands together is 132 mg but weights varying from 66 to 388 mg have been recorded. The average size in persons over 20 years of age is 6.5 by 3.5 by 1.5 mm the lower glands being slightly larger than the upper and the female glands rather larger than the male. No normal gland ever exceeds 4 mm in thickness but occasionally a length as great as 15 or even 20 mm is encountered. Corresponding to this elongation the other dimensions of such glands are usually small—that is they are long narrow and thin (Gilmour and Martin 1937).

Histologically two types of cell are readily distinguished—the oxyphil and the principal. There are sub-varieties according to the depth of staining. The two types do not appear to be of distinct origin or nature but rather to represent conditions of special activity. It is not known which cell gives rise to the active substance on extraction of the gland.

The Hormone

The clinical use of the active principle of the parathyroid glands is dependent upon its marked influence on calcium and phosphorus metabolism. Its physiological effects are to raise the blood calcium and lower the blood phosphorus possibly to increase the ionized calcium in the blood and to increase the calcium and phosphorus excretion in the urine. The calcium for this increased

demand comes either from the stores of calcium salts in the bones or from a large amount of ingested calcium salts (Aub, 1929). Parathyroid extract is obtained from the fresh parathyroid glands of healthy domesticated animals used for food by man. The glands are freed from gross fat and connective tissue ground and extracted with hydrochloric acid. The aqueous extract of the active principle is purified to make it suitable for parenteral administration and is sterilized by heating. The preparation is usually sold in 5 ccm vials capped with rubber diaphragms, and containing 100 units in each ccm. The *British Pharmacopoeia* includes no preparation of the hormone.

There is no standard for parathyroid extract and the unit is based on the rise in blood calcium produced by injecting the extract either into normal dogs or into dogs from which the parathyroid glands have been removed. The unit first adopted was defined as one hundredth part of the amount necessary to raise the blood calcium of a dog weighing 20 kilogrammes by 5 mg per 100 ccm. The *U.S.P.* XI (1936) reduced the strength of the unit to one-fifth of its previous potency. The doses referred to in this paper are expressed in *U.S.P.* units. Confusion as to the potency of parathyroid preparations is bound to remain until a standard preparation becomes available. Standardization is being attempted (1) by estimating the rise in the urinary calcium of groups of rats and (2) by employing the awakening effects of parathyroid extract on the narcosis produced in mice by injections of magnesium sulphate (Dyer 1936). These methods involve a comparison of the potency of preparations of unknown strength with those of a standard preparation. The results give promise of a suitable method of preparing a stable powder which may serve as a standard until the pure hormone has been isolated. The following preparations are to be obtained: parathyroid extract—Lilly, N.N.R. (parathormone), parathyroid extract—Squibb, N.N.R., paroidin N.N.R. Parke Davis and Co. and euparitone Allen and Hanbury's.

Parathyroid extract is destroyed in the alimentary tract and is therefore worthless when given by mouth. Some commercial houses manufacture parathyroid tablets but of such firms it may be truly said that their enterprise outruns the discretion of their scientific advisers.

DOSAGE

Like other hormones parathyroid extract has a greater effect when it is needed, thus 75 units a day may be enough to raise the serum calcium from 4.5 to 7 mg per 100 ccm in a case of low-calcium tetany. In normal individuals it may require 500 units a day to raise the level from 10 to 12 mg per 100 ccm. Susceptibility however varies greatly and a dose which will elevate the serum calcium considerably in one individual may have little effect in another. The dosage must be regulated by estimations of the serum calcium repeated every few days until the new level becomes constant. If the doses given are too small this can of course be detected by persistence of the tetany. A serum calcium level above 12 or 13 mg per 100 ccm is never desirable. Since hypercalcaemia gives few clinical indications until a level of about 14 mg per 100 ccm is reached the need for repeated estimations will be appreciated. Where hypercalcaemia persists less

of appetite nausea, and a sense of fatigue appear. Repeated doses of parathyroid extract are more often effective than a single large injection. It is therefore wiser to give the extract twice daily even though the injections may cause some induration and pain.

PARATHYROID OVERDOSAGE

When given in excess parathyroid extract causes the inorganic phosphorus in the blood to rise as well as the calcium. The efficiency of the kidneys is interfered with and nitrogenous waste products accumulate in the tissues. Owing to the large excretion of calcium and phosphorus in the urine renal calculi may be formed, and metastatic calcification may occur in the kidneys, stomach, and lungs. The activity of osteoclasts is increased and this leads to excessive resorption of bone with osteoporosis and osteoclastic (giant celled) tumours. The activity of osteoblasts is also increased but the apposition of new bone cannot keep up with the destruction of old (Thomson and Collip 1932).

TIME RELATION

The parathyroid hormone injected intravenously has a latent period of approximately four hours, after which the blood calcium rises and therapeutic effects begin. These effects last about twenty hours following a single injection. In emergency it must be remembered that calcium salts when injected intravenously exert an immediate effect, which is often prolonged for two hours or more. The chief disadvantage of the parathyroid extract now available is the gradual loss of its effect. After injections have been repeated for several months an apparent immunity is established and then 750 units may have no result in a patient who originally responded well to 50 units. This characteristic limits the use of parathyroid extract to acute conditions in which the treatment is to be continued for weeks rather than for months.

THE PARATHYROTROPIC PRINCIPLE OF THE PITUITARY

It has been reported recently that the urine of patients with hyperplasia of the parathyroids contains a substance which will induce hyperplasia in the parathyroids of normal rabbits. It has also been claimed that parathyroid enlargement may be produced in the rat by the administration of a pituitary extract; this is attributed to a parathyrotropic hormone. Similarly an increase in blood calcium in rabbits has been reported after the administration of a parathyrotropic pituitary extract. The additional claim is made that this is due to the stimulation of the parathyroids since the extract has no effect after parathyroidectomy. It therefore seems possible that the activity of the parathyroid bodies is directly controlled by the pituitary.

Hypoparathyroidism

Parathyroid insufficiency occurs in clinical medicine both as post-operative tetany following operations upon the thyroid or the parathyroids and as spontaneous hypoparathyroidism which is analogous to myxoedema. Both conditions are rare. Parathyroid insufficiency results in lowering of the serum calcium with an associated rise in the plasma inorganic phosphorus, diminished urinary excretion of calcium and phosphorus and the clinical picture of tetany.

TETANY

As its name implies tetany is a condition characterized by a tendency of muscles to go into a condition of painful prolonged spasm. This commonly involves the muscles of the forearms and hands, the larynx, less fre-

quently the muscles of the legs and feet, and even the oculomotor muscles. Sympathetic motor fibres may be involved, resulting in spasm of the cardia, pylorus or any smooth muscle. Sensory nerves are also affected, and paraesthesia of the forearm and hand often of uniform distribution is the most constant symptom of tetany. A similar tingling sensation may be felt in the legs especially in the distribution of the sciatic nerve. In the crises of tetany the patient may complain of girdle sensations of a feeling of a great weight on the chest and of general numbness. The central nervous system may be affected, drowsiness is common and twitchings followed even by convulsions and coma may occur. Even when there are no major manifestations of tetany between attacks the patient may be nervous, self-centred, introspective, difficult to handle, hysterical, emotional, or depressed.

The underlying condition appears to be a decrease in available calcium ions usually associated with a serum calcium level below 7 mg per 100 ccm. The plasma phosphorus figure rises to 5 mg per 100 ccm or higher. There is a diminished excretion of calcium and phosphorus in the urine. Though in severe crises the serum calcium usually is between 4 and 6 mg per 100 ccm, the severity of the symptoms does not vary in proportion to the level of the serum calcium figure. Probably it varies inversely with the number of calcium ions in the body fluids but at present there is no means of measuring this. The symptoms generally become mild or disappear when the serum calcium rises above 8 mg per 100 ccm.

The recognition of tetany is easy during an attack. There is flexion of the metacarpophalangeal joints with extension of the interphalangeal joints, the thumb and little finger being drawn into the palm. There may be flexion at the wrists and elbows and slight pronation of the forearm. The carpal spasm is characteristic and its association with tingling of the arms and sometimes of the legs with or without hoarseness or stridor, completes the picture. The hysterical patient who knows a little about tetany is as a rule unaware of the constancy of the paraesthesia and can seldom reproduce true carpal spasm. The diagnosis can be confirmed by two clinical tests.

1 *The Chvostek Sign*—This consists of twitching of the upper lip or even of one half of the face and is elicited by tapping the facial nerve just in front of and below the ear. It is not an absolute sign of tetany, for it may be demonstrated occasionally in healthy people.

2 *The Trousseau Sign*—This consists of typical carpal spasm brought on by pressure on the upper arm. It is best demonstrated by placing a sphygmomanometer bag on the arm and inflating it to a figure just above the systolic blood pressure. Within a few seconds or up to one minute spasm appears and gradually increases. The spasm becomes very intense in patients with tetany so that the thumb can be separated from the palm only with difficulty. In simulated tetany it is relatively easy to pull the thumb away from the palm and to demonstrate voluntary contraction on the part of the patient.

CATARACT

Lesions of ectodermal tissues may arise in patients suffering from long-standing tetany. Cataract, brittleness and ridging of the nails, loss of hair and defects in the enamel of teeth giving rise to several transverse ridges, one above the other—all these defects in ectodermal tissues have been described in tetany. None of these changes is common but the first is met four times as frequently as

any of the other three. The association of cataract with tetany was first recorded about fifty years ago. It has been described in endemic tetany, post-operative tetany, rickets and spontaneous hypoparathyroidism. It may appear even in young people and may require operative treatment. It is now possible by means of the slit lamp to detect opacities in the lens in cases in which no visual disturbance exists; neither does it follow that such a patient will necessarily develop such disturbance later.

POST-OPERATIVE TETANY

In countries where operations for endemic goitre are common post-operative tetany is more frequently met with than here, but now that radical thyroidectomy is becoming a common practice, especially in exophthalmic goitre, it is probable that more cases of tetany will be seen. Where post-operative tetany supervenes after a subtotal thyroidectomy it usually does so in from one to four days. It is an uncommon complication, and is generally found in patients who have had a previous operation upon the thyroid gland. The patient begins to feel tinglings in the arms and hands on the second or third day. This tends to become more intense and more widespread on the fourth day, when attacks of carpal spasm, perhaps associated with hoarseness or stridor, appear. Between attacks which may last from a few moments to an hour or more the patient suffers from persistent paraesthesia, most marked in the arms, often from stiffness of the hands or mild carpal spasm, and perhaps from hoarseness. In most cases after the initial rather sudden onset the symptoms moderate and gradually disappear, never to return. Here there is probably pressure due to the trauma at the site of operation which together with oedema and blood clot causes temporary interference with the blood supply of the glands. There are, however, severe cases which go on to chronic tetany, and here it is probable that the greater part of the parathyroid tissue has been removed at operation. In the state of chronic tetany paraesthesia is by far the most constant symptom. It becomes worse when the patient is worried or tired. There may be nervousness, lack of energy, weakness and fatigue. Superimposed upon this chronic state of ill health are crises of carpal spasm. Some patients are almost incapacitated by prolonged spasms with severe paraesthesia and hoarseness. In others the symptoms are very mild and the spasms infrequent. In all cases the condition is liable to be reactivated by acute infection, malnutrition, unhappiness or fatigue.

Tetany often arises after removal of a parathyroid tumour in hyperparathyroidism. In some 7 per cent of cases it has proved fatal.

SPONTANEOUS HYPOPARATHYROIDISM

Spontaneous or idiopathic hypoparathyroidism is a very rare disease. It affects persons of either sex and at any age. The onset is gradual, the first symptoms being numbness, paraesthesia, weakness and loss of energy. Later attacks of tetany supervene and the course of the illness is similar to that of post-operative tetany. The serum calcium may be as low as 5 mg. per 100 ccm. and the plasma phosphorus as high as 10 mg. Lenticular opacities may occur and advance to cataracts, blindness (Aldrich and Lippich, 1929).

Differential Diagnosis

Tetany may result from a number of causes including parathyroid deficiency, nutritional disturbances and excess. Most cases met with in this country have nothing to do with the parathyroid. The diagnosis of

parathyroid tetany is easy when the syndrome arises after a subtotal thyroidectomy. Spontaneous parathyroid tetany is to be recognized by the gradual onset of carpopedal spasm associated with a low serum calcium and a high plasma phosphorus. Three disturbances of nutrition may produce tetany—namely, rickets, osteomalacia and idiopathic steatorrhoea. In rickets and osteomalacia characteristic changes in the bones are present, and in idiopathic steatorrhoea the patient passes large fatty stools. The serum calcium is low owing to defective absorption. The plasma phosphorus instead of being high as in parathyroid tetany is low. A large number of cases of tetany are due to alkalosis. In these the serum calcium is normal, but there is thought to be a decrease in available calcium ions. Attacks are usually of short duration, although they may be recurrent. Three types are recognized, and may be diagnosed because of the associated symptoms:

- 1 Following upon over breathing and rapid removal of carbon dioxide this may arise after emotional shock in hysteria and in disease of the upper respiratory tract. It is the commonest form of tetany met with in this country.

- 2 In pyloric or high intestinal obstruction following upon repeated vomiting, with loss of hydrochloric acid, dehydration and alkalosis.

- 3 After overdosage with alkalis especially in the treatment of peptic and chronic gastric ulcer.

Treatment of Parathyroid Tetany

Where the blood supply of the parathyroids has been damaged during an extensive thyroid operation post-operative tetany may occur in an acute form and complete recovery may take place even without treatment. It is the chronic form which may be serious. The patient should be given a diet of moderately low phosphate content: meat, yolk of egg, and milk being allowed only once a day. Often this diet must be supplemented by calcium salts. Calcium lactate can be given with the food in doses up to 60 grains six times daily. The equivalent dose of calcium chloride is 30 grains. Being potentially an acid salt it is more effective in relieving tetany than is calcium lactate or calcium gluconate, which have, however, the advantage that they are less apt to upset the stomach. Many patients are almost completely relieved by calcium administration which forms the basis of all treatment.

In some cases the dose of calcium lactate or chloride may be reduced while the patient continues on a low phosphate diet. In others, while large amounts of calcium salts are taken it may be necessary to give calcium chloride intravenously or to employ parathyroid extract from time to time. In a severe attack of tetany the intravenous administration of 20 ccm. of a 5 per cent solution of calcium chloride relieves symptoms in a few minutes. It is an excellent emergency measure. The solution must be injected slowly and care must be taken that none of it escapes into the subcutaneous tissues for necrosis and ulceration may result. The patient feels a sense of warmth all over the skin while the calcium chloride is being given. The muscles in spasm relax, paraesthesiae disappear and a feeling of greater well-being returns. Although the serum calcium again quickly falls to a low level the patient will commonly feel fairly well and free from tetany for hours and even days after use. If spasms recur the injection should be repeated.

Finally there are cases where so much parathyroid tissue has been damaged or destroyed that the use of the hormone is essential. It is best to inject 30 units of parathyroid extract intramuscularly, repeating the dose

up to twice or even four times daily. At the same time calcium lactate should be given by mouth. In emergency such treatment, because of its slower effect, is not so valuable as the intravenous administration of calcium chloride. But since the blood calcium may remain raised for twenty hours after a single injection of parathyroid extract it is a valuable treatment when severe tetany recurs frequently. Its use should always be controlled by estimation of the serum calcium. Parathyroid extract is an unsatisfactory therapeutic agent to say nothing of its cost. When administered over long periods of time it may become quite inert and when this appears it may be impossible to save the patient. In such a case vitamin D should be given in the form of calciferol, of which very large doses may be prescribed. One patient received more than 30 million units in fifty days, and showed no trace of ill effect. There was prolonged benefit and the blood calcium remained normal for the next three months without any further treatment. A fraction of irradiated ergosterol called A T 10 has also proved valuable in treatment. This fraction does not contain the antirachitic factor, but resembles vitamin D in having the specific effect of raising the calcium content of the serum. The mode of action of this substance is not quite clear, but its effect, though slow in developing, appears to be prolonged. Doses as large as 5 ccm on alternate days have been taken by mouth. Manufacturing firms put A T 10 only at the disposal of clinicians who are able to have serum calcium estimations done regularly, for overdosage may lead to a dangerous hypercalcaemia with metastatic calcification of certain organs. Parathyroid grafting is of no value even though homoplastic transplants be employed.

If there is hypothyroidism thyroid extract should be prescribed in adequate amounts usually 2 or 3 grains a day. It is important that the patient be kept in the best possible state of mental and physical health. Malnutrition, infection, fatigue, worry, unhappiness all aggravate the condition. If foci of infection are found they should be removed when possible. Patients with tetany need interest, increased rest in a quiet environment, adequate sleep and encouragement to continue at work. There is a tendency for the patient to become introspective, discouraged and entirely without hope. Active interest and encouragement on the part of the physician does much to prevent and relieve such mental states and the occasional use of small doses of luminal will help. Perhaps the commonest error in the treatment of tetany is to mystify and frighten the patient and relatives by regarding the condition as grave merely because it is uncommon. In 1861 Armand Trousseau wrote: 'This complaint is in general of no gravity, although it sometimes frightens the patients who suffer from it and misleads medical men who do not recognize it.'

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(To be continued)

RADIOTHERAPEUTIC DEPARTMENTS IN GENERAL HOSPITALS

MINISTRY OF HEALTH MEMORANDUM

The Ministry of Health has published this week a short memorandum—the seventy ninth of its series of reports on public health and medical subjects—on the provision of radiotherapeutic departments in general hospitals. Sir Arthur MacNalty in a prefatory note states that it was a consideration of the extent to which the existing radium centres supply the needs of the country that suggested the memorandum. It is clear, he adds, that much of the population is still indifferently served in this respect, especially in areas which lack voluntary general hospitals suitable for the maintenance of a treatment centre.

The memorandum, which is written by Lieut Colonel A B Smallman, a medical officer of the Ministry, discusses the provision to be made in hospitals which set out to afford adequate treatment of cancer patients. Such treatment, whether operative or radiotherapeutic, requires the resources of a fully equipped hospital, but owing to the characteristics and cost of radium and of x-ray installations and the need for careful clinical observation supported by physical and biological experiment the addition of radiation as an alternative or supplement to surgery brings with it the necessity of limiting radiation methods to a comparatively small proportion of hospitals.

Economic Size of Hospital for Radiation Facilities

An attempt is made to estimate the number of beds which will ensure full economic use of equipment for the radiation treatment of cancer. In a 100 bed hospital it is considered that about 120 cancer patients will be admitted annually. Of these about 40 per cent will be affected in those organs, such as the uterus, mouth, skin and breast which are most amenable to radiation alone or combined with surgery. Such a hospital would be too small for reasonable use of radiation facilities. A 300 bed hospital intended for what may be called 'acute' cases may be expected to receive yearly about 200 cancer patients affected either in accessible organs or in other situations where irradiation is given with varying degrees of frequency and success and in such a hospital radiation apparatus would be in full and regular use.

In England and Wales (outside London) twenty three general voluntary hospitals have 300 or more beds, of which number eleven possess radium on loan from the Radium Commission and ten have their own stocks, and nearly all of them have deep x-ray therapy apparatus. Of eleven hospitals with 250 to 300 beds, three have radium on loan and five have their own stocks of less than 1/2 gramme; four have deep x-ray apparatus. A number of smaller hospitals have supplies of radium of varying and sometimes quite inadequate amounts.

From the experience of hospitals with about 300 beds it appears that the necessary radiation equipment should consist of about 1 gramme of radium and two or three deep x-ray therapy tubes working at 200 to 250 kilovolts. The choice of radium containers is best left to the clinician concerned and the nature and disposal of the x-ray equipment will again depend upon the views and experience of the officer in charge. With the most

Dr D H Giffen of Enfield has been elected chairman of council of the National Federation of Personal Health Associations. The annual meeting and conference of the Federation will be held at British Medical Association House Tavistock Square, WC, on Thursday, June 24.

¹ Cancer Memorandum on Provision of Radiotherapeutic Departments in General Hospitals. By A B Smallman CBE, DSO MD HM Stationery Office (7d net).

modern types at least two tubes will be necessary keeping in view the probability that the number will need to be increased eventually

Lay out Plants

It is pointed out that the radiotherapeutic department should be an integral part of the hospital rather than a specialized annexe. From the standpoint of diagnosis a close connexion is necessary with the pathological x-ray diagnostic and medical services and from that of treatment with the surgical service. The grouping of apparatus will sometimes be governed by the convenience of the medical and subordinate staff, as for example, when the same person is in charge of both the diagnostic and the therapeutic work. Radiation is used for out-patients as well as in patients therefore it is advantageous for the department to be on the ground floor and with two means of entry and exit one for each of these classes of patients. Another consideration which determines the ground floor is the great weight of the x-ray installation.

In appendices to the memorandum a suggested lay out is given for a new radiotherapeutic department and another for the conversion of an existing hospital ward into such a department. The following points are stressed: the room where x-ray treatment is given should be cross ventilated; it should allow patients of both sexes to be treated simultaneously without being in view of each other by means of curtains and reds a room containing two tubes may be divided into sections so that the two patients can be seen from one observation table. (The new viewing system of spherical mirrors now being constructed at the National Physical Laboratory to enable patients to be kept under observation in such a way that no stray radiation reaches the observer should be of interest in this connexion.) It is recommended that the observation corridor be so placed as not to form an ordinary route from one part of the building to another thus avoiding one cause of distraction to the nurse observer. The power room may be so placed that with a glass partition the nurse may have under observation the electrical apparatus as well as the treatment couch. One examination room should be larger than the others so as to admit of minor surgery and special examinations. A rest room for out patients should be provided. A laboratory for the physicist and another for the making of radium applicators are desirable. The radium safe room should be convenient of access for those authorized to use it and as distant as possible for the safety of patients and staff.

Organization of the Unit

The team or unit would comprise experts in each of the three branches of treatment—operative surgery, radium and x-rays—as well as a radiological diagnostician a gynaecologist a pathologist, a physicist and others. The director would be an expert in one or both radiation methods, and preferably one whose previous experience had been surgical. A follow up system would be established.

The hospitals which have full facilities correspond (excluding London) with the national and regional radium centres, together with the eighteen hospitals recognized by the Radium Commission all are voluntary hospitals in large aggregations of population. How far other hospitals can avail themselves of the provision at these centres must depend upon the number of patients for

whom they cannot provide the necessary treatment, their distance from the centre and other factors. Not all patients need be in-patients during the whole of their treatment, some in whom the disease affects the skin, may not need admission at any stage. An arrangement might be made whereby one member of the unit at the centre hospital visited periodically the affiliated hospitals for consultation as to whether such facilities as they possessed sufficed for the needs of a particular case or whether transference to the centre with its full facilities was necessary. For the detailed discussion of difficulties arising from centralization of radiation treatment reference may be made to a paper by Dr Ralston Paterson.¹

In addition to appendices showing the two lay outs mentioned, the fourth revised report of the British X-Ray and Radium Protection Committee published in 1934 and the instructional code prepared by the Radium Commission on the care and custody of radium are reprinted in the memorandum.

TRAVELLING FELLOWSHIPS IN MEDICINE

The Medical Research Council invites applications for six Rockefeller Medical Fellowships for the academic year 1937-8.

These are provided from a fund with which the Council has been entrusted by the Rockefeller Foundation of New York. They are intended for British graduates who have had some training in research work in clinical medicine or surgery or in some other branch of medical science and who are likely to profit by a period of work at a centre in the United States or elsewhere abroad before taking up positions for higher teaching or research in the United Kingdom. The stipend will ordinarily be at the rate of £400 per annum for a single Fellow and of £450 per annum for a married Fellow. Travelling expenses and some other allowance will be paid in addition.

The Council also invites applications for four Dorothy Temple Cross Research Fellowships in Tuberculosis which are awarded from a special endowment of which the Council acts as trustee. The object of these Fellowships as defined in the trust deed is to give special opportunities for study or research to suitably qualified British subjects of either sex intending to devote themselves to the advancement by teaching or research of curative or preventive treatment of tuberculosis in all or any of its forms. The stipend will ordinarily be fixed at the rate of £400 per annum with travelling expenses in addition.

Completed applications for Fellowships of either type must be lodged with the Council not later than June 1 1937. Further particulars and forms of application are obtainable from the secretary, Medical Research Council, 38 Old Queen Street, Westminster, S.W.1.

¹ *British Medical Journal* December 26 1936 p 1316

The twenty sixth annual general meeting and conference of the British Waterworks Association will be held in London from June 22 to 26 at the County Hall and elsewhere. Lieut-Colonel Harold Will open a discussion on present day aspects of the purification of the London water supply. Professor P. A. Buxton of the London School of Hygiene and Tropical Medicine will describe the work of the Freshwater Biological Association of the British Empire and attention will also be drawn to the problem of prevention of the pollution of rivers. Visits will be paid to various institutions belonging to the Metropolitan Water Board and a demonstration of water purification control methods at the Board's Laboratories has been arranged. A programme of the conference may be had from the secretary of the British Waterworks Association, Grand Buildings, Trafalgar Square, W.C.2.

Reports of Societies

THE BLADDER IN SPINAL INJURIES IN WAR

At the annual meeting of the Section of Urology of the Royal Society of Medicine on April 23 with Mr BERNARD WARD in the chair Sir JOHN THOMSON WALKER opened a discussion on the bladder in spinal injuries in war. He thought it important in view of the possibility of another war, to recall the experiences of the past. Anyone who had to deal with such cases during the war of 1914-18 would agree that the treatment of bladder conditions due to spinal injuries constituted one of the surgical failures.

It was well established Sir John Thomson Walker continued that destruction of the supralumbar cord was immediately followed by complete retention of urine, later the lumbar centre regained its tone and involuntary reflex micturition became established. In a large number of the cases which came under his care these two stages were clearly defined. The duration of the stage of retention varied from twenty-four hours up to in one case eighteen months. There was a transition period during which the bladder was partly distended with urine but contracted and gradually increased in power until the residual urine was small in amount or absent. It was taught before the war that injury or destruction of the lumbar centre and of the cauda equina was followed by complete paralysis of the bladder but experimental work on dogs had shown that the spinal cord could be removed and micturition would return.

Urinary Infection

In a recent paper Mr Geoffrey Jefferson had stated that in the series of cases of injury to the spinal cord under his care no patient who might otherwise have recovered had died of urinary infection. This was in striking contrast to what was found during the war. At the King George Military Hospital from May 1915 to the end of 1916 he examined 339 cases of spinal injury in which bladder function was affected. The cases arrived from fourteen to twenty one days after the injury. The stay in hospital was from one to two months and the patients who survived were drafted to such institutions as the Star and Garter Home, where there were sixty-five beds occupied almost exclusively with cases of spinal injury about 90 per cent of them having serious infections of the urinary tract. Of the 339 patients at the Military Hospital 160 (47.2 per cent) died from urinary infection within six or eight weeks and at the Star and Garter nineteen out of 111 patients (17 per cent) died from the same cause. He estimated that the eventual total death rate due to urinary sepsis in spinal cases was 80 per cent. It was a lamentable tale of surgical failure. Immediately after the injury and before arrival at the hospital the patient was catheterized intermittently and it was septic catheterization which had led to the high mortality. Between the passages of the catheter the bladder became distended with grossly infected urine and the infection passed to other parts of the renal tract.

Methods of Treatment

Some of the methods of treatment to be considered had been tried in the war but the organization was then imperfect, and they were not carried out consistently but were changed according to the whim of the medical officer in charge. During the phase of complete retention the problem was whether the distended bladder should be emptied and if so how while during the stage of periodic reflex micturition the problem was the method of collecting the urine and the treatment of the sepsis if present.

The first method of treatment was non interference. It had been part of the surgical creed that a bladder dis-

tended with urine from obstruction or paralysis must be emptied by the surgeon at the earliest time possible and it came almost as a shock to the orthodox that any doubt as to its soundness should be raised. The spectres that lay behind non-interference were the fear that the bladder might rupture from over-tension or that from too long stretching the muscle might not regain its contractile power. It had been said also that there might be shock from distension of the bladder but this was not so with the slow distension of the paralysed bladder. The effect on the renal structure and secretion however had to be considered and without definite evidence that there was no deleterious effect on bladder function or renal structure and secretion he did not consider the method of non interference one to recommend for universal adoption though at the same time he felt that something of a boggy had been made of the distended bladder.

Next came the method of expression of the bladder contents by pressure or massage. As soon as possible after the injury the distended bladder was gently but firmly compressed and massaged through the abdominal wall with the object of expressing its contents a procedure repeated every four or six hours. In some cases this was quite easy in others difficulties arose. The contraction of the bladder sphincter was an obstacle for which a crop of remedies had been suggested including the giving of certain drugs. Sacral anaesthesia by injection through the sacral hiatus had been tried. It seemed hardly necessary to point out that instillation of anaesthetics into the prostatic urethra or the passage of metal instruments was as dangerous from the point of view of sepsis as the passage of the catheter. If one could accept the statement of some writers this was the safe method in their hands and was successful, but those writers saw only part of the clinical course of the cases. The method was entirely unsuited for cases where serious urinary sepsis had become established. Apart from the danger of rupture of the bladder wall massage of a distended bladder undoubtedly led to regurgitation of septic urine.

With regard to the indwelling or tied in catheter which had been passed at the earliest time possible after the injury and changed twice a week this method if used as a continuous drain had the great advantage over intermittent catheterization that it prevented the recurring distension of the bladder but if used with a clip to evacuate the bladder at a convenient time it was merely a variant of intermittent catheterization. Patients varied greatly in their toleration of the indwelling catheter.

Prophylactic Cystotomy

There remained the method of early or prophylactic cystotomy—prophylactic that is to say, against infection of the kidney not against cystitis. The method he described could be rapidly carried out and in peace time practice ensured a dry patient. He did not think that the objections carried very much weight. It was said to be difficult to get a watertight drainage that cystitis was certain to develop and that drainage of the bladder over any long period practically meant the abandonment of any attempt to establish automatic function. A method of cystotomy had been introduced by Mr Clifford Morson which was even simpler than the one he had practised and slightly modified he thought it would be suitable in these cases.

Of these various methods of treatment of a recently paralysed bladder that of the expression of urine was the simplest and was likely to avoid the urinary infections which caused a high mortality in the late war but more information was wanted as to the method of expression and massage. But he thought there was also a place for early suprapubic cystotomy simplified as it now was and that it should follow immediately on the failure of the expression method and be carried out before the onset of infection not postponed until the fatal train of sepsis was laid. There might be conditions in which it was

superior to the method of expression, but until additional information was available under conditions which admitted of proper management of the recently paralysed bladder the preference as between expression and immediate cystotomy could not be finally decided

Discussion

SIR ALFRED WEBB JOHNSON said that if an authoritative statement could be issued that in spinal injury a catheter should not be passed a great stride would be made towards improving the results. In the late war he succeeded in persuading the Red Cross to erect a hut in which were concentrated twenty such cases of spinal injury. It proved difficult to get hold of cases of virgin bladder for either at the casualty clearing station or in the ambulance train somebody was pretty sure to have insisted on passing a catheter. On the sixty-six cases on which they were able to concentrate both the expression method and non interference were carefully tried out. Neither method was perfect, but each was worth a trial. It soon became evident that the expression method must not be left to a heavy handed orderly and very seldom was to be entrusted to a nurse, it could be carried out sometimes by a well instructed sister. The great differences between bladders were illustrated immediately an endeavour was made to empty by expression, and yet if was possible at one time to walk into that hut of twenty beds and to see at the entrance twenty specimen glasses of urine all perfectly clear and free from infection.

MR KENNETH WATKINS said that it was clear from recent observation that the bladder could not be started working in the same way as movement in a limb for example was started. There was some sort of facilitation within the central nervous system which released the mechanism of the micturition reflex. With regard to urinary infection like Mr Jefferson whom Sir John Thomson Walker had quoted he had not seen a patient who had died from urinary infection but then he had not seen war time cases and there was possibly a difference between these and cases seen in civil practice. He gathered from Sir John Thomson-Walker that the majority of the war time cases were high spinal transections, the majority of the cases he had seen had been cauda equina lesions. MR JOHN EVERIDGE supported Sir John Thomson Walker's views as to the value of primary cystotomy, and described the case of a patient who was shot during riots in Paris in 1934 and on whom cystotomy had been carried out with a favourable result.

Management of the Undescended Testicle

At the same session of the Section of Urology Professor G GREY TURNER gave an address on the place of surgery in the management of the undescended testicle. He said that he had been brought up to believe that in the great majority of these cases it was better to deal with any hernia that was present and to make little or no effort with regard to the testicle. That was an impression still somewhat generally accepted though there was no justification for it. His renewed interest in the subject dated from the publication by Southam of his Hunterian Lecture in 1927 and the effect on his choice of method might be judged from the fact that during the eight years 1920-7 he did no orchidopexies and seventeen castrations, while during the four years 1929-32 he did twenty four orchidopexies and four castrations.

John Hunter stressed the underlying problem in his *Animal Economy* when he wrote "It is not easy to ascertain the cause of this failure in the descent of the testicle but I am inclined to suspect that the fault originates in the testicles themselves—a view commonly held at the present time. There was a good deal of evidence for the truth of both the following propositions: the testicle does not descend because it is not sufficiently developed; the testicle does not develop because it has not descended. From his own experience he was satisfied

that if a testicle was going to descend of its own accord after birth then it would almost certainly do so during the first three years of life. He was very sceptical of cases that came down after that period. In a good many cases in all probability the testicles were lying in the inguinal region, and the case was not one of non-descent but of ectopia.

Professor Grey Turner went on to show photographs of the after-results of some cases. One case was that of a man who had a double orchidopexy sixteen years previously and was now at the age of 31, already the father of three children. In some cases the results were not so satisfactory and it was on these relative failures that he chiefly dwelt. If the testicle could be got into the scrotum and be quite mobile it was almost certain that the testicle would develop but there were cases in which, even when the testicle was satisfactorily placed in the scrotum development did not come about. Such failures were not common but it was well to have the possibility in mind.

Age for Operation

As to the age of election for surgical intervention in these cases it was generally held that if the operation took place fairly early and the testicle was brought into the scrotum it had a better chance of development. He was not sure however that that was entirely correct. He thought that on the basis of what was known already of the results of hormone treatment the optimum age for which was probably about 9 that a patient would suffer in no way if the operation was deferred until he was 10. Perhaps the age 10 to 14 was the optimum time for surgical intervention. Surely it was just before puberty that the testicles like the other genital organs were ready for an outburst of activity and were more likely to develop.

If an associated hernia was giving trouble it was necessary to intervene but he was not sure they were wise in interfering merely because there was a hernia. If the hernia were left alone to develop up to the optimum time for carrying out the operation then probably the presence of that hernia and the gradual distension of the sac would encourage the descent of the testicle and might even have something to do with encouraging the testicle in its subsequent development. He had very little confidence in repeated operations for undescended testicle. The patient's best chance lay in the first operation. A second operation was not carried out with anything like the same facility or prospect of success.

If there was any special reason for doing so there was no objection in his opinion to operating very much later and he had even operated with great success on young men between the ages of 18 and 24. But at later ages, if one testicle was fully developed it was much more sensible to recognize that it was not worth while interfering too much. One fully developed testicle was enough and one should not be too particular about excising a testicle associated with a hernia when the prospects of its functioning seemed to be poor.

Association with Hernia

As for the association with hernia which had such a large bearing in determining the earlier operations although it was recognized that hernia was quite common with undescended testicle he did not think it was so common as might be supposed from the textbooks. At operations although a sac was found which was rather like a glorified tunica vaginalis he had often failed to demonstrate whether it was a hernial sac or not. The mobilization of the testicle was a most important thing but it was not the only important thing. He was really more than he had done in the past that possibly the methods used for fixation were though not equally important yet of great importance. He described with drawings how he had made a kind of scrotal bed on the affected side, and passing the suture through the body

of the testicle and through the scrotum had sutured to the thigh. He was satisfied that unless the mobilization was so good that one felt that the gland would lie in the scrotum even without fixation, the probability was that there was not enough fixation and that some other method should be adopted. The testicle in a pouch in the thigh would often develop completely and the result be extremely satisfactory.

Finally, Professor Grey Turner made a plea for more careful recording, and showed a suggested form of record. Surgeons in this field had analysed their results as comprising a satisfactory outcome in between 70 and 80 per cent of cases and failure in between 20 and 30 per cent. If the cases were likely to be helped by endocrine therapy this should certainly be undertaken.

Discussion

Mr McADAM ECCLES suggested that the term undescended testicle be avoided. An undescended testicle was one which was close up by the kidney—an abnormality occasionally seen but exceedingly rare. The imperfect migration of the testicle was the more common occurrence, and that was the subject of the discussion. He ventured to prophesy that if only the definite cause of non migration could be discovered surgery might be cast aside and the cases wholly given over to the endocrinologist. In surgery those interested in this subject had all deplored their failures. It had not always been recognized that it was one and the same cause—possibly a cause associated with the endocrines—which prevented both migration and development. In other words, there was not one cause for non migration and another cause for non development. In the cases in which he had had failure in the past he had not always put it down to his imperfect technique but rather to the fact that he was not dealing with the real cause which lay behind the non descent. He was quite sure that a real investigation of these cases would assist more than anything else in their better treatment in the future. Medical officers of public schools had special opportunities of carrying out these investigations.

Mr T W MIMPRISS gave particulars of operations for imperfectly descended testicle carried out at St Thomas's Hospital chiefly by the Keetley technique or some modification thereof. Good results had been achieved in about 90 per cent of cases—a good result meaning a testicle brought well down in the scrotum. A certain number of cases which had been admitted but not operated on had shown a spontaneous descent at about the age of 11 or later and he thought that was not very unusual. Since then he had written to the medical officer of a public school who dealt with boys aged 13 and over and he gave it as his opinion that the majority of undescended testicles came down spontaneously. That however was rather difficult to accept. He believed the only result of hormone treatment was to bring down testicles which if left alone would come down of their own accord.

Dr RONALD SMITH, medical officer of Rugby School gave particulars of a number of cases of imperfectly descended testicle including a group of boys aged from 7 to 13½ in whom the testicle had descended without any treatment whatsoever. He thought it was justifiable to say that at puberty there were certain biological changes going on which induced the testicle to descend. Every boy should be left until he reached puberty and then, if the testicle was not descended he should be given hormone treatment and if that did not avail surgical advice should be taken as to whether adhesions were present or not. In the group mentioned all the testicles which had descended spontaneously seemed to be normal save in one case in which a boy with an undescended testicle on reaching to a high shelf felt a sharp pain in his groin and it was then found that the testicle had descended, but was much smaller than the other. Pro-

fessor GREY TURNER suggested that with the help of school medical officers something in the nature of a communal census might be very useful on this subject.

FUNGUS INFECTION OF THE FEET

At a meeting of the United Services Section of the Royal Society of Medicine on April 12 Surgeon Commander J C SOUTER read what was described as a clinical note "but was in reality a comprehensive paper on fungus infection of the skin of the feet."

Surgeon Commander Souter said it seemed to be generally supposed that this disease had been recognized only since the war but Whitfield described 'ringworm of the toes' as long ago as 1908. No doubt the disease had become much more prevalent since the war and this might tentatively be put down to two factors—namely the conditions of trench warfare and the service of so many men in tropical and subtropical countries who on their return home disseminated the disease. The disease could no longer be regarded as one of hot countries but was of world wide incidence. The consensus of opinion was that fungus infections of the feet were commoner in the higher strata of society, they had been shown to occur in hospital cases though the speaker had seen very few instances while attending the practice of one of the skin hospitals in London.

Ætiological Factors

By far the most common types of fungi found were those belonging to the trichophyta, epidermophyta and endodermophyta groups. Fungus growing anaerobically in the skin in the form of a network of mycelial threads had both a corrosive action by the elimination of a keratolytic ferment and an irritant action producing inflammation owing to the toxic influence of the ferment and rapid growth of the fungus itself.

For the soil to be rendered favourable for the growth of the fungus two factors heat and moisture seemed to be necessary. The predisposing factor of excessive sweating in the causation was generally accepted and one authority had shown that it was necessary to produce maceration before experimental lesions by inoculation. Tight fitting badly ventilated modern shoes tended to produce excessive heat and moisture and cause maceration and devitalization of the skin between the toes giving ideal conditions for the growth of fungi. Trauma however slight seemed to be necessary for the fungus to gain an entrance and this might be effected by particles of sand while bathing or wading or by the action of caustics on the bare feet of sailors while cleaning the decks. In the author's experience the intertriginous type was by far the most common, while the hyperkeratotic type was comparatively rare. The intertriginous involvement represented the primary lesion in practically all cases.

Although the diagnosis might have to be made on clinical grounds alone it could not be regarded as final unless the fungus had been seen on microscopical examination of scrapings and indeed not until a true pathogenic fungus had been demonstrated by cultural methods. Cases of simple true systemic dysidrosis were often diagnosed as fungus infections. In this condition non inflamed deep uniform sago grain like vesicles sprang up at once symmetrically in dozens or hundreds. They burned rather than itched and seldom ruptured spontaneously.

Treatment

Fungus diseases of the skin of the feet were extremely difficult to cure and very liable to relapse or recur. They had been treated by almost every conceivable agent from kerosene to chiropractic. The general health of the patient should not be forgotten particularly in the more severe cases, and cure could be hastened by the use of

tonics containing iron strychnine and Fowler's solution. A generous diet with a high vitamin content should be given. Secondly infected patients with lymphangitis or cellulitis should of course be kept in bed and the infected feet treated on the usual lines with boric acid fomentations eusol soaks and boric starch poultices and the like, until all signs of the secondary infection had disappeared. Presuming that the lesions were no longer inflamed, a remedy or combination of remedies with fungicidal or at least fungistatic and keratolytic action must be employed. He had not found powders of great value in therapy and preferred to treat the intertriginous variety with a combination of paint by day and ointment by night and the vesicular variety with a paint after opening all the vesicles with a sterile needle changing to an ointment if the lesions became eczematoid or scaly. The hyperkeratotic type of lesion reacted best to pastes while fissures required special treatment.

Discussing some of the more common remedies used in treatment Surgeon Commander Souter said that the best known preparation was Whitfield's ointment so often wrongly prescribed. The correct prescription was as follows:

R. Acid benzoi	grains 25
Acid salicyl	grains 15
Paraff mollis	dr 2
Olei cocois nucis	oz. 1

Hard paraffin, 15 grains should be added in hot weather. In all intertriginous cases except when gross maceration was present, and in scaly or eczematoid lesions elsewhere he used Whitfield's ointment or the preparation mycozol as the treatment of choice. After mentioning other preparations he said that the success which had followed x-ray treatment of scalp ringworm had given rise to an impression that this method could be used for treating other forms of ringworm as well. It was forgotten that x-rays did not kill the ringworm fungus but simply brought out the affected hairs. X-ray treatment was not a rational therapeutic measure in this field. He also touched on prevention, general and individual, saying that the main factor in prevention was to render the site unsuitable for the fungus.

Dr G. RONIE HALL mentioned that at Lagos some forty years ago civilian Hausas were treated for what was then known as *anum* described as a circular rodent ulcer around the base of the little toe. Sometimes the whole of the ligaments around the metacarpophalangeal joint were exposed and the people came for removal of the moribund toe. One point was that these were sandalled people and the ulcer was always fouled with sand. Those who suffered in this way were often newcomers to the territory and had undergone a change of diet.

EPITHELIAL TUMOURS OF THE BLADDER

At a meeting of the Pathological Society of Manchester on April 14 with the president Dr T. H. OLIVER in the chair Dr I. A. B. CATHIE and Mr K. H. WATKINS presented a preliminary report on the epithelial tumours of the urinary bladder.

Dr Cathie discussed the histological findings in the eighty-four cases which had been examined. Many of the tumours were subjected only to biopsy, the tissue being removed with the flexible cystoscopic rongeur forceps. Others were examined after operative removal with or without previous biopsy. Cytological variations alone could not be accepted as evidence of malignancy; invasion being the only criterion on which malignant change could be established. Malignant tumours of the bladder were classified into three groups—malignant papilloma, papillary carcinoma, and infiltrating carcinoma—according to the morphological structure as observed microscopically. These tumours were also graded cytologically according to the method of Broders. A distinct parallelism was found

to exist between the various groups and the cytological grading. Thus a benign papilloma would usually be graded '1' or at the most '2', whilst at the other end of the scale infiltrating carcinoma was usually graded '3' or '4' or occasionally '2'. In the case of biopsy it was necessary to correlate the histology with the clinical (cystoscopic) findings, since the same tumour might show a benign structure at one part and malignant change at another.

Mr Watkins described some of the characteristics of tumours of the bladder and remarked especially on the frequency with which tumours originate or recur on the vesical orifice itself and even in the posterior urethra, the high incidence of metastasis, and the tendency to cause obstruction at the bladder neck or lower ureter leading to death from uraemia. The difficulty of differentiating benign and malignant tumours by naked-eye examination had been stressed by many writers, notably Albarran and Geraghty. Malignant changes could be found in tissue removed by biopsy from the surface of a tumour and about 50 per cent of pedunculated tumours showed malignant change.

Surprisingly enough, those with tumours infiltrating the bladder wall graded '2' had lived little if any longer than those with similar tumours graded '4'. It was concluded that cytological grading alone was not an estimate of the danger threatening the life of the patient. Since areas of benign papilloma might be found in a malignant tumour a single biopsy report must not be allowed to mislead but repeated biopsy examinations might be expected to reveal the diagnosis. Biopsy was a valuable addition to the information derived from the clinical and cystoscopic examination.

Local News

ENGLAND AND WALES

Lord Moynihan of Leeds

The March issue of the *University of Leeds Medical Society Magazine* takes the form of a richly illustrated Moynihan Memorial Number. An editorial foreword says: 'In selecting extracts from his papers, lectures and speeches we have endeavoured to convey something of the magnetic personality of Moynihan and to create as far as possible the atmosphere which was so essentially associated with the man rather than to record a mere historical list of facts.' The text of Dr T. Wardrop Griffith's broadcast on September 7, 1936, is followed by a biographical sketch signed R. E. T. Sir David Wilkie contributes an article on Lord Moynihan's place in British surgery and Dr William J. Mayo an appreciation. Mr C. Oldfield writes on 'The Man' and Mr L. R. Braithwaite and Mr E. R. Flint on 'The Craftsman'. Mr E. W. Hey Groves and Dr W. Cuthbert Morton recall Moynihan as editor and as orator and writer. The story of the Moynihan Chirurgical Club is told by Mr E. Finch of Sheffield. Seventy-eight pages are given up to extracts from published works, letters, speeches and addresses, and a comprehensive bibliography. The illustrations include many portraits, two of them in colour, a photograph of the great surgeon's hands, and a facsimile letter written by him on April 30, 1936, to his old friend Dr Hawkyard.

Royal Surgical Aid Society

For seventy-five years the Royal Surgical Aid Society has provided well over a million patients with urgently needed surgical appliances, and for the past thirty-five years it has enjoyed Royal patronage. In the ordinary way a patient must first obtain a surgeon's certificate and must then collect from subscribers to the Society's funds a

specified number of letters of recommendation—an annual subscription of half a guinea or a life subscription of five guineas entitling the subscriber to two recommendations per annum these numbers of recommendations increasing in proportion to the amount of subscription or donation. But in order to mark the year of the King's Coronation the committee is prepared to issue double the usual number of recommendations in respect of all special "Coronation donations" during the month of May. This means a corresponding increase in the number of those whom the society can help. The number of deserving applications is always far in excess of what can be dealt with. Last year 27,156 patients obtained help, and the appliances supplied totalled 35,263. So inundated was the society with requests from Durham and other distressed areas that a special fund was created to deal with them and a successful appeal was launched enabling special grants to be made to all authorized cases from these areas. Perhaps the most valuable aspect of the work of the Royal Surgical Aid Society is that it not only relieves much suffering and distress but enables people who would otherwise be chronically handicapped to lead normal and useful lives. Not only in the distressed areas but in the great L.C.C. housing estates springing up around London are fresh fields where surgical equipment is desperately needed. To meet these demands an appeal for further support is made.

Propaganda for Health Services

It was reported to the London County Council on April 27 that the Minister of Health had communicated with Lord Snell, the chairman of the Council, stating that he was impressed with the importance of making the health services throughout the country better known to the public in order to encourage their fuller use and that the suggestion had been made that the efforts of local authorities in this direction should be supplemented by a national campaign. The Minister, with the support of the President of the Board of Education is arranging for a publicity campaign to be carried out in the autumn. The Government finding the money for the provision on a generous scale of posters, leaflets and other material. The Minister is endeavouring to enlist the co-operation of local authorities. In London the field of administration covered by the campaign is very largely the concern of the metropolitan borough councils and he has addressed letters to the mayors of the boroughs. He asked for the co-operation of the L.C.C. which it expressed its willingness to give. One sentence in the Minister's letter read that while it is agreed that the health services of the country are probably unrivalled, there can be no room for complacency so long as it is true that in the country generally they are not being used to the fullest extent by those for whom they are provided.

An L.C.C. Hospital Handbook

The Public Health Department of the London County Council has issued a neat pocket size handbook containing particulars of the Council's general and special hospitals and the ancillary services. A section is devoted to each hospital and includes such details as the names of the principal staff, the bed accommodation and special services, statistics, the telephone number and the route. One recent development is the appointment of almoners at twenty-eight of the general hospitals. Particulars are also given of the affiliation of seventeen of the Council hospitals with eleven of the medical schools. The compilation will be a boon to London practitioners. One detail which might perhaps be added in future editions is the days and hours of the clinics and outpatients departments. The special units at some of the hospitals make a remarkable list. Hammersmith for example in addition to the more usual services has a metabolism

department, an oxygen therapeutic service and a dietetic kitchen. The special units at the general hospitals now number seventeen: there are diabetic clinics at three hospitals and psychiatric out-patient clinics at three; eight hospitals are furnished with electrocardiograph apparatus and fifteen oxygen tents are available for the general and special hospitals. The staff of these hospitals and institutions includes 368 medical officers apart from consultants, 253 consultants, 10,540 nurses, 90 pharmacists, 44 radiographers and 113 masseurs and masseuses, while the pathological services employ a medical and technical staff of about 100. A useful hospital map of the county is appended.

INDIA

Madras Hospitals and Dispensaries

The number of civil hospitals and dispensaries in the Madras Presidency increased in 1935 by seven, there being at the end of that year 1,116 working in rural areas and 247 in towns. There was an increase also in the total of in-patients by about 6 per cent. In his annual report for that year Lieut. Colonel Newcomb, I.M.S., officiating surgeon with the Government of Madras, announces with satisfaction the growing tendency of women to come to medical institutions for maternity relief. In 1935 90,910 normal and 15,913 abnormal cases of labour were conducted in them. Thirty-one new antirabic centres were opened in the Presidency and twenty-one medical officers received special training at the Pasteur Institute at Coonoor which records that for the third time in its twenty-nine years there were no deaths. The Paris fixed virus was in use throughout the year, and was in its 95th passage at its termination. Patients treated in the Institute numbered 535 and at the local centres in Southern India 14,084. There were twenty deaths in these centres from rabies of which fourteen occurred among the completely treated—a mortality rate of 0.11 per cent. The shortest incubation period was thirteen days and the longest 231 days; there were no post-treatment complications. The total number of doses of antirabic vaccine issued was 192,269 as compared with 169,106 in 1934. Steady progress was made in the Presidency in the leprosy campaign: thirty-six new clinics were opened during 1935 but still more are required by subsidized rural dispensaries. The clinical results were better than before in those patients who persevered with treatment and enthusiasm is consequently growing among the medical practitioners as well as among the patients. The new pathology block in the Medical College, Madras, was completed and occupied during the year. The total number of surgical operations in all institutions was 602,304, with a percentage death rate of 0.27, as compared with 0.28 in the preceding year.

Child Welfare in Agra and Oudh

Dr K. L. Chaudhri, director of public health for the United Provinces of Agra and Oudh, devotes part of his report for the year 1935 to the progress made in school medical inspection and emphasizes the importance of treatment clinics. It has been found from the experience of central school dispensaries in Agra, Allahabad, Cawnpore, Benares and Lucknow that in addition to the provision of treatment facilities for removal of defects of a routine nature the clinics afforded opportunities of paying attention to the conditions which needed an educational treatment for follow-up work. From the clinic records it was possible to check up the results of treatment of the defectives who had been sorted out at the medical inspections, and thus to systematize the subsequent work of supervision and treatment. Boys with defective vision received attention which could not otherwise have been given without considerable interference with their work, while those from very poor families were supplied with glasses free of cost. Patients with defective teeth and

gums were suitably advised and treated. Boys coming from the rural areas appeared to have better teeth as a rule, the incidence of pyorrhoea being much higher in urban areas where also the prevalence of enlarged tonsils was more marked. The records showed that considerable manifest improvement followed this careful examination and treatment especially in urban areas, where the incidence of mouth breathing was reduced from 32 to 1 per cent., the same level as that in rural areas. The school dispensaries also served as a sorting-place for reference of cases to specialists in hospitals. It is added that the most necessary lines of advance in maternity and child welfare work in the provinces of Agra and Oudh are the education of the public, particularly of mothers, in health matters and the training of indigenous dais in clean and normal midwifery, the last-named activity having been undertaken on a large scale. Maternity boxes have been distributed to many successfully trained candidates. The maternity and child welfare work, apart from the school medical work, is purely an activity of the Indian Red Cross Society but is controlled by the director of health. One child welfare and three new maternity centres were opened during the year under review but there is as yet no Red Cross maternity hospital in the United Provinces. Public instruction is given on such occasions as exhibitions and fairs and other forms of propaganda work are actively conducted. General improvement of the health standards of the child population is discernible.

Correspondence

Anaesthesia for Perineal Tears

SIR—In the *Journal* of April 10 (p 753) Dr Stanley Way advocates the use of local anaesthesia for the repair of torn perineums. In 1928 (*Lancet* I 1281) I described a similar method in a short article entitled 'A Note on the Immediate Suture of the Perineum under Local Anaesthesia'. The only difference between my method and his is that I add one drop of a 1 in 1000 solution of adrenaline chloride to each drachm of novocain, and use a 2 per cent. instead of a 4 per cent. solution of novocain. The method has been in continuous use in both the indoor and the outdoor practices of the Obstetric Unit, University College Hospital for the last ten years and has given satisfactory results. As in Dr Way's method the hypodermic needle is introduced through the raw surface and never through the skin. We find that the introduction of the hypodermic needle is painless if a swab soaked in the novocain is first laid against the raw surface for ten minutes.

I consider that an anaesthetic of some kind is always necessary for the proper repair of torn perineums that a general anaesthetic is not necessary and that even in hospital it adds very materially to the risk of labour—I am, etc.,

London W.C.1 April 20

F. J. BROWNE.

SIR—With reference to Dr Stanley Way's note on the repair of the torn perineum (*Journal* April 10 p 753), I should like to point out that perineal tears can be repaired under the analgesia produced by chloroform brisettes. There is no need for the practitioner to give the anaesthetic while the midwife repairs the tear for these crushable capsules of twenty minims of chloroform can be quite safely administered by the midwife. I am still of the opinion that the use of these crushable capsules is the most practical way of giving relief in the majority of labour cases not dealt with in hospitals—I am, etc.,

London April 25

W. D. HAYWARD M.B., B.Ch.

Hermaproditism

SIR,—Mr Harold Chapple's article on his 'female man' in the *Journal* of April 17 (p 802) is of such interest and importance that I hope he will be kind enough to elucidate certain further details.

I take it by implication that the three examinations of the pelvis which were carried out thoroughly while the patient was anaesthetized were performed through the (pseudo) vagina. The following questions occur to me:

1. Has the pelvic cavity in this case ever been examined through an abdominal wound? If not—

2. In what percentage of parous women can an experienced gynaecologist detect the ovaries per vaginam?

3. (The corollary.) Would the failure to detect an ovary per vaginam in a woman with a normal vagina lead to the conclusion that ovaries are absent?

4. Would the shortness (3 in.) of the (pseudo) vagina in this case at all impede thorough examination of the pelvic cavity?

5. How often has the coexistence of testicles and ovaries been recorded?

6. Are extrapelvic ovaries ever found?

7. How would the discovery of ovaries in Mr Chapple's patient affect his theoretical conclusions?

8. I do not grasp the purport of the following sentence: 'Indeed it appears to me simple to deduce that the superior intelligence of the female is the result of her physical disadvantages. Does simple here mean foolish or easy?' Is the intelligence of the female superior to that of the male? Is this a scientific fact or a personal opinion?

9. In what obvious way are homosexual practices damaging to the herd in which we live? I doubt whether the law should have any jurisdiction over homosexuality except to prevent its commercialization.

In the case described by Mr Chapple there are three possibilities:

(a) The patient is a female and the question of homosexuality does not arise, or (b) the patient is a male and comes under the shadow of the law and the gynaecologist by lengthening the (pseudo) vagina is implementing a homosexual practice, or (c) the sex is indeterminable in which case there is no basis to deal with these problems legally.

So important are the issues raised by Mr Chapple's article that I hope he will forgive this inquisition—I am, etc.,

Beaminster Dorset, April 20

R. E. HOPE SIMPSON

SIR—In the *Journal* of April 17 Mr Harold Chapple (p 802) describes a case which he rightly considers to be of considerable importance in having a direct bearing on the problems of sex, its origin, and manifestations. His communication is of such importance that I feel a certain diffidence while admiring the presentation of his case, in criticizing his conclusions.

How does Mr Chapple know that his patient "has no ovarian secretion"? Only one of the lumps was microscopically examined. We do not know of what nature the other one was. Moreover even the normal 100 per cent. male produces an oestrogenic hormone. In saying that the woman had never possessed ovarian tissue at all I feel sure that Mr Chapple goes beyond his observed facts. In his last paragraph he displays a stern morality which suggests that to the scarlet gown of the doctor he has added the crimine tippet of the judge. Even supposing that he is right in saying that his patients produce only male hormone he can hardly uphold in the present state of our knowledge his view that the behaviour of homosexuals "should not be regarded as justifiable on the ground of these glandular secretions, nor should it be held that it is

Research in Mental Hospitals

SIR,—In an annotation on London's mental hospital service in your issue of April 24 (p. 872) Dr Golla is quoted as follows: 'The work (of research) continues to be patchy in its distribution and in certain institutions there is a spirit of inquiry among the medical staff that is lacking in others with equally good facilities for investigation.'

In spite of the recent substitution of the term 'mental hospital for asylum' the primary purpose of these hospitals remains the same—the treatment care and comfort of persons of disordered mind. According to authoritative opinion and modern conceptions of mental hospital practice and treatment such hospitals are still grossly understaffed. Such staffs as are available have as much as they can do in tackling the minimum basic routine of clinical surgical and other work that is necessary for the patients. Such work we venture to say is of a wider range and of a higher quality than the average general practitioner is in a position to carry out. In confirmation we need only refer to an editorial in the *Lancet* of July 18 1936 under the heading 'Medical Staffing in Mental Hospitals'. In view of this fact we suggest that such research can only be carried out at the expense of the patients' welfare. It would be interesting and not difficult to investigate whether the standard of routine treatment is not in fact higher in hospitals where such research does not flourish. Some of us, incidentally, question the value of much that passes for research. Too often it would seem to add more to the researcher's chances of promotion in the eyes of promoting bodies who have been bitten by the research bug than to mental science. In any case until the staffing of mental hospitals becomes more adequate to modern needs we would suggest that we must devote our energies to the primary purpose of the mental hospital—treatment of the patient. We might usefully leave research great though our interest in it be to those psychopathic hospitals that are suitably staffed, equipped and constituted for the purpose.—We are etc.

SEVERAL LCC MENTAL HOSPITAL
MEDICAL OFFICERS

April 26

Why "Nocifensor"?

SIR—I thank Lucifer and Peter Shaw for their good humoured replies to my letter, but must not waste your space which I might do extensively by discussing the words they refer to. My knowledge of the classic languages is only moderate but it suffices to fill me with respect for them: their exquisite scientific structure appeals to me as a scientist and considering what our language owes to them I am ashamed of the outrage which is persistently done by the invention of barbarous compounds.

I hold that the Latinist would have used the stem *nocui-* in compounding with *-fensor*. He would not have pronounced it in the English way, for the short *u* in Latin had an obscure sound perhaps resembling that of *u* in *locum* pronounced as in English. Neither would he have pronounced *nocifensor* in the English way. In any case if we pretend to derive new terms from the classical languages we should take care to be sure of our methods.

—I am etc.

Shepton Mallet April 23

F J ALLEN

Obituary

JOHN LUKE JACKSON, M.B.

Dr John Luke Jackson, medical superintendent of Knowle Mental Hospital, Fareham Hants, died on April 5. He was a son of the late Rev John Jackson, D.D. of Ballycastle, and studied medicine at Queen's University, Belfast, graduating M.B. B.Ch., and B.A.O., with honours, in 1910. After a hospital post and a short period in general practice he was in 1912 appointed as a medical officer at Knowle Mental Hospital. At the outbreak of war he volunteered for the R.A.M.C. and saw service in France, Egypt, and Gallipoli. He was for a time a prisoner of war in Germany. He was twice mentioned in dispatches, was awarded the French Croix de Guerre in November 1918 and attained the rank of major. In 1922 he became medical superintendent of Knowle Mental Hospital, and in 1931 was appointed principal medical adviser to the Hants Joint Mental Health Institutions Committee. Dr Jackson was a member of the Royal Medico Psychological Association and joined the British Medical Association immediately after graduation. At the Annual Meeting in Portsmouth in 1923 he was honorary secretary of the Section of Neurology and Psychological Medicine.

Dr W. H. Lamplough writes: The members of the Medical Golfing Society will hear of the death of John Jackson with deep regret. He was a member of the society for the last fourteen years and rarely missed a meeting where his obvious friendliness, sense of humour and boyish enthusiasm made him many friends. No day was too long for him, and at these moments of general relaxation from the cares of our profession his gaiety was infectious to all. He had been a member of the Hayling Golf Club since 1919, and a most capable captain for three years. He was a past holder of the Hampshire championship. A man of quick and courageous decisions, he was a born administrator, and as medical superintendent of Knowle Asylum and in charge of mental clinics throughout the county he had ample opportunity for exercising his undoubted talents and unbounded energy. Less than three weeks before I wrote these lines he was among us in apparently the best of health and spirits, happy in his work and play and devoted to his family. His passing will be a sad loss to many, as it is given to few to command the affection of his fellow men to such a high degree as did John Jackson.

The sudden death from pneumonia of Dr ROBERT ANDERSON jun., of Erdington, Birmingham, at the early age of 33, has come as a sad blow not only to his family but to a wide circle of patients, colleagues, and friends. Anderson left Repton School to study medicine at Trinity College, Cambridge, at Birmingham University, and at the Rotunda Hospital, Dublin. He qualified with the B.Chir. and M.R.C.S. L.R.C.P. and gained the Senior Clinical Medical in Obstetrics at the Birmingham medical school. Seven years ago Anderson joined his father in practice in Erdington after having held resident posts as house surgeon, house physician and obstetric house surgeon at the Birmingham General and Queen's Hospitals. His career was one of great promise (writes H.F.). When at Cambridge he was a keen member of First Trinity. He followed up his experience in the Cambridge University O.T.C. by taking a commission in the R.A.M.C. (T.A.) and attained the rank of captain. His personal qualities were of an exceptionally high order. He was an indefatigable worker and even as a young man his attractive personality and his capacity for sym-

pathetic understanding of the patient's point of view quickly established him as an exceedingly valuable practitioner. When he entered the old-established practice, which had been carried on by his father for thirty years, Anderson was already well known in the district, and he speedily attained a leading position. In the 48th (South Midland) Divisional R.A.M.C. his work was distinguished by enthusiasm and by soldierly qualities of ability and self-reliance. In the efforts which have been made during recent months to bring the Territorial Army up to strength and to encourage a high standard of efficiency Anderson has been untiring. To his widow his mother, and his father we add our tribute of sympathy to those which have already been accorded by many from all sections of the community in Birmingham and elsewhere.

Dr ROBERT LYALL GUTHRIE H.M. coroner for the Eastern District of the County of London died at his home at Wimbledon on April 13. He was born in December 1867, at Dundee and was educated at Edinburgh University, graduating M.B. Ch.B. in 1892 and proceeding to the M.A. and M.D. degrees in 1901 two years after being called to the Bar by the Middle Temple. From 1903 to 1914 he was deputy coroner for North East London. Then during 1915 he served in France as medical officer in the Royal Field Artillery, later taking command of the Fulham Military Hospital and after that becoming lieutenant-colonel in charge and commandant of the Belmont Prisoners of War Hospital. For his war services he was awarded the O.B.E. On returning to civil life Dr Guthrie was appointed coroner for the district in which he had been deputy. He had long been a member of the Coroners Society and was for some time treasurer of the London and Counties Medical Protection Society. In carrying out the work of his court he displayed a high sense of duty and was ever regardful of the feelings of others.

We regret to announce the death on April 10 after a short illness of Dr JOHN GALLETT of Bourne, Lincs. at the age of 75. He graduated at his native city of Edinburgh as M.A. Ed in 1881 and then, after a year at Marburg, returned to take his M.B. and Ch.B. degrees in 1886. He spent six months in Vienna before finally settling down in South Lincs. where he practised for forty-eight years. He took his D.P.H. Camb. in 1895 and was appointed M.O.H. for Bourne Rural District in 1907 after the Mivart report on the conditions there prevailing. Thanks largely to many years of patient effort on his part this area was transformed from the worst district to the best in the county. Housing, water supplies and an isolation hospital were all going forward before the war and the ground was thus ready for the intensive drive of post-war years. Dr Gallett was medical officer to the Bourne County Institution, to the Post Office, the Bourne Cottage Hospital, certifying factory surgeon and for a few years before he retired from public health work in district officer of health to the Bourne Urban District Council. He was made a J.P. in 1917 and during the war together with his colleague in the town staffed the local V.A.D. hospital. A scholar by nature and training Dr Gallett was one of the old school of family doctors devoted to work and finding in it his hobby. He gave his patients of his best with untiring zeal but was always impatient of humbug and conceit. Though of a retiring disposition his kindness, integrity and generosity made him a friend of all who came to seek his help. He had been a member of the British Medical Association for over forty years.

News has been received of the death on April 21 at Illovo, Johannesburg, of Dr FRANK BURNARD MUDD, younger son of the late Dr Barrington Mudd of Storrington, Sussex. Frank Mudd studied medicine at the Middlesex Hospital and after qualifying as M.R.C.S. L.R.C.P. in 1897 settled in the Transvaal where he became prominent as an anaesthetist, contributing papers on this

subject to the *Transvaal Medical Journal* in 1913 and to the South African Medical Congress of 1928. He joined the British Medical Association in 1912 and was for two years honorary treasurer of the Witwatersrand Branch. At the time of his death he was senior anaesthetist to the Johannesburg Hospital, lecturer on anaesthetics in the Witwatersrand University, and major in the Reserve of Officers of the South African Medical Corps.

Dr HERBERT VICTOR HORSFALL of Otley, Yorks. died on April 18, aged 42. He came of a Halifax family and studied medicine in Leeds, graduating M.B. and Ch.B. at the University in 1917. During the war he served as medical officer to a combatant unit in East Africa with the rank of captain, and on returning to civil life took up practice at Otley, where he recently succeeded his senior partner, Dr Galloway, as medical officer to the county council institution known as New Hall Infirmary. Dr Horsfall had been a member of the British Medical Association since 1918. He leaves a widow and two children.

Universities and Colleges

UNIVERSITY OF OXFORD

John Chassar Moir, M.D., F.R.C.S. Ed., reader in obstetrics and gynaecology in the University of London and assistant director of the Department of Obstetrics and Gynaecology at the British Post Graduate Medical School, has been appointed Nuffield Professor of Obstetrics and Gynaecology from October 1, 1937.

Schorssem Research Fellowship in Medical Science 1937

The Board of the Faculty of Medicine will make an election to the above Fellowship in June if a candidate of sufficient merit presents himself. The Fellowship of the value of £300 will be tenable for one year from October 1 in any medical department or institute at Oxford under such regulations as the Board may approve. Candidates must be graduate members of the University holding a registrable medical qualification and must be under 35 years of age on October 1. Candidates must submit their applications to the Dean of the Medical School, University Museum, not later than Monday, May 3. Each must submit evidence of age, testimonials (three copies) or names of referees, a statement of his career and a statement of the department of medical science in which he proposes to research.

UNIVERSITY OF CAMBRIDGE

Applications for the Marmaduke Shield Scholarship in Human Anatomy are to be sent to the Registrar on or before May 20 in the present term. The award will be made towards the end of June. Those eligible are such undergraduates of not more than three years standing from matriculation and such Bachelors of Arts of not more than four years standing from matriculation as have passed Part II of the Second M.B. Examination or done the equivalent of so passing and have also obtained honours in Part I of the Natural Sciences Tripos with anatomy as one of their subjects. Women also are eligible. The awarders will take into consideration not only candidates' performance in examinations in anatomy but also reports by the staff of the Department of Anatomy. The scholarship is normally tenable for a year from the date of the award but a scholar may be re-elected for a second year, whether he satisfies the rules of standing for a first election or not. The emolument of the scholarship is £100 a year.

The title of the degree of M.B. was conferred by diploma during March on Mrs. E. M. P. Wilson of Newnham College.

UNIVERSITY OF LONDON

LONDON HOSPITAL MEDICAL COLLEGE

A course of three lectures on "The Chemistry of the Carotenoids and Vitamin A" will be given in the chemistry lecture theatre of the Imperial College of Science and Technology, Imperial Institute Road, South Kensington, S.W. by Professor I. M. Heilbron, F.R.S., on May 24, 25 and 26 at 5.30 p.m. The lectures which will be illustrated with lantern slides are addressed to students of the University and to others interested in the subject. Admission is free, without ticket.

In a notice in our advertisement columns this week, the Senate of the University of London invites applications for the University Chair of Bacteriology, tenable at University College Hospital Medical School at a salary of £1000 per annum. Applications must be received by the Academic Registrar of the University Bloomsbury WC1 by May 14.

The first Open Entrance Scholarship for 1937-8 value £100 has been awarded to R. R. Hunter (Caius College Cambridge). Approx. Accessit J. F. Smith (St. John's College Cambridge).

UNIVERSITY OF GLASGOW

A graduation ceremony was held on April 24 when the following degrees among others were conferred:

MD—†Annie R. Chalmers, †D. K. McI. Chalmers, †E. Cochran (in absentia), †J. A. M. Hall, †D. W. Hendry, †W. Telfer, S. M. Laird, J. S. McNair (in absentia).

MB ChB—R. B. Wright, †J. C. Wilson, M. O. Alakija, I. A. McM. Beaton, W. Begg, S. A. Bond, J. M. Brown, R. Browning, B. Camber, Annie Cameron, D. A. Cannon, H. Carnovsky, J. Cassells, W. J. Christie, Isabel S. Craig, W. Cross, J. M. Cuthbert, A. L. Dick, A. Donald, Muriel F. Frew, C. R. George, W. E. Gifford, A. M. Gilchrist, D. R. Gorne, J. D. P. Graham, R. F. Hand, C. Hecht, Violet M. M. Howat, Mary McL. C. V. Howie, J. B. Hurl, A. Jack, M. I. Kerr, O. P. D. Law, on J. C. Liddle, B. D. Ling, J. Loudon, J. M. McBride, A. H. McDougall, J. C. MacIntosh, W. W. W. McNeish, A. M. Mullen, W. W. Millen, W. N. Miller, D. N. B. Morrison, K. Murray, W. G. Oman, J. R. Preston, P. A. Rodger, D. C. Russell, J. Shapiro, R. Smith, A. N. Surline, I. Stoll, Irma M. A. Thomson, J. D. Uytman, J. Y. Walker, Alexandra C. Walton, D. C. Wiseman.

* With honours

† With commendation

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

At a meeting of the Royal Faculty of Physicians and Surgeons of Glasgow held on April 5 with the president Professor Archibald Young in the chair the following were admitted Fellows of Faculty: Andrew Girdwood, Ferguson, M. B. Ch. B. Thomas Landles, Gordon, M. B. Ch. B. Donald Valsler Marshall, M. B. Ch. B. Arthur MacLennan Sutherland, M. B. Ch. B.

The Services

HONORARY SURGEON TO THE KING

Major General H. H. A. Emerson DSO has been appointed Honorary Surgeon to the King in place of Major-General FitzG. G. FitzGerald CB DSO who has been placed on retired pay.

INDIAN MEDICAL SERVICE

SPECIAL CORONATION DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant, London, on Wednesday, June 16 at 7.15 p.m. when Brevet Colonel Sir Rickard Christophers CIE OBE FRS will preside. Officers can arrange to sit near their friends and separate tables to seat eight will be provided. Tickets may be obtained from the joint honorary secretary, Major Sir Thomas Carey Evans, Hammersmith Hospital, Duane Road, London W12.

DEATHS IN THE SERVICES

Surgeon Captain HUGH PRIDEAUX TURNBULL RN (retired) died at Southsea after an operation on April 11. He was educated at St. George's and after taking the MRCS and L.R.C.P. in 1897 entered the Navy. He became surgeon commander on May 25, 1911 and retired with an honorary step of rank as surgeon captain on January 1, 1924. He served throughout the war of 1914-18 receiving the medals. He had been a member of the British Medical Association since 1900.

Captain NISAR MUHAMMAD Durrani, Indian Medical Service, was killed in action in the recent fighting in South Waziristan on the North West Frontier of India near Jandoh on April 9, aged 31. He was born on January 1, 1906, was educated at the Punjab University and London Hospital and took the MRCS and L.R.C.P. in 1932. He received a temporary commission as lieutenant in the IMS on February 25, 1935.

Medico-Legal

RECOVERY OF FEES

A medical man is generally speaking, entitled to a reasonable fee and the question of what is reasonable has often been discussed by the courts in various circumstances. On March 17 two medical partners of Worthing claimed in the Worthing County Court £33 15s. 6d. from the father of a Cobham patient for professional services rendered between August 1933 and June 1936. The defendant had paid £15 into court together with three guineas costs with a denial of further liability. He said in his defence that the fees charged were exorbitant and unfair and that he had already paid more than enough. One of the partners said that the illness had been serious with unusual complications and that the defendant was well off, with a house at Hampstead and another by the sea at Ferring. In cross examination he agreed that if he had visited a similar class of house in Worthing he would only have charged half a guinea but said that he had had to travel for an extra half hour and therefore had charged a guinea a visit. The defendant said in evidence that no fee had been agreed but that he had expected from his previous experience to pay half a guinea a visit. The judge said that on the evidence a guinea a visit was not unreasonable, and gave judgment accordingly with costs.

LEAVE TO SUE A MENTAL HOSPITALS BOARD

By the Mental Treatment Act 1930 S. 16 anyone who wishes to bring an action against any person in respect of procedure carried out under the Act must satisfy the court that there are good reasons for alleging that that person acted in bad faith or without reasonable care.

A husband and wife recently applied to Mr Justice Talbot sitting in chambers for leave to bring an action against the Lancashire Mental Hospitals Board and two members of the medical staff of one of its institutions for negligence in allowing a certain mental patient out on licence. The patient had while on licence attempted to murder the wife by striking her on the head with a piece of wood. At the trial at assizes the medical superintendent said that the prisoner was a morally defective person of violent and dangerous propensities who ought not to be at liberty, that he himself was not responsible for granting the licence and that any two managers of the institution could write an order of release without the advice of the medical staff. Mr Justice Finlay ordered the prisoner to be detained at another institution.

Mr Justice Talbot came to the conclusion that there was substantial ground for alleging absence of reasonable care and in the exercise of his discretion gave leave to bring the action. The Lancashire Board and the two medical officers appealed and at the hearing before the Court of Appeal counsel for the board said that the occurrence had been a most lamentable one but those responsible for the patient had observed him themselves, had a report from the institution and been satisfied that his behaviour was excellent and that he was working. Counsel for the husband and wife contended that the Court of Appeal should not interfere with the discretion of Mr Justice Talbot as the board had not shown that he had exercised his discretion wrongly. Counsel also pointed out that the order for release on licence had been signed by the deputy medical superintendent and that the Act provided that no one but the medical superintendent had authority to sign it. Counsel for the board replied that even if the board's rules had not been approved by the Board of Control they were protected by Section 16 of the Act which provides that a person shall not be liable to proceedings on the ground of want of jurisdiction or any other ground unless he has acted in bad faith or negligently. He contended

that the licence was valid. Lord Justice Slesser the president of the court remarked that the court was only concerned with the question whether there was substantial ground for contending that the board acted without reasonable care in that the officer who ordered the patient to be released had no power to do so. The validity of the licence he did only arise in relation to the question of whether reasonable care had been taken. The court decided that Mr Justice Talbot was right in giving leave to bring an action. This decision of course does not in any way extend to the merits of the action if and when it is brought.

A PERFORATED EAR DRUM

A lady who suffered from irritation in her left ear was advised by her doctor to clean the inside of the ear every day with a pledget of cotton-wool on the blunt end of an orange stick dipped in almond oil. She did this for several years but one day left the cotton-wool inside the ear. As she could not get it out she consulted another medical man. According to her account, in attempting to remove the pledget with forceps he caused a severe rupture of the drum. This was treated by an aural surgeon but hearing was permanently impaired.

The patient sued the doctor for negligence and said in evidence that he had taken off his forehead mirror and tried to extract the cotton wool without it. The operation had caused great pain and she had shrieked and suddenly become deaf in that ear. He had used the forceps again producing the same pain and had then syringed the ear with warm water. She had become violently giddy and lost consciousness for a moment. The doctor on the other hand said that the piece of wool was stuck to the drum, he had put on a head lamp which gave perfect illumination, the patient had not shrieked but had complained of some pain, she had a particularly sensitive ear and the cotton wool was stuck, he had syringed out the wool and the patient had not fainted. He had found the drum perforated.

Mr Justice Greaves Lord in giving judgement, remarked that the patient had to prove that the injury was due to failure by the doctor to use competent and ordinary care and skill. It was he said extremely important that doctors who after education took upon themselves duties requiring great care, attention, and skill should perform those duties with reasonable competence. Equally it was extremely important—so important that the whole fabric of the law depended upon it—that no negligence should be inferred unless it was proved beyond reasonable doubt such as an ordinary man would act upon in his own business. This requirement made it extremely difficult for any plaintiff to prove his case. At first blush one might say that perforation of an ear drum is a mere attempt to take out a piece of cotton wool sounded like gross carelessness and nothing else. The answer however was not so easy as that because obviously something might quite possibly have taken place during the operation without gross negligence to account for the perforation. He had to be satisfied that nothing of that kind had taken place. The slight movement that would be necessary to cause the injury might be made without an honest witness recollecting it and it was extremely difficult to say that nothing of the kind had occurred. On the other hand the possibility of injury being suffered in the removal of a small piece of cotton wool without any neglect by the doctor was so great that he was not justified in concluding without positive evidence that a negligent act had been performed. He therefore dismissed the action with costs.

The judgement besides repeating in the clearest terms the ordinary principles of law governing actions for negligence against doctors is a useful reminder that an injury suffered in the course of treatment is not itself negligence and that an injured patient is not entitled to compensation merely because he has been injured.

MANCHESTER MEDICO-LEGAL SOCIETY

The Manchester and District Medico-Legal Society, which was founded towards the end of last year, held its inaugural dinner at the Manchester Reform Club on April 17 and an account of the proceedings has appeared in the columns of the *Manchester Guardian*. The president Judge T B Leigh was in the chair, and the speakers included the patron, Mr Justice Singleton, Dr Ainsworth Mitchell, president of the Medico-Legal Society of London, Sir William Willcox, president of the Medical Society of London and Dr G Roche Lynch, president of the Society of Public Analysts, and other analytical chemists. Judge Leigh, speaking of the antagonism and misunderstanding that had existed between the medical and legal professions, recalled the effort of the Manchester Medico-Ethical Society to improve matters by arranging discussions on such topics as "Where Law and Medicine Meet" and "The Doctor and the Law." Dr Ainsworth Mitchell, proposing a toast to the new society, spoke of the removal of barriers that arose because of technical differences and the use of jargon. There was still a lingering tradition that technical witnesses must use terms unintelligible to the lawyers. Mr Justice Singleton in his reply enlarged upon the same theme. Law had been defined, he said, as the absolute justice of the State enlightened by the perfect reason of the State. How could perfect reason be obtained in medical questions unless the parties understood each other's position? Co-operation in insanity cases offered great advantage and on the question of compensation for injuries much could be done by collaboration. If the medical profession could approach something like a standard of damages for the loss of a leg for the working man earning three to four pounds a week the legal profession would not have much hesitation in accepting it.

NATIONAL HOSPITAL, QUEEN SQUARE

FESTIVAL DINNER AT MANSION HOUSE

A brilliant company which included the Duke of Kent, Prince and Princess Chichibu of Japan, several of the Indian princes present in London for the Coronation and the French and Japanese Ambassadors assembled at the Mansion House on April 27 for the festival banquet of the National Hospital for Diseases of the Nervous System and the cause of the hospital was so effectively pleaded that £25,000 was raised at the tables towards the sum required for the completion of its new buildings in Queen Square. The Duke of Kent described the hospital as the oldest and largest in the world for nervous diseases. By the nature of the work which it had carried on so well for nearly eighty years it had created a special claim upon public sympathy. The speed at which life was now lived exacted its toll from the reserves of nervous energy and the results of strain and anxiety were found in many forms of illness and in almost every home. He especially commended the appeal to industry with every step towards science and mechanization a new source of nervous strain for the worker was created. The Rockefeller Foundation had with characteristic generosity offered £120,000 for the new research department of the hospital (it was explained later that £60,000 of this was towards the cost of the new building and £60,000 for endowment) conditional upon a similar sum being raised on this side.

The appeal was supported by Sir Walter Monckton, K.C. who said that the hospital treated 1,500 in-patients every year had 300 out-patient attendances almost every day and that during the last ten years more than 40,000 medical men and women from every university with a medical faculty had attended at Queen Square for study and research. New buildings were projected for a teaching school, pathological and research departments and a surgical unit the cost of which would be about £125,000.

and when these were completed the necessity would immediately arise for a new nurses home at a cost of £75 000. An overdraft of £30 000 on maintenance account had also to be extinguished so that the total liability was £240 000, about half of which sum was in sight.

The EARL OF ATHLONE congratulated the medical staff on what they had succeeded in doing in circumstances really detrimental to the effective treatment of patients suffering from nervous diseases. With the lack of up-to-date accommodation it had been necessary to take over some old houses, until portions of the hospital looked like a rabbit warren. Building operations had begun and steady progress was being made, but the great anxiety at the moment was to ensure the nurses home the completion of which should synchronize with that of the other buildings if the hospital was to do its work effectively.

LORD HORDER responding for the guests to the toast of their health said that throughout his professional career he had always regarded the National Hospital as the premier institution of neurology. It was sufficient to say that in its annals were the names of Hughlings Jackson, William Gowers, David Ferrier and Victor Horsley. The chairman of the hospital, Captain H. W. STYLES, in thanking the Lord Mayor (Sir George Broadbridge) for presiding and for the hospitality of the Mansion House mentioned that seventy-seven years ago when the hospital started it was due principally to the Lord Mayor of that time and the Mansion House might be said to be the birthplace of the hospital.

During the evening a film was projected showing scenes in some of the departments of the hospital with flash-backs to London streets and workplaces illustrating their hurry and tension as being the conditions which created the hospital's cases. It was stated that the exhibition of this film had already brought in £18 000 in small sums from picture theatre audiences.

Medical Notes in Parliament

On April 21 the House of Lords read a third time the Edinburgh Royal Maternity and Simpson Memorial Hospital Order Confirmation Bill and sent it to the House of Commons. The Hydrogen Cyanide (Fumigation) Bill passed through committee in the House of Lords on April 22, one minor amendment being made. On the same day a Bill to make provision for the removal of the Royal National Hospital for Rheumatic Diseases Bath to a new site in the City of Bath was passed.

The Report on the Investigation Conducted into Maternal Mortality at the instance of the Ministry of Health and a Report on Maternal Mortality in Wales were presented to both Houses of Parliament on April 22. On the same day Public Health (Imported Food) Regulations dated April 16 and made by the Minister of Health under the Public Health (Regulations as to Food) Act 1907 were presented to Parliament.

The House of Commons will adjourn for the Coronation and Whitsuntide from May 6 to May 24.

The House agreed on April 21 to amendments made by the House of Lords in the Education (Deaf Children) Bill. On April 27 the House debated the Budget Resolutions on report. The resolutions dealing with income tax were approved and Mr. Neville Chamberlain sketched out projected modifications of the National Defence Contribution. The Special Areas (Amendment) Bill was read a third time by the House of Commons on April 26.

Consideration of the Widows, Orphans and Old Age Contributory Pensions (Voluntary Contributors) Bill was concluded by the Standing Committee of the House of

Commons on April 27. The Bill as amended was ordered to be reported to the House.

The Report and Minutes of Evidence of the Select Committee on Medicine Stamp Duties and the Report of the Commissioners of Prisons and the Directors of Convict Prisons including the Report of the Medical Committee, were issued this week.

Sterilization in Hereditary Mental Deficiency

As briefly reported in these columns (April 17 p. 841) Wing Commander JAMES on the motion that the House of Commons should go into Committee of Supply on the Civil Estimates moved an amendment to the effect that the Government should give further consideration to the question of voluntary sterilization for hereditary defectives. He quoted the following paragraph from the report of the Committee on Scottish Health Services which he said put the whole matter in a nutshell:

"In considering what measures should be taken to improve the health of the people we have to take into account at the outset the question of heredity. Physical and mental capacity has a basis in inheritance and some people therefore because of their hereditary constitution will be less fit physically and mentally than others no matter what is done by way of medical care and improvement of environmental and other conditions.

It would be out of order for him that day to propose legislation to implement the recommendations in the report. All he could do was to invite the Minister to give his attention to the need for further research into the problem of genetics. The fact that his amendment was not completely in agreement with the recommendations of the Brock report was not because he disagreed with any of them or would in any respect depart from them but was merely a matter of technical form. Mental deficiency which covered the largest number of people concerned had generally in varying degrees a basis in heredity. There was a great deal of published evidence on this matter some of it reliable and much of it unreliable but a specific piece of accurate research was quoted in the report of the Departmental Committee. There were other forms of hereditary disability notably some forms of blindness.

A very comprehensive survey of this important subject was made and published in the report of the Brock Committee. Most of the opposition to the idea of sterilization came from people who had not read that report. The Brock Committee agreed with the findings of a previous committee which reported in 1929 that there were in England and Wales about 300 000 defectives and they gave as their opinion that of these 300 000 approximately 200 000 were fit for community life their degree of deficiency or defect not justifying their being retained in any form of institution. At present a very much smaller proportion than one third were in institutions or under care. In January 1936 the London County Council stated in a report that the London County Council Hospitals Committee was responsible for the care of 27 730 persons of both sexes but that since 1920 there had been an average annual increase of 603 and that during the next few years they anticipated a net annual average increase of 560 in the number of persons for whom accommodation would have to be provided. The expenditure on such cases by the London County Council during the last financial year was £1 698 633. There was an enormous total expenditure in connection with this problem. He did not suggest that if sterilization was legalized it would be an economy. In the long run there might be an economy but it was not from the point of view of economy that the Brock Committee recommended sterilization or that anyone else should consider the problem. All he suggested was that there was an enormous expenditure which if any part of it could be diverted to other channels and other social services would benefit the community as a whole. Any member who had not been over a mental hospital ought to do so. He would get a very vivid picture of the great misery which afflicted so many people. The hospitals were extraordinarily well and sympathetically run and the treatment given was splendid but one saw the number of unfortunate

people who were condemned largely through hereditary causes not only to lead miserable lives themselves but to be a source of great misery to their families.

BROCK COMMITTEE'S RECOMMENDATIONS

The Brock Committee recommended that subject to certain safeguards voluntary sterilization should be legalized where a person was mentally defective or had suffered from mental disorder where a person suffered from or was believed to be a carrier of grave physical disability which had been shown to be transmissible and where a person was believed to be likely to transmit mental disorder or defects. The Committee recommended that before sterilization was sanctioned in the case of a mental defective care should be taken to test his or her fitness for community life and that such a person should receive adequate supervision. The Central Association for Mental Welfare looked after persons who had been in institutions and had gone back to their homes or persons who needed assistance and help. That body had vast experience and it actively supported the suggestion that sterilization should be legalized. Its members pointed out that if the fear of parenthood could be removed it would greatly ease the mental condition of many defectives.

A point in opposition to this proposal was that the existence in the community of persons who had been sterilized would lead to a lowering of the standard of morality. That point was examined and answered by the Brock Committee. It had been examined and reported upon elsewhere and so far he had not heard any evidence adduced in support of it. There was still a great deal of misunderstanding about the nature of the sterilizing operation. Any doctor would confirm the statement that the operation was very simple and in the case of a male trivial. It had no effect whatever on the normal ordinary life of the individual. It had nothing in common with any of the operations used for the removal of any gland, it in no way affected sex life or sexual secretions. Another argument frequently used was that a mentally defective person could not have full volition. That argument again was dealt with extensively in the report. It should be remembered that sterilization for health reasons as opposed to eugenic sterilization was legal. Every year hundreds of people in this country had operations performed for reasons of their own health. Most frequently these operations were in women likely to be endangered by child bearing. They were voluntarily sterilized and that operation was legal. Thus the curious anomaly existed that whereas it was legal for a man or a woman to be sterilized even in a public general hospital if his or her own life was in danger it was illegal for such a person to be sterilized in the interests of posterity.

THE MENTAL DEFECTIVE'S VOLITION

Of the 300,000 defectives estimated to be in England and Wales 200,000 at least conducted their lives in the ordinary way as members of the community and for all other purposes save this were held to have volition. Their volition however was sometimes denied in the arguments which were put forward on this particular score. Mental disorder implied that a person was in possession of full mental capacity but suffered from a disturbance of the brain. Those who had recovered from mental disorder were held to have complete volition in other respects save this and research tended to show that theirs was the most hereditary type of mental trouble. Then there were people who had disabilities such as certain forms of blindness, which were hereditary. Was it to be said that they had not complete volition? There were also carriers persons who being themselves sound came from stocks so tainted that it could be said with varying degrees of assurance from moral certainty down to possibility that their progeny would suffer from some congenital trouble. In the last few years since the medical profession and a large section of the public learned how simple safe and effective the operation was many people were to-day upon eugenic grounds having themselves sterilized.

There was a general tendency for mental and physical defects to spread among the population. That was only to be expected when it was remembered that our social services had

had the effect among others of preserving the life of a great many of the weaker stocks which in earlier and less happy times would have been killed off by the ruthless pruning of Nature. The social services had expanded. All these alleviating and ameliorating factors operated without discrimination and to-day many children were born and grew up who in the lifetime of many members present and certainly in the lifetime of their parents would have been killed off by Nature's hard hand. There was one point by which the Brock Committee was very much impressed and by which anybody who had encountered it must be impressed. That was the position of the unfortunate normal child of a defective parent. It was perhaps one of the most telling arguments in favour of sterilization. Some proportion of mental deficiency was due to environmental causes usually prenatal infection. At present such persons who might be described as borderline cases might marry and have children.

He hoped that the Minister of Health would be able to give some statement on what was being done about the research recommended by the Brock Committee and incidentally by other bodies such as the Departmental Committee on Scottish Health Services of 1936. Those who advocated voluntary sterilization did not for a moment suggest that it was going to be a universal panacea or a substitute for other efforts. All they said was that for those who wanted it administered under adequate safeguards such as were recommended by the Brock Committee it would be a most important and very necessary weapon in the armoury of preventive medicine.

NOTHING COMPULSORY IN THE RECOMMENDATIONS

SIR FRANCIS ACLAND in seconding the amendment said that something ought to be done without too long delay. He emphasized a point implicit in the whole campaign for voluntary sterilization on the lines of the Brock Report—namely that it was the very reverse and antithesis of the whole idea of anything compulsory. The proposal was not that any one could go and get himself or herself sterilized but that there must be very careful inquiry and certification by two doctors who were both specially approved for the purpose with an expert Ministry of Health Committee in the background in case the Minister's advisers were not satisfied with the medical reports and certificates. That had this importance that in three out of four cases who would be entitled to apply for voluntary sterilization under the Brock Report the certificates could only be given if the practitioner was satisfied that the person applying was suffering or had suffered from disability or disorder deemed to be inheritable or was a person deemed to be likely to transmit defectiveness or disorder or great disability to a subsequent generation. No really honest opinion with regard to that could be formed—and it was intended that these opinions should be honest and careful opinions—unless practitioners concerned had had access to the family histories of both of the past generations and of the collaterals of the person concerned. No one would give information with regard to people of another generation if there was any possibility that as a result of such information a person might be sought out and compulsorily sterilized. Therefore the whole machinery on which voluntary sterilization rested which depended on the care and conscientiousness and thoroughness of these reports would be brought to naught immediately any system of compulsory sterilization was introduced.

The law as to sterilization of persons who were in their right mind at the time they applied for the operation was uncertain and a considerable majority of those might come under the Bill. Sterilization was believed to be legal if there were good eugenic reasons for it and if the proper consents had been obtained. But the doubt meant in practice that persons who had the means to consult a private physician and to employ a private surgeon could get the operation done but those whose means were limited so that they would be compelled to go to a hospital could not. They of course were just the people who because of the narrow compass of their homes and housing and sleeping accommodation, found lifelong and invariable self-control in the married state particularly difficult and almost impossible.

Mr LOGAN said it had been stated that people in possession of their faculties would not apply for sterilization. Therefore the amendment could not work because people in the possession of their faculties if they would not apply were the very people who would not be considered mentally defective. If they had not got their senses it could not be voluntary for they would not know what they were applying for.

Captain GUNSTON said that the Brock Committee reported that the children of parents one or both of whom are mentally defective are on the average below the normal and our inquiry shows that nearly one third of such children as survived are likely to be defective and more than two-fifths must be expected to exhibit some degree of abnormality. In the face of evidence like that it could not be said that we ought not to take measures to reduce the number of mental defectives born into the world. The Brock Committee came to the conclusion that though it might be difficult to trace antecedents valuable information might be obtained by finding out the proportion of mental defectives and subnormal children coming from mentally deficient parents. The result of the investigation was startling. Out of 8,800 cases investigated 2,000 children died at a very early age which indicated some direct connexion between infant mortality and mental deficiency on the part of the parents. The remainder were divided into age groups of those between 7 and 13 and those over 13 and it was found that no less than 40 per cent of the children still living were subnormal. When it was remembered that 22 per cent of the children had already died it would be seen that the proportion of subnormal children was high so high that the House could not regard the situation with complacency. When it was realized what normal or abnormal children born of abnormal parents must go through surely it was not asking very much to advocate that sterilization should be permissible.

GOVERNMENT REPLY

Sir KINGSLEY WOOD said that an allegation had been made that there had been an increase in the number of defectives in this country. Of course it should be borne in mind that the number of defectives under care increased as the general population increased and as the local authorities became more efficient in ascertaining the existence of defectives but it could be said with authority that there was no proof that the incidence of mental deficiency in this country was rising. Members would appreciate the importance apart from the merits of the case of taking public opinion wholly with them. Sterilization laws were in operation in several of the United States but in some little use had been made of them. In certain cases the law appeared to have been enacted without any money being provided but the real explanation of failure in other cases was probably that the enthusiasm of small groups secured the passage of legislation for which there was no general demand and no sufficient backing of public opinion.

One or two Members had made observations which would lead one to think that in certain cases the treatment of people who unhappily suffered from mental deficiency was—one expression used—very horrible. He must testify however to the increasing provision care, forethought and kindness displayed in these institutions. He would not like it to go out that there was anything else but the utmost consideration shown and large sums of money spent to see that reasonable care and treatment were given. A great deal of research was being done in this country. For instance only in 1934 in consultation with the Board of Control the Medical Research Council appointed a new committee to advise and assist them in promoting research into mental disorders. Another committee of equal importance had also been appointed by the Medical Research Council a committee on human genetics. In spite of the advances made in the biological study of heredity and the application of the results, it was felt that the study of human genetics had been relatively neglected. Under the aegis of this latter committee some very interesting researches were now being carried out at the Royal Eastern Counties Institution at Colchester by Dr Penrose and his colleagues and an important examination of the hereditary characteristics in the blood of mental defectives and their

families was now being made by Professor Fisher and Dr Taylor of the Galton Laboratory University College London. This work was being assisted by grants from the Rockefeller Foundation. Dr Slater at the Maudsley Hospital London was also working on a large-scale field of inquiry into certain different types of mental disorder. Other work was also being carried on so that it would be seen that this aspect of the question was not being neglected by the Government.

Wing Commander JAMES asked if the Minister could give an assurance that any funds needed for research would also be forthcoming from the Government?

Sir KINGSLEY WOOD said that would be a very bold undertaking to give without consultation with the Chancellor of the Exchequer but if a question of money arose which he (the Minister) thought was important he would not hesitate to take it to the Chancellor of the Exchequer. There was no doubt that opinion was growing in favour of sterilization. But he could not disguise the fact that opposition still remained and there was much conflict of opinion particularly on religious grounds. The medical profession was by no means unanimous on the matter. If one asked even the medical men that one knew in one's private circle there was not a great deal of unanimity of opinion. Resolutions of certain learned colleges had been quoted but he very much questioned whether one would get anything like unanimity from the British Medical Association.

Mr THURTELL asked if it was not a fact that on most matters one could not get unanimity in the medical profession. The Minister replied there were always small minorities and one dealt with them as best one could but there would be found he thought in the British Medical Association a pretty steady and strong view on most medical matters of the day. He was endeavouring to put fairly the other side of the question and he doubted very much whether they would get a strong vote as would justify a Bill being promoted at this moment. It was desirable that ample time should be given for consideration and to get public opinion developed as he believed it was developing.

Wing Commander JAMES then withdrew his amendment.

Expenditure on School Medical Inspection and Treatment

Mr OLIVER STANLEY replying to Mr Riley on April 12 said it was not possible to separate the expenditure of local education authorities on the medical treatment of school children from their expenditure on medical inspection. The net expenditure on the medical inspection and treatment of public elementary school children during the year ended March 31 1936 was £2,188,462 of which 50 per cent was met by grants from the Board of Education. The net expenditure of local education authorities on the education and treatment of children in special schools during the year ended March 31 1936 was £2,110,693 of which 50 per cent was met by grants from the Board of Education which also paid grants amounting to £38,034 directly to certain special schools provided by voluntary bodies. The figures, however, included expenditure on schools for blind, deaf, and mentally defective children where the expenditure on medical treatment was comparatively small. Expenditure on sanatorium schools for children suffering from tuberculosis was not included as such expenditure was incurred by the tuberculosis authority and not by the local education authority and grant in respect of it was not paid by the Board of Education. During the year ended March 31 1936 the average attendance of children sent to special schools by local education authorities was 38,939. In schools for physically defective children as distinguished from schools for blind, deaf, mentally defective or epileptic children the average attendance of children sent by local education authorities was 19,769.

Sale of Methylated Spirits in Scotland

The Methylated Spirits (Scotland) Bill the object of which is to control the sale in Scotland of methylated spirits and of methylated spirits in admixture was considered by a Standing Committee of the House of Commons on April 13. Mr HARDIE moved an amendment to prohibit the retail sale of

methyated spirits unless under all the conditions laid down by Act of Parliament for the sale of poisons as scheduled in the No 1 List of Poisons. Bulk quantities would have to be signed for in the same way. He said that the proposal in the Bill that the retail sellers should be registered with the local authority and that purchasers should sign a book would not have the desired effect of stopping the evil. There would not be the same difficulty with other 'dope' taken by people with plenty of money, because ships arriving from abroad were inspected at the ports for 'dope'. Miss HORSBROUGH who was in charge of the Bill, asked Mr Hardie not to press the amendment. The Bill was only the starting-point and it was impossible to go as far at present as the amendment would take them. The amendment was withdrawn.

Mr WESTWOOD moved an amendment to ensure that the restrictions in the Bill should apply to surgical spirit as well as to methyated spirits. Lieut-Colonel MOORE said that owing to the smell of methyated spirits surgical spirit was ousting it as a drunk and a new bath essence was proving almost as seductive. Mr JOHNSTON said that addicts, by shaking a little milk on top of eau de Cologne could obtain a drinkable spirit more readily and cheaply than by purchasing methyated spirits. The amendment was agreed to.

Combating Overcrowding in Scotland

On April 13 Mr MAXTON asked the Secretary of State for Scotland if he could state what progress had been made since the passing of the Housing Act 1935 in combating the problem of overcrowding in Scotland and in how many places had the appointed day been fixed. Mr ELLIOT said that since the passing of the Act tenders had been approved for 36,012 houses and 24,377 houses had been completed. These houses were not specifically approved for subsidy purposes under either the Acts of 1930 or 1935 but under arrangements designed to secure that the most economical use was made of the new accommodation they were used for slum clearance or overcrowding purposes as local circumstances or needs might dictate. There was no record of the number of families actually removed from overcrowded houses before April 1 1936 but from that date to February 28 1937 6,444 families living in overcrowded conditions were rehoused. The appointed day under the Housing (Scotland) Act 1935 had so far been fixed only for the Dysart Ward of the Burgh of Kirkcaldy. The date fixed in this instance was May 15 next.

Control of Hydrogen Cyanide

Lord DUFFERIN in the House of Lords on April 14 moved the second reading of the Hydrogen Cyanide (Fumigation) Bill. He said it had received a second reading in the House of Lords less than a year ago and its purpose was to regulate the use of hydrogen cyanide. This was most efficacious for exterminating bugs and other vermin and the pests that preyed on the vegetable world but it was extremely dangerous. A very small quantity was fatal and the victim was usually dead before he had any warning. Fatalities had occurred and the Government was convinced that statutory powers were necessary to protect the public. The Bill conferred power to make regulations to control dangerous methods of generating the gas to control or prevent inexpert operation of it to control the disposal of residues and to regulate the use of premises during and after fumigation by the gas. Fumigation of rabbit warrens and fumigation carried out in the open air where there was little danger, were specifically exempted from the Bill. Every interest would be consulted by the Home Office before the regulations were decided upon and the proposed regulations would be open to inspection for forty days. The Bill had its counterpart in almost every country in Europe and if passed would save many lives.

The Bill was read a second time without a division and sent to a committee of the whole House.

Scottish Maternity Services Bill

The Maternity Services (Scotland) Bill as amended in Standing Committee was considered on report by the House of

Commons on April 15. Mr LEONARD moved a new clause (Panel of Registered Medical Practitioners) as follows:

It shall be lawful for a local authority in consultation with the local organization of registered medical practitioners as referred to in Subsection (5) of Section 1 of this Act to publish annually a panel of registered medical practitioners for the purposes of Section 22 to the Midwives (Scotland) Act 1915 such panel to consist of registered medical practitioners regularly practising midwifery and to be made available to all certified midwives practising within the area of the local authority.

Mr WALTER ELLIOT said he had every sympathy with the object of the clause. The schemes under the Bill would make provision for the midwives to know where were the practitioners and the specialists. The schemes would cover 80 per cent of the confinements in Scotland and the other 20 per cent would be those of the well-to-do who had their own doctors and were in touch with obstetric specialists. It would not be left to the midwives to pick a doctor from a casual list of practitioners. It would be the duty of the midwife to work with the woman's own medical attendant and if she did not know where the medical attendant was or where in his absence some other practitioner could be found, then she would be at fault under the new schemes. Mr LEONARD withdrew the proposed new clause.

On Clause 1 (Provision of Maternity Services) Mr ELLIOT moved to insert an amendment to provide that medical schools and midwifery training bodies should have an opportunity to make representations on the schemes proposed. The amendment and further minor ones were agreed to. Small amendments resulting from the delay in the passing of the Bill were made in Clause 4 (Compensation to Midwives Ceasing or Required to Cease Practise).

On Clause 6 (Prohibition of Unqualified Acting as Maternity Nurses for Gain) Mr WESTWOOD moved to provide that persons attending confinements under the Act should have undergone at least three years training. He said it was unsatisfactory for it to be possible, as under the clause at present, for a young medical student just entering his studies or for a nurse just starting on her training to be able to take control of a case.

Mr ELLIOT said that neither medical students nor pupil midwives could now undertake a domiciliary case until they had had a complete theoretical course and adequate practical instruction including the delivery of women in labour under qualified supervision in an institution. The existing safeguards went further than the proposed amendment. Under the rules of the General Medical Council no medical student might undertake practical midwifery until the last term of the fourth year of his curriculum. He undertook when scrutinizing schemes prepared by local authorities under the Bill to ensure that no danger arose of medical students going out to cases earlier than that period. He was certain the General Medical Council had no intention of relaxing the rules, but he did not wish to put the matter into the statute or to make it too rigid.

Mr WESTWOOD withdrew his amendment, and moved a subsequent one to provide that a nurse attending a case should have undergone at least two years training with a view to becoming a midwife. Mr ELLIOT said this amendment dealt with a subordinate who would not regard herself as being in charge of a case. A midwife could rightly put responsibility on the medical practitioner and if she found herself in difficulty was expected to call in a doctor. The full course of the midwives curriculum under the rules of the Central Midwives Board extended over only twelve months and the amendment would not be possible in practice. That Board contemplated an extended period of training, but not to the extent which would make the amendment practicable. It would be difficult for the House to amend by statute the rules of the Central Midwives Board but he would see that untrained persons did not get the opportunity of experimenting on those for whom the House was passing this measure.

The amendment was withdrawn and on the motion of Mr ELLIOT three small amendments were made in later sections of the Bill without discussion. The Bill was read a third time.

Mortuary Provision

Mr CECIL WILSON asked on April 22 how many local authorities other than those of county boroughs had provided mortuaries as empowered by Section 143 of the Public Health Act of 1875 and how many had not made any such provision. Sir KINGSLEY WOOD said he had no complete information but since April 1 1920 loans had been sanctioned by the Ministry of Health for the provision of mortuaries by sixty three local authorities other than county boroughs.

Answering Mr Wilson on the same day Sir JOHN SIMON said that excluding the City of London the County of London and county boroughs forming complete coroners districts 10 274 post mortem examinations were directed or requested by coroners. He had no information on how many of these examinations took place in hospitals in mortuary premises and in other places. He did not know that on a recent occasion there was no fit place for a post mortem examination and that it was held on the village green.

Capitation Fee Tribunal

In the House of Commons on April 26 Mr RHYD DAVIES asked the Minister of Health the terms of reference and the *personnel of the tribunal to inquire into the fees paid to panel doctors under the national health insurance scheme*. Mr HUDSON replied that the arrangements for the inquiry were not quite complete.

Poole Corporation Bill and Pasteurization

In the House of Lords on April 27 Lord MARKS moved the second reading of the Poole Corporation Bill, which was agreed to. Lord CRANWORTH then moved an instruction to the committee which will consider the Bill to delete Clause 21 which relates to by laws as to pasteurization etc. of milk. He said that the Poole Corporation admitted that this clause was included in the Bill because of the recent outbreak of typhoid at Bournemouth. This was panic legislation. Viscount HALIFAX said that the health of the people must be the first and last consideration and the question of vested interests did not arise. The Bill was not opposed on petitions but he understood it was the intention of the Chairman of Standing Committees to refer the Bill to a Select Committee of the House in order that the proposals as to pasteurization might be examined. In the Government's view such an inquiry would be unsatisfactory and probably inconclusive. It ought not to be held in connexion with any particular locality; the question must and could only be considered as a general one affecting the country as a whole. In the circumstances the Government had reviewed the whole matter and he was authorized to announce that it was its intention to bring forward long term legislation dealing with milk policy generally in the near future. In this connexion the Government would examine the question of pasteurization in the light of all the evidence that was available. He supported Lord Cranworth's motion.

Lord DAWSON of PENN said that the Poole experiment would have been a very valuable one but they were obliged to be influenced by the question of cost. If it was to be such a costly matter he could see the force of the argument for waiting for a general measure. But no indication had been given how long it would be before that general measure came into operation. There was an overwhelming body of evidence in every civilized country that pasteurization was an efficient means of preventing the continuance of certain infectious diseases. The mortality from tuberculosis had declined but there had not been so much improvement in regard to the bovine type of infection as in regard to the human form of infection.

Lord Cranworth's motion was agreed to.

Sickness and the Drug Fund—Colonel ROPNER on April 13 asked the Minister of Health whether in view of the incidence of sickness during the early months of the present year he proposed to make special provisions to ensure that the Drug Fund should be able at the end of the year to meet in full

its liabilities to chemists and bodies corporate dispensing under the National Health Insurance Acts. Mr HUDSON answered that as the Drug Fund related to the calendar year it would be premature at this stage to estimate the extent if any to which payment of the chemists' accounts would be affected by the sickness experience early in the year. The Minister of Health undertook at the time at which the present agreement with the chemists was made to consider representations regarding any abnormal deficit in the Fund.

Drunkenness Alleged from British Wines—Mr LEES JONES on April 19, asked the Home Secretary if his attention had been drawn to the result of the investigation which the Manchester licensing magistrates had made on the subject of drunkenness caused through British wines and whether he would take steps to mitigate this cause of drunkenness. Mr GEOFFREY LLOYD replied that the Home Secretary had received from the Manchester licensing justices a copy of a speech by their chairman in which reference was made to certain cases of drunkenness treated at the Manchester Royal Infirmary last Christmas. The Home Secretary understood that these cases were not attributed to the drinking of British wine but he was making further inquiry.

Electro filters and Poisonous Smokes—On April 19 Mr LLOYD informed Mr Parker that the possibility of employing electro-filters as a protection against poisonous smokes had been considered. This method involved practical complications and satisfactory protection could be provided by simpler and cheaper methods.

Grants to Scottish Universities Inquiry Committee—Answering Mr Alexander Morrison on April 20 Mr PARKER said he had decided to appoint a committee in terms of Section 16 (1) (b) of the Education (Scotland) Act 1908 to inquire into the application made by the University Courts of the Universities of Scotland for the payment from the Education (Scotland) Fund of sums in respect of yearly maintenance expenditure and to advise him as to the sums if any which should be paid to them. The chairman of the committee would be Lord Alness and Sir Arthur Rose and Sir George Macdonald would be the other members.

Infant Mortality—Sir KINGSLEY WOOD answering Mr Will Thorne on April 22 said that for 1935 the last year for which separate figures were available the mortality rates of infants under 1 year over 1 000 live births were: Letchworth U.D. 17, England 56, Wales (including Monmouth) 63. Letchworth was a small unit the total births there being 200 or less each year. During the past five years the infantile mortality rate there had been 17.62 per 1 000 births.

Birching at Doncaster Court—Sir JOHN SIMON told Mr Alfred Short on April 22 and on April 7 the justices in the West Riding Juvenile Court Doncaster ordered nine boys to receive three strokes of the birch. Eight were birched on that day; a medical officer certified that a ninth was unfit for the punishment. As he had decided to appoint a Committee to consider the question further action on his part was not required.

Blood Transfusion in the Army—On April 27 Mr W. KEFIELD asked the Secretary of State for War what supplies if any were available of human blood suitable for transfusion, grouped and bacteriologically tested for large scale emergency treatment. Mr DUFF COOPER replied that the Army policy was not to store blood for large scale transfusion as the period for which this could be done was very limited. Each military formation had a number of donors grouped and tested who were available for this service.

Provision of Canteens in Schools—Mr OLIVER STANLEY stated on April 22 that he had drawn the attention of local authorities to the desirability of providing school canteens at schools where children came from a distance. In considering plans for new senior schools this point was always borne in mind. He would also consider any proposals by local authorities to make arrangements for school dinners in schools where children did not come from a distance but was not prepared to require the provision of canteens in all new senior and junior schools.

Maternal Mortality Report

The report on maternal mortality in England was issued by the Ministry of Health on April 28 (Cmd 5422 H.M. Stationery Office 5s 6d.) It finds that the factors in the problem cannot be separately assessed. There is no necessary relation between maternal mortality and housing conditions. The report advises local authorities to secure team work between health visitors, midwives and doctors and Sir Kingsley Wood is making suggestions for this purpose and observations are made on the ill effect of haste and too early use of instruments in confinements. The report says that every doctor who does midwifery cases under local authorities schemes should be experienced and actively engaged in such work have enough time for unhurried work and be ready to co-operate with the local authorities' own officers. Every local scheme should provide specialist consultants and Sir Kingsley Wood is urging local authorities to arrange for flying squads of skilled hospital staffs to be brought to the patient where she cannot be moved to hospital without risk to life. The report finds that attempted abortion is probably increasing, and Mr Norman Birkett, K.C. will act as chairman of a Departmental Committee to be set up at once to inquire what can be done to reduce mortality from this cause. The report suggests further research into the influence of diet on child bearing, and the Minister is in touch with the Medical Research Council on the subject. A similar report is made in regard to Wales.

Medical News

As the House of the British Medical Association (including the Library) will be closed on Coronation Day (Wednesday May 12) all editorial communications and advertisements intended for the issue of the *British Medical Journal* of May 15 should reach the Editor and the Financial Secretary and Business Manager respectively by Monday May 10 at the latest. The House of the Association will also be closed for the Whitsun holiday from 6 p.m. on Friday May 14 to 9 a.m. on Tuesday, May 18 (Library 10 a.m.)

To celebrate the Coronation a reception will be given at the Royal Society of Medicine on Monday, May 10, at 8.30 p.m. when films will be shown and interesting exhibits provided. The object of the reception is primarily to entertain medical men and their wives from over seas who are in London for the Coronation. As accommodation is limited and as first call for tickets is with the guests of the Society there will be only a few tickets available for Fellows and their wives. Those Fellows desirous of attending should communicate with the secretary not later than May 3, when a ballot for the remaining tickets will be held. Applications are limited to two tickets.

The London Jewish Hospital Medical Society has arranged a symposium on "Modern Aspects on the Diagnosis and Treatment of Gastric Ulcer" which will take place at the Hospital Stepney Green E., on Thursday May 6 and will be opened by Dr D. T. Davies Professor G. Grey Turner and Dr H. Graham Hodgson. The president Mr Arnold Sorsby will take the chair, and tea will be served at 3.15 p.m.

A general discussion on "Reform of Medical Education" promoted by the Edinburgh University Debates Committee consisting of representatives of the Students Representative Council, the University Union and the University Women's Union will be held in the University Union Edinburgh on Thursday May 6 at 8 p.m. The opening speakers are Sir Francis Fremantle M.D., M.P., Chairman of the Parliamentary Group House of Commons, Dr G. O. Barber Dunmore, Essex and Professor Sydney Smith M.D., Dean of the Faculty, Edinburgh.

University Miss Agnes MacLaren, president of the Women's Union will take the chair and the summing up of the discussion will be in the hands of Dr Chalmers Watson, Edinburgh.

The University College (late Queen's College) Galway North of England, and Midlands Alumni Association will hold its eleventh annual medical reunion at the Midland Hotel Peter Street, Manchester, on Saturday May 8, at 7.30 p.m. followed by dinner at 8 p.m. The subscription is one guinea, which includes the dinner, cost of organization printing etc., and all Galway graduates are invited. The president of University College Galway, Monsignor Hynes D.D. will be guest of honour. Those who intend to be present are asked to notify the honorary secretary, Dr P. J. Webb 127 Rochdale Road, Harpurhey, Manchester, 9.

Professor Charles Singer will read a paper entitled "Medicine in Early England" before the Listerian Society of King's College Hospital in the lecture theatre of the hospital Denmark Hill, S.E., on Wednesday, May 5, at 5.15 p.m.

The annual meeting and luncheon of the Tavistock Clinic will be held at the Wharcliffe Rooms Hotel Great Central Marylebone Road, N.W., on Monday, May 3 at 12.15 p.m., when Sir Henry Brackenbury will preside.

A sessional meeting of the Royal Sanitary Institute will be held in conjunction with the Welsh Branch of the Society of Medical Officers of Health and the South Wales and Monmouthshire Branch of the Sanitary Inspectors' Association in the Rolls Pall Monmouth on Friday, May 7, at 5 p.m. when there will be discussions on Immunization in Diphtheria, to be opened by Dr W. R. Nash and Dr W. Panes and on 'The Public Health Acts, and their Implications in Rural Areas'.

The Priory Church and the Hospital of St Bartholomew in West Smithfield, London, E.C., both founded in A.D. 1123 will be open to view during the Coronation period, especially to visitors from over-seas. Conducted parties will be met at the church first at 11 a.m. and 2 p.m. each day from Thursday, May 7 to Friday May 14 excluding Sunday and Wednesday. In connexion with this viewing there is to be an exhibition in the Great Hall of the hospital, in which unique documents, seals and books will be shown, and stands will bear drugs from all parts of the British Empire and substances made from coal and used in medicine. Talks will also be given on the world-famous Hogarth paintings on the walls of the great staircase.

A Clinical Society of the Royal Eye Hospital has been organized, and a meeting will be held on Tuesday May 4 at 6 p.m. at the hospital when Dr T. Rowland Hill will read a paper on "Neuromyelitis Optica," illustrated by cases. All medical practitioners will be welcome. Further particulars may be obtained from the honorary secretary, Mr J. Minton F.R.C.S., Royal Eye Hospital, Southwark.

A meeting of the Paddington Medical Society will be held at Paddington Town Hall, Paddington Green, W. on Tuesday May 4 at 9 p.m., when there will be an address by Dr G. F. McCleary on "The Threatened Depopulation of the British Commonwealth." All interested are invited to attend.

An exhibition of hygiene will be held in Vienna from the middle of May to the end of June under the patronage of the President of the Austrian Government.

At the annual meeting in Droitwich of the British Spas Federation Alderman C. H. Hacker of Bath was elected chairman in succession to Alderman Kidson of Harrogate and Mr John Hutton spa director of Bath, was re-elected honorary secretary.

Under the title of "Hospital Medical Library Suggestions" the issue of the *Journal of the American Medical Association* for March 27 which is a hospital number, contains a selection of leading British and American journals and textbooks suitable for a hospital library.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL, B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1.

ORIGINAL ARTICLES AND LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone, unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names, not necessarily for publication.

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QUERIES AND ANSWERS

Achondroplasia

W. R. (Belfast) writes: I have under my care at the moment a boy of 1½ years suffering from the above. He is an only child and his parents are greatly disappointed that his condition should be considered incurable. I would be grateful for any suggestions regarding causation and treatment.

Asthma Query

"P.L.E.A." writes from South Africa: My son aged 4 years has been suffering from bronchial asthma since he was 2½ years old. The condition followed the removal of congenital adenoids. The attacks are experienced every four to six weeks and usually follow an acute coryza. So far I have been unable to identify the offending allergen which must be present daily to produce the constant rhinitis, and which is so intensified by the advent of a cold as to cause an attack of asthma. Frequent investigations of the nose for sinusitis and of the diets have not helped. I would be glad if some reader could suggest a diet free from milk and cereals which will be tasty and appetizing. Would an autogenous vaccine or a stock anti-catarrhal vaccine be of use in preventing attacks?

Iodine in Pulmonary Tuberculosis

Dr. H. A. MURRAY (Exeter) in reply to Dr. W. O. C. Hunt (*Journal* April 24 p. 900) writes: I remember that Dr. Guy, one time assistant M.O.H. for Edinburgh, was trying this method of treatment about 1923 and I believe he intended to incorporate the results in a book. Again in 1926 in my thesis for M.D. Edinburgh I suggested that iodine would prove to be the most valuable drug in the treatment of pulmonary tuberculosis.

Income Tax

Co-operative Stores Dividend

"Y." inquires whether he should include in his return dividends received as a member of the local retail co-operative store.

"*." Interest received from deposits with a co-operative society is liable to assessment, and so are dividends received on shares in such societies, but the so-called "dividends" paid in respect of purchases are not liable to tax and should not be shown on the form of return.

Nursing Home Fees Car Replacement

"J. A." inquires (a) whether nursing home fees paid for oneself are allowable, and (b) what allowance he should have if he replaces a 14 h.p. car bought in 1930 for £285 for another of similar h.p. which will cost £265 less, say £10 allowable for the old car. Depreciation has not been claimed.

"*." (a) The fees are not allowable, they are personal rather than professional expenses. (b) If cost of replacement is claimed the amount allowable as an expense of 1937 will be £265 - (say) £10 = £255—that is the actual out of pocket expenditure in the circumstances it is preferable to claim the obsolescence allowance, which is £285 - (say) £10 = £275 or £265 whichever is greater.

LETTERS, NOTES, ETC

Kitchen Offices in Hospitals

A Chadwick Trust Lecture on the plan and equipment of kitchen offices in hospitals and other institutions was given by Miss R. Whitaker, principal of the Gloucestershire Training College of Domestic Science at the Royal Sanitary Institute on April 15. The lecturer referred to the astonishing effects on output which followed the application of scientific studies to the layout of factories and training workers. Application of the same principles to the women's workshop had been unduly delayed, but it was now attracting much attention in the effort to lessen drudgery and make domestic work more attractive. While the principles were the same whether for the kitchen of the council house or for the great hospital or school, the result in the elimination of unnecessary labour, improvement in standard of output and of health and contentment of workers was naturally immensely greater in the institution. The first essential was rational planning, based upon certain simple principles which however usually required the aid of the expert in their application, since probably no two sets of conditions were identical and the alteration of the position of a single item of apparatus might destroy the efficiency of the whole plan. The essentials were that raw materials should enter the building as near as possible to the place where they would be stored until they were used. Each item which was to form part of the meal or meals undergoing preparation should travel steadily forwards through the various processes of preparation with no backward movements and as little cross-tracking of workers as possible, until the finished product was assembled in the hot or cold closets of the service. Miss Whitaker showed slides illustrative of the application of these principles in industry and of their contravention in the kitchens of even modern institutions where the plotting of the workers' movements produced wild confusions of line such as might have been made by a mouse in a cage. The lecture will be printed in full in the June number of *Nosokomeion*, the official organ of the International Hospital Association, published at Buchschlag, Hessen, Germany.

Another Warning

Dr. G. L. DAVIES (London SW6) writes: I should be glad to know if any of your readers have been called upon by a slight delicate-looking young man (usually wearing a bowler hat and a blue overcoat) who sells potentiometers to enable ophthalmoscopes, etc. to be illuminated from the house circuit. I have seen him once in the North and twice down here, and on the last occasion he prevailed upon me to pay him 10s. (plus 3s. 6d. for certain accessories) for one of his potentiometers, which he normally sold (so he said) for £2 15s. He told me a story about having run out of money, and having nothing to pay his fare home. He left no address and the accessories have never arrived. One of the local doctors who is also supposed to have bought one of these articles has just told me that he didn't. An electrician who dismantled the apparatus said the components were of the cheapest and the handsome piece of chrome steel which formed the panel for the switch etc. is nothing but a piece of brass chromium plated. I was warned that there was a great risk in using the instrument as the flex is much too thin to stand the average voltage in a house.

Corrigenda

Dame LOUISE MCILROY writes: I would be glad if you would kindly correct a mistake I made in the manuscript of my paper on surgical intervention in obstetrical practice (*Journal* April 17 p. 800). At the paragraph referring to the third stage of labour, "Injection of saline solution into the umbilicus in some cases effects delivery of the placenta" should read "Injection of saline solution into the umbilical cord in some cases effects delivery of the placenta."

We regret that by a slip of the pen the name of Miss Susan Musson, general secretary of the National Council for the Unmarried Mother and her Child, was incorrectly given in a paragraph about her pamphlet *The Unmarried Mother* published last week at page 876.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

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Essential Hypertension

L. HANTSCHMANN (*Klin Wschr* March 13, 1937, p 378) is of the opinion that a certain proportion of cases of essential hypertension is due to endocrine dysfunction. He points out that hypertension and disturbances of carbohydrate metabolism occur characteristically in Cushing's syndrome, in which hyperfunction of the pituitary appears to be the commonest aetiological factor. The presence of hypertension in Cushing's syndrome on the one hand and the diabetic tendency in cases of hypertension on the other led the author to investigate the blood pressure in 452 diabetics. He found that hypertension was more common in diabetics than in normal persons of the same age, and that it was more often present in the mild hypophyseal diabetes of old age than in the grave pancreatic diabetes of the young. Examination of the blood sugar in patients with essential hypertension showed that in more than 50 per cent the blood sugar values were raised and that carbohydrate tolerance was lowered. Hantschmann shows that the problem of the hormones producing vasoconstriction is not yet solved. He points out that the posterior pituitary hormone only raises the blood pressure slightly, and that the presence of adrenaline in the blood of patients with essential hypertension has never been proved. He was able to produce hypertrophy of the adrenals in five guinea pigs into which he injected posterior pituitary hormone daily for a year. Hypertrophy was most noticeable in the zona fasciculata of the cortex. He suggests that essential hypertension may be due to a corticotrophic hormone engendered by an abnormal interrelation between the pituitary and the adrenals.

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Gastric Haemorrhage

H. J. USTVEDT (*Tidsskr norske Lægeforen* March 15, 1937, p 289) reviews the experience of the Ullevaal Hospital in Oslo since the beginning of 1934 with regard to the treatment of gastric haemorrhage. In the author's department of this hospital 113 patients were treated for haematemesis or melaena. Of the fourteen deaths as many as seven were traced to cirrhosis of the liver. The remaining seven patients suffered from gastric ulcer and five of them were over 50, two being over 70. The practice has been adopted during the past year of estimating the urea content of the blood in every case of gastric haemorrhage and Ustvedt has almost invariably found the concentration of urea in the blood above normal in many cases very much so. It is probable that this uraemia is in most cases of extrarenal origin—a condition described by the French as *azotémie par manque de sel*. The author's own experience and the literature agree on the influence of age on the mortality: very few patients dying of gastric haemorrhage under 40 and most being over 60 at the time of death. Age also plays a part in the choice of treatment: the older the patient the more likely is he to suffer from complicating ailments contraindicating an operation. The author's own attitude to operative treatment is very reserved and he concludes that in very few cases should a gastric haemorrhage require an operation. Only in one of his cases that of a man aged 31, who died of a large duodenal ulcer after two blood transfusions might an operation conceivably have saved life.

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Myalgia and Infection

M. CLAMANN (*Med Welt* March 6, 1937, p 313) points out that myalgia is not a sharply defined clinical entity. He understands by this term sudden acute attacks of muscular pain—for example lumbago. The sudden and inextinguishable onset of pain following an ordinary movement is the characteristic symptom of the condition. An increased sensibility to pain must be present in order to give a pathological reaction to a normal stimulus. Clamann is convinced that this is due to infection. From careful observations on himself and his patients he states that myalgia occurs usually in the presence of infection which should be looked for. Thus cervical and lumbar myalgia may arise in the course of an acute infection of the tonsils and nasopharynx appearing before, during or after such an infection. The apparently acute onset of pain is due to faulty observation. The acute attack is preceded by a number of lesser often unnoticed, pains in the muscles. There is usually then a painless interval followed by the acute attack. Myalgia may remain in the 'prodromal' stage as one link in a chain of non specific symptoms of acute infection. Not only is the sensibility changed but also the muscular motility, as shown by facial expression, tired demeanour, lassitude, etc. Myalgia appears as the primary disease when pain overshadows the clinical picture of infection. Conversely it appears as secondary when acute infection overshadows the picture. Clamann admits that climate, alcohol, muscle activity and psychic depression are also aetiological factors but he believes that they are only secondary to infection.

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Some Forms of Meningitis

B. A. PHOTAKIS (*Z. Tuberk. Bd 77 Heft 3, 1937, p 177*) states that a number of cases of meningitis cannot be attributed to any aetiological factor. The majority are secondary to some primary infectious focus in the body. The author describes four types he has met: (1) Meningitis occurring in the course of acute or chronic infectious diseases of a serous or sero-fibrinous type with typical symptoms. (2) Cases of chronic phthisis occur in which tubercles are found in the meninges and in which (a) meningeal symptoms have been present and (b) have not been present before death. Of sixty-nine post-mortems twenty-two belonged to group (a) eight to group (b). Photakis is convinced that tuberculous meningitis stated to be always fatal is recovered from in a small percentage of cases or passes into an abortive chronic form. Relapses occur from a flaring up of latent foci. Meningeal symptoms are recognized clinically only when the tubercles are active never when they are in an inactive chronic state. (3) There are cases of chronic phthisis in which although meningeal symptoms have been present no miliary tubercles are discovered in the meninges post mortem. Thus in a number of cases of phthisis a non specific meningitis arises but the patient recovers. The author shows that the diagnosis of tuberculous meningitis is too often made on the history of phthisis and meningitis and on the finding of bacilli in the cerebro spinal fluid. Non-specific meningitis may be accompanied by meningeal symptoms: turbid fluid, lymphocytosis and lowered glycogen content. Only the finding of miliary tubercles in the meninges at necropsy allows of a positive diagnosis.

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Narcosis in Graves's Disease

E. FENZ (*Wien Arch inn Med* February 28, 1937, p 15) has investigated the basal metabolism of healthy individuals and of patients suffering from Graves's disease treated with large doses of veronal (0.5 gramme three times a day for three days) and of prominal (0.2 gramme three times a day for three to seven days). In healthy individuals the treatment produced only a slight decrease in the basal metabolism whereas in Graves's disease the decrease was very pronounced during the administration of the drug and in a number of cases the rate of the basal metabolism even descended to normal. The re-

usually increased again a few days after the cessation of the action of the drug. The excretion of water as ascertained by the Volhard test was very copious before the treatment, but decreased during it. In the majority of cases of Graves's disease the blood sugar curves were of the insulin resistant type but under the influence of the narcotics the resistance to insulin decreased. The drug also produced changes in the values of blood cholesterol, blood carotin and in the alkali reserves. There was a definite decrease of the excitability, a decrease of the pulse rate and in a few cases a decrease of the thyroid swelling but the exophthalmos remained unchanged. The author suggests the use of these narcotics as a preliminary to surgical operation. The favourable action of the drug may be explained either by a decreased activity of the thyroid through the inhibition of the diencephalon under the influence of the drug or through a decrease of the sensitiveness of the diencephalon to thyrotoxin.

Surgery

343 Subcutaneous Rupture of the Tendo Achillis

L. DEJARDIN and A. VAN RENTERGHEM (*Bruit méd* February 7 1937 p 545) point out that subcutaneous rupture of the tendo Achillis is comparatively rare, and describe fully several personal cases. The immediate cause of rupture is usually a fall or strain or some sudden movement of the leg or foot. Symptoms vary in different cases. There may be great pain with complete loss of function but in some instances pain is only slight and the patient is able to walk without much difficulty. In two cases reported the rupture was accompanied by a noise similar to the breaking of a cord. In recent cases there was swelling, ecchymosis, and limitation of movement in the foot particularly of extension. In cases of long standing there was rapid fatigue limitation of movement and the presence of a gap in the tendon at the site of rupture. It is of the greatest importance that operation which is the only satisfactory method of treatment should be carried out as soon as possible. By this means it is possible to clear out the haematoma and restore the continuity of the ruptured tendon. The operative active mobilization can take place at an early date thus preventing the formation of adhesions. The drawing technique which is fully described, consists of the ends together by light traction of the ruptured ends and suturing with silk and fine catgut. Occasionally a graft may be necessary if the ends cannot be brought together satisfactorily. In the cases described the functional result was good and in one instance walking was possible at the end of a fortnight. It is suggested that in cases in which there is no obvious cause for the rupture some condition such as diabetes, syphilis or overdevelopment of the leg muscles may be a contributory factor in producing the lesion.

344 Facial Injuries in Motor Accidents

C. STRAITH (*Rev. Chir. structure* December 1936 p 403) divides the facial injuries resulting from motor accidents into two groups: those which occur to the driver and those suffered by the passenger. As the driver is protected by the steering wheel he frequently emerges without injury but if he releases his hold on the wheel his injury usually consists of laceration and contusion of the chin associated with fractures of the mandible or damage to the upper jaw. Usually the passenger in front receives the worst injuries with fractures and depressions of the maxilla and malar bones or involvement of the orbit and eyeball. The procedure to be carried out consists of careful inspection and cleansing of all wounds and removal of foreign bodies. Hurried closure of wounds with skin clips and heavy suture materials is to be condemned. Cleansing must be followed by careful pal-

pation of all facial bones: separation of the malar attachments, depressions and eversions of the zygoma and depressed malar fragments at the infra-orbital foramen may thus be detected. Anaesthesia of the lateral surface of the nose and upper lip on the affected side is a frequent finding in these fractures. Palpation of the nose followed by inspection of the oral cavity to detect maxillary lesions, displacement of the maxilla caused by transverse fracture or midline or unilateral maxillary mandibular fractures or fractures of the necks of the condyles may be suspected. Severed portions of skin should be replaced and sutured then covered by a pressure dressing. After the wound has been cleansed and the skin edges trimmed buried dermal sutures are placed to relieve tension. The surface is approximated with a subcuticular horse hair suture, which may be removed in forty-eight hours. Simple nasal fractures can be corrected by thumb pressure under local anaesthesia but nasal bones that are torn loose from the frontal bone must be wired in position. The treatment of other fractures of the facial bones is fully described but emphasis is laid on the fact that no plastic procedure should be undertaken until two months after all traces of infection have disappeared.

Therapeutics

Pellagra and Polyneuritis

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S. PETRI and O. WANSCHER (*Acta med. scand.* March 16, 1937 p 370) report from a hospital in Copenhagen their observations on five patients suffering from pigmentation of the skin, stomatitis, psychic disturbances and polyneuritis and treated with human gastric juice or preparations of hogs stomach. The human gastric juice was obtained by Ewald's test meals and was filtered through cotton immediately after removal from the stomachs of normal and hyperchylous persons not suffering from tuberculosis. The preparations of hogs stomach were obtained by alcohol treatment and desiccation. During the experiments the patients received no other treatment. Three of them suffered from alcoholic polyneuritis with mental disturbances and one from chronic achylia. Although the stomach preparations were given in small quantities and over a short period their effect on almost all the symptoms was surprisingly rapid. The general condition also improved rapidly and there was a considerable gain of weight. The achylia was not affected and there was little or no change in the blood picture. The authors conclude that the administration by the mouth of stomach preparations is so effective in pellagra that the condition may be due to a deficiency or absence of a substance normally existing in the stomach. Their experiments on animals confirm this opinion.

346 Blood Transfusion in Pulmonary Tuberculosis

P. BOURGEOIS, H. GISELBRESCH and S. COMMERSOY TEYSSIER (*Rei. Tuberc.* February 1937 p 150) review their experiences during eighteen months with seventy blood transfusions in cases of pulmonary tuberculosis in a sanatorium. No difficulty was experienced in finding donors nor did any accident from faulty technique occur. The authors do not consider this treatment indicated as an anodyne placebo for hopeless cases in which it may hasten rather than delay death. It should not be attempted when the patients are cachectic, when for several weeks their temperatures have oscillated wildly or when the extent of the pulmonary lesions is such that there is no hope of recovery. But there is a strictly limited field of usefulness for this treatment in other than certain cases of haemoptysis provided the recuperative capacity is not grossly impaired. In such patients blood transfusion repeated every ten or fifteen days for some time

may have a beneficial effect, transfusions of only 100 ccm being sufficient. The three main indications for this treatment are profuse haemorrhages, recurrent haemorrhages, and inability on the part of the patient to benefit from other standard methods of treatment. The authors classify their cases according as the results of this treatment were good, bad, or indifferent, and they recommend it only to those physicians who are prepared to employ it with strict discrimination. Its beneficial psychic effects are far from negligible.

347 Insulin-depot Therapy

G KATSCH and K KLATT (*Med Klinik* March 12, 1937, p 369) describe the advantages and the technique of administration of insulin-durante, which when injected in the gluteal muscles forms a depot of insulin. This depot is absorbed slowly and gradually so that injections may be given every twenty four, forty-eight, or seventy two hours according to the severity of the diabetes. Insulin durante consists of insulin incorporated in a mixture of lipoids. Certain substances are added to the preparation to delay its absorption by the blood stream. The same principle of preparation and administration has been applied to a number of other drugs, such as morphine, atropine, scopalamine etc.

Laryngology

348 Sphenoid Osteomyelitis

L J LAWSON (*Arch Oto laryng* Chicago January 1937 p 1) reports two cases of osteomyelitis of the sphenoid bone. A child aged 6 had a bilateral otitis media with mastoid abscesses. Both mastoid regions were opened and drained. Two weeks after apparent cure there was a recurrence of otitis on the left side with diplopia and headache. Ten days later a rapidly fatal basal meningitis developed. Necropsy revealed osteomyelitis of the sphenoid bone, produced by an extension from an osteomyelitis of the apex of the left petrous bone. A woman aged 33 had acute middle-ear suppuration on the right side with very severe pain. The discharge of pus from the meatus remained profuse for four and a half weeks. Then a thorough mastoidectomy was performed. Some three weeks after apparent recovery there was a sudden change for the worse. The first diagnosis was meningitis but this was later changed to thrombophlebitis of the large neck veins and septicaemia. Multiple skin incisions were made for the drainage of deep cervical abscesses in the posterior part of the neck. The right jugular and facial veins were tied but these operations did not save the patient. Necropsy showed osteomyelitis of the sphenoid bone. The usual complications of this are either basal meningitis or thrombosis of the cavernous sinuses. Neither of these developed but the process took the unusual outlet of posterior cervical thrombophlebitis with abscess formation and late septicaemia. Osteomyelitis of the sphenoid bone is rare because the pattern of the blood supply within the red bone marrow accounts for a unique ability to defend itself against invasion by organisms a property possessed to a lesser extent by the petrous apices (Eagleton). When osteomyelitis of the sphenoid does occur it requires extensive surgical removal of the bone beyond infected thrombosed blood vessels. This is not possible by any present-day technique.

349 Early Laryngeal Tuberculosis

N RH BLEGVAD (*J Laryng* March 1937, p 153) gives statistics of 1773 cases of laryngeal tuberculosis. The treatment practically always begins with universal carbon arc light baths as inaugurated by the Finsen Institute. In the last few years the author has also used quartz light baths. If there is no appreciable improvement

within a few months a local operation is done by the indirect method—for example, galvano cauterization, amputation of the epiglottis injection of alcohol into the superior laryngeal nerve or resection of this nerve. In most textbooks on laryngology it is stated that phthisical patients who are susceptible to acute laryngitis are especially disposed to laryngeal tuberculosis. Blegvad is convinced that this belief is wrong and based entirely on theoretical considerations. In the diagnosis of early laryngeal tuberculosis Blegvad lays stress on the following six signs: (1) Isolated redness of a vocal cord, if found in a phthisical patient is a fairly certain sign. The redness resembles a catarrhal affection but is actually tuberculous from the beginning. (2) Swelling and redness of both vocal processes which closely resembles ordinary pachydermia but differs from pachydermia because there is no swelling of the interarytenoid region. (3) Prolapse of the ventricle of Morgagni, which seldom consists in an eversion of the mucous membrane of the ventricle but is a swelling of the mucous membrane of the false vocal cords. The prolapse appears as a long red swelling along the outer edge of the vocal cord either on one or on both sides. Prolapse disappears more or less during phonation, and is most prominent during complete abduction of the vocal cords. (4) There is swelling of the lower surface of the vocal cords. (5) Swelling of the mucous membrane in the interarytenoid region is seen. The author has invented a special back-wall mirror which can be guided down between the vocal cords and displays the interarytenoid region. The image thrown on the small mirror is reflected on to a second laryngeal mirror placed in the usual position. (6) A red cushion appears beneath the commissure.

350 Otogenous Septicaemia in Infants

It is well recognized as B KARBOWSKY (*Ann Oto laryng* December, 1936, p 1230) points out that epidemic vomiting and diarrhoea affecting infants in the late summer and early autumn are often associated with signs indicative of middle-ear inflammation. Many writers maintain that these serious intestinal disturbances in infants are caused by the active or latent middle-ear suppuration. Others believe that the rapid dehydration of the body due to the diarrhoea leads to a diminished resistance and secondary infection of the tympanic cavity. The author undertook a histological study of temporal bones obtained from fatal cases in order to decide what part the middle-ear inflammation plays in the syndrome. There are three possibilities: (1) The middle-ear infection occurs just before death and has little significance. (2) The middle-ear infection is the primary cause of the illness. (3) The middle-ear infection is a complication of the general toxic state. The first hypothesis may be dismissed because signs of middle-ear inflammation have been observed too often during life and many infants have derived great benefit from paracentesis of the tympanic membrane. In some of the fatal cases no pus was found in the tympanic cavity, but the histological examination showed foci of suppuration in the substance of the petrous and mastoid bones pointing to a blood-borne infection rather than to an invasion via the Eustachian tubes. Other histological sections showed foci of thrombophlebitis and small abscesses immediately adjoining the jugular bulb. Such observations may be used in supporting either the second or the third hypothesis. The following explanation of the pathology is probably the correct one. The general infection is caused by an organism of the influenzal group. When the resistance of the patient is sufficient the otitis which is a secondary manifestation of the general infection goes on to suppuration. After incision of the tympanic membrane the infants recover from the ear symptoms as well as from the gastro-intestinal disturbance. On the other hand when the resistance is low the temporal bone foci and more particularly the septic thrombi of small bone veins near the

jugular bulb, become the dangerous factor in the clinical picture. The infants then die of a blood invasion from the ear region.

351 Diathermy Coagulation of the Tonsils

E. MOSER (*Zbl Chir* February 20, 1937, p 458) strongly advocates diathermy coagulation of septic tonsils. The operation is simpler than tonsillectomy, there is less shock and hardly any post-operative pain. Diathermy coagulation can therefore be done even if patients are in a weak state. Two children with severe polyarthritis and obstinate fever were treated in this way with excellent results. After experiencing this treatment himself Moser decided that it was safe to try diathermy coagulation on out-patients and he has treated some ninety cases. Local anaesthesia is produced by painting the tonsils with a weak solution of decaine and subsequent injection of 0.5 per cent solution of tutocaine in three or four places around the tonsils. The author emphasizes that only one diathermy application is made in each tonsil—namely, in the part of the tonsil where the septic focus appears to be—and sometimes only one tonsil has to be treated. In some patients only one side is coagulated and the other side is done after an interval of seven to ten days. The portions of the tonsils which remain after the slough has separated are harmless and can be looked upon as healthy tonsil remnants.

Obstetrics and Gynaecology

352 Carcinoma of the Female Urethra

T. P. SPARKS, jun and W. H. PARSONS (*Urol cutan Rev* February 1937, p 157) who have collected 119 cases from the literature as well as a personal one in a patient aged 75 in whom the growth was successfully excised, state that carcinoma of the female urethra, though uncommon is not so rare as the number of reported cases would suggest. The ages of the patients ranged from 26 to 75, the average age being 54. Of the 119, fifteen survived three or more years after treatment. Of forty received surgical treatment alone and of these two lived three years and one five years after operation. Of thirty treated by radium or deep x-ray therapy six survived three years or more and five were living at the end of five years. Of twenty one treated by a combination of some surgical procedure with radium or deep x-ray therapy seven lived three years or longer and five lived five years or longer after treatment. Of seventeen with inoperable glandular involvement only one survived. Six were treated by operation alone and none survived three years. Seven by radiation alone and none survived three years. Three by a combination of operation and radiation and two survived three years or longer. One nine years. One patient had no treatment. The prognosis in carcinoma of the female urethra is exceedingly poor though not hopeless. The authors conclude that desiderata for successful treatment are examination of all patients with painful micturition, early diagnosis of the malignant type and complete excision in the early stage.

353 Chorion Epithelioma and Hydatidiform Mole

B. ZONDEK (*J Amer med Assoc* February 20 1937 p 607) now writing from Jerusalem recalls that in hydatidiform mole and chorion-epithelioma the production and excretion of gonadotropic substance may be immensely increased so that huge amounts appear in blood, urine and spinal fluid. The significance of hormone tests in hydatidiform mole is dependent on the exclusion—which clinically should be easy—of a pregnancy toxæmia in which almost equally large amounts may be excreted. If a positive luteinizing reaction (Grade III in the Zondek

Asehheim test) is given by the spinal fluid hydatidiform mole may be diagnosed. If the pregnancy test remains positive six weeks after the discharge of a mole and if the urinary gonadotropic hormone has progressively increased, chorion epithelioma is probable—especially if a positive reaction is found in the spinal fluid. If after hydatidiform mole the pregnancy test, at first negative, later becomes positive a chorion epithelioma is possible, but it is very important to remember that there may be a new pregnancy. The presence of at least 416 mouse units of luteinizing factor per litre of urine points to chorion-epithelioma if a second pregnancy can be excluded. In chorion epithelioma the urine usually contains much more than such a content of luteinizing hormone—up to 1,000,000 units per litre. The hormone assay of the urine is of great prognostic importance after operation for chorion-epithelioma. Clinical improvements are often deceptive and a return of luteinizing substance in the urine points to an early metastasis—for example in the lung. Zondek confirms the apparently paradoxical finding that in normal pregnancy as well as chorion epithelioma the anterior pituitary contains little or no gonadotropic hormone.

Pathology

354 The Sedimentation Test in Tuberculosis and Syphilis

F. SCHEIDEMANDEL (*Disch Tuberkul* March 1937, p 69) has found in an institution serving as a clearing station for definite and doubtful cases of tuberculosis that the rate of sedimentation of the erythrocytes is a valuable guide to differential diagnosis although this test is not specific but is merely indicative of inflammatory and destructive changes in the body. He gives details of four cases common to which were little or no radiological evidence of active pulmonary tuberculosis. In doubtful clinical signs of active pulmonary tuberculosis, tuberculin reaction, of it a negative intracutaneous tuberculin reaction, positive Wassermann reaction and a remarkably high rate of sedimentation. The contrast between this high rate and the negative findings on radiological and physical examination of the chest was striking. This experience has taught the author to require a Wassermann test whenever the findings of the sedimentation test could not be accounted for by reference to pulmonary tuberculosis and in the course of the last two years he has, by taking this precaution been able to provide anti-syphilitic treatment for seventeen patients the nature of whose disease had not previously been recognized. A rapid rate of sedimentation may well be due to untreated secondary syphilis whereas in tertiary syphilis this rate is comparatively slow. Indeed, it is almost normal in latent forms of syphilis in which the Wassermann reaction is negative. When it is positive but the syphilis is latent the sedimentation rate is only slightly raised. When a tuberculous process is slight and scarred and is not calculated to have any effect on the rate of sedimentation a high rate should raise suspicions of Wassermann positive syphilis running a more or less latent course.

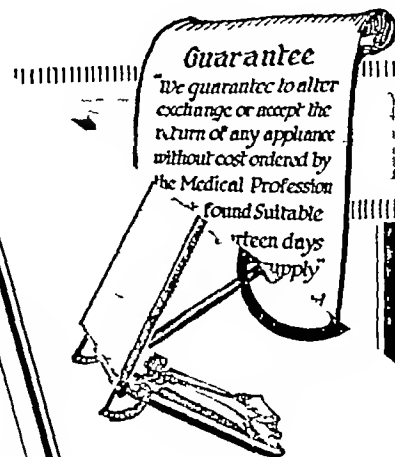
Fatal Bleeding

355

S. M. LEITESS (*Arch Sci Biol* 1936 vol 41 p 133) has investigated the distribution of blood in the different blood vessels following profuse bleeding. Bleeding from the aorta causes more rapid death than bleeding from the femoral artery although more blood is lost in bleeding from the latter. The blood content of the brain and other internal organs is high following bleeding from the aorta but is low following bleeding from the carotid artery. There is no relation between the blood contents of the brain and of the other internal organs. In the brain itself the distribution of the blood varies from one part to another: the medulla and pons usually contain little blood while much blood is found in corpora quadrigemina.

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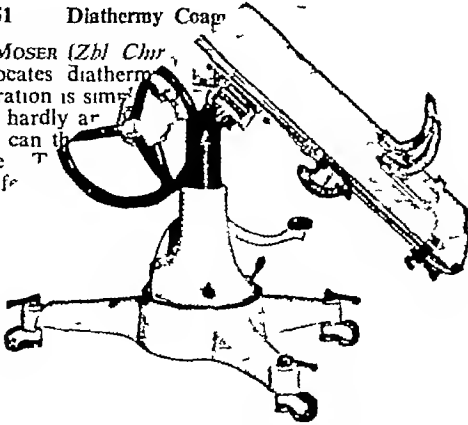
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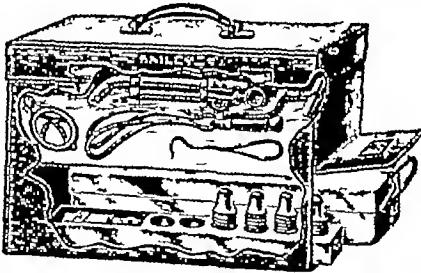
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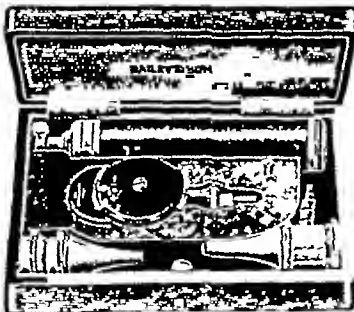
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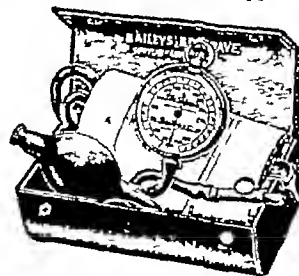


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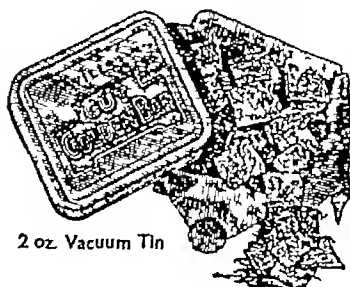
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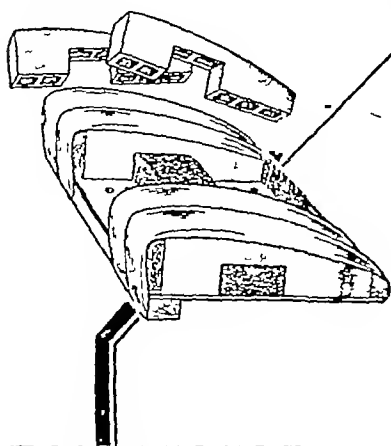
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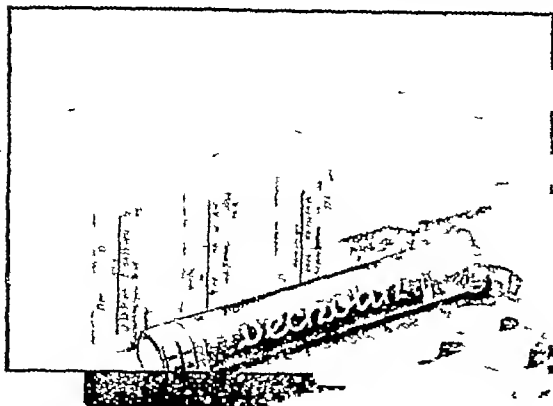
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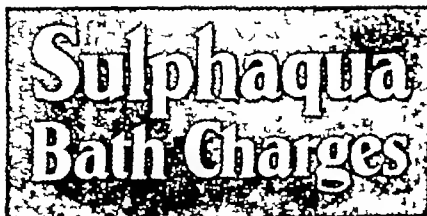
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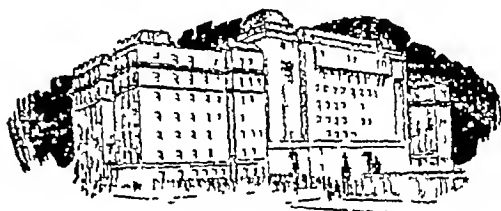
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Institute of Pathology and Research

ST MARY'S HOSPITAL, LONDON, W 2

A Course of Lectures on **PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE** has been arranged for the SUMMER SESSION. These Lectures will be given in the Lecture Theatre of the Bacteriological Department of the Institute, on **TUESDAY AFTERNOONS** at 5 p.m. The second and third lectures of the series will be the following —

MAY 4th

FRANCIS MARTIN ROUSE WALSHE MD
(Physician i/c Neurological Dept University
College Hospital)

SUBJECT

"Some General Principles in Neurological
Diagnosis"

Synopsis furnished by the lecturer —

The central nervous system is not accessible to any form of direct observation. Therefore the recognition of disease within it depends upon the finding and interpretation of disorders of function and structure in tissues innervated by it.

In this recognition the applied anatomy and physiology of the nervous system play an important part but since the disease process and the body's reaction are dynamic diagnosis depends not only upon the observation of signs at any given time but also upon a study of the sequence of events. There is a time factor as well as a spatial in clinical diagnosis.

Direct clinical study of the patient must precede pathological instrumental and surgical methods of diagnosis. Any other sequence is irrational and unsafe.

The study of physical signs has not only a practical usefulness but for the neurologist also an unsuppressed interest for the light it throws upon the normal functions of the nervous system. The maintenance of this second interest has always been a distinguishing feature of the English school of neurology.

MAY 18th

WILLIAM ROBIN THOMPSON
PhD DSc FRS
(Asst. Director The Imperial Institute of
Entomology)

The Biological Control of Insect and Plant
Pests (With Cinema film)

(The Synopsis furnished by the lecturer will appear in next week's advertisement.)

These Lectures are open to all members of the Medical Profession and to all Students in Medical Schools without fee.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL

MARYLEBON ROAD, N.W.1

Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admissions being primiparous cases). Over 700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 6000 attendances per annum. Clinical demonstrations are given by the Staff daily.

For rules, fees, etc. apply to H. D. Stokes, Secretary-Superintendent.

CITY OF LONDON MATERNITY HOSPITAL

(Incorporated by Royal Charter)
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Midwifery Training School

PRACTITIONERS and MEDICAL STUDENTS admitted to Hospital Practice with operative Midwifery and Obstetrical complications—nearly 800 patients annually. Fees £10 per month or £8 10 per fortnight (inclusive of board and residence).

PUPILS trained as Midwives in accordance with C.M.B. regulations. Reduced fees under Ministry of Health Scheme. Senior Tutor on Staff. Post-graduate Courses in Anaesthetics. Phone: CLEVENELL 571.

POST GRADUATE COURSE IN VENEREAL DISEASES

LEICESTER ROYAL INFIRMARY

A 12 months COURSE OF INSTRUCTION in the DIAGNOSIS and TREATMENT of VENEREAL DISEASES, male and female, will be given by C. HENRI, M.D., M.B., Ch.B., B.S., Medical Officer in Charge, Male V.D. Department.

The Course will include lectures, lantern demonstrations and clinical work. The class will be limited to 12 in number. The Course will begin in May 1937 and will continue until the end of October (third fortnight of July and first fortnight of August excepted).

Attendance at this Course will qualify, subject to the other conditions made by the Ministry of Health, for the certificate enabling the possessor to hold the position of a V.D. Medical Officer under the Council of a County or County Borough.

A minimum of 120 hours attendance must be put in.

Those intending to take the Course should send in their names to the Medical Officer in Charge before May 15th.

Further particulars obtainable on request. Fee £10 10s.

DIPLOMA IN OPHTHALMOLOGY DIPLOMA IN RADIOLOGY DIPLOMA IN LARYNGOLOGY AND OTOTOLOGY

Short Intensive Revision Courses, Oral and Postal in preparation for these Diplomas.

For full details write SECRETARY, Medical Correspondence College, 19 Webster Street, W.1.

MEDICAL SICKNESS, ANNUITY & LIFE ASSURANCE SOCIETY, LTD

NOTICE IS HEREBY GIVEN that the ANNUAL GENERAL MEETING of the Society will be held on MONDAY, MAY 10th at 4.30 p.m. at the Society's Head Office, Lincoln House, 96-100, High Holborn, W.C.1.

By Order of the Board

BERTRAM SUTTON,
Manager & Secretary

April 21st 1937

STAMMERING SPEECH DEFECTS

BEHNKE METHOD. Estab. 1850. Cases non-recurrent treated at 39, Earl's Court Square, S.W.5 and in residence in the Summer Holidays, at Miss BEHNKE's house on the Chilterns.

Presenting notes in the evening and treatment of stammering and other speech defects—2 times. Thoroughly logical and practical—4 years. The method is the officially recommended by the Ministry of Education.

STAMMERING CLEFT PALATE SPEECH LISPING. Mrs. M. BEHNKE, 39 Earl's Court Square, S.W.5.

ADVICE ON THE CHOICE OF SUITABLE SCHOOLS AND TUTORS

for BOYS and GIRLS with prospectuses of recommended establishments will be given free of charge to parents stating age of pupil, district, preferred range of fees and type of school required.

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ST GEORGE'S HOSPITAL MEDICAL SCHOOL

(UNIVERSITY OF LONDON)
11 Hyde Park Corner, London S.W.1

During the Summer Session, Sir LUTHERICK HEDDERLEY, M.C., Principal and Dean of the Royal Veterinary College, will give a course of 12 lectures entitled, A COMPARISON OF DISEASES IN ANIMALS AND MAN.

The lectures will be given in the large Lecture Theatre on Mondays at 5 p.m. beginning on MAY 4th and will be illustrated by endoscope and cinematograph.

They will be open to all members of the Medical Profession and Medical Students without fee.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL

Denmark Hill S.E.5

ADVANCED MEDICINE COURSE

A COURSE IN CLINICAL MEDICINE, PATHOLOGY, MORBID HISTOLOGY AND BIOCHEMISTRY suitable for M.D. and M.R.C.P. examinations will be given for seven weeks commencing on May 9th.

The class is limited in number. The next Course will be held from February to April 1938.

UNIVERSITY OF LONDON

A Course of three Lectures on "THE ECONOMIC MECHANISMS AS A CONDITION OF THE BODY'S ADAPTATION TO INCREASED ACTIVITY" will be given (in English) by Professor Dr. H. REIN (Director of the Physiological Institute in the University of Göttingen) at UNIVERSITY COLLEGE LONDON (Gower Street W.C.1) on MAY 1st, 4th and 6th at 5 p.m. At the last Lecture the Chair will be taken by Prof. C. A. LEVITT, F.R.C.S., D.Sc., LL.D., F.R.C.I., F.R.S. (Honorary) Professor of Physiology in the University. Tickets and lantern slides.

Admission free without ticket.

S. J. WORSLEY, Academic Registrar

NORTH EAST LONDON POST GRADUATE COLLEGE

PRINCE OF WALES'S GENERAL HOSPITAL, N.15

The Practice of this Hospital is limited to Medical Practitioners. Particulars from J. BROWNING, ALEXANDER, M.D., Dean.

FRCS (Edin)

POSTAL AND ORAL COURSES

Full details of above and Private Tuition—H. C. GIBB, F.R.C.S., Surgeon's Hall, Edinburgh.

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY CHAIR OF BACTERIOLOGY, tenable at University College Hospital Medical School. Salary £1,000 a year. Applications (1. copies) must be received not later than first post on May 14th, 1937, by the Academic Registrar, University of London, W.C.1, from whom further particulars should be obtained.

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Work also Private Tuition.

COUNTY BOROUGH OF CROYDON PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from qualified Medical Practitioners for the appointment of an Assistant Medical Officer of Health and Assistant School Medical Officer.

Applicants must be Medical Men holding a special qualification in State Medicine or a Diploma in Public Health and must have had three years experience of the practice of medicine since obtaining their medical qualification.

Preference will be given to applicants who—
(a) Have had some definite experience of School Medical work
(b) Have enjoyed special opportunities for the study of Diseases in Children
(c) Have had experience in Infectious Diseases and
(d) Have held one or more Resident Hospital appointments

The candidate appointed will be required to produce a recent satisfactory medical certificate of health and to devote the whole of his time to the duties of the office.
The salary will be £500 per annum rising by annual increments of £25 to a maximum of £700 per annum. The post is designated under the Local Government and Other Officers Superannuation Act, 1922.

Applications to be made on forms to be obtained by sending a stamped addressed foolscap envelope to the Medical Officer of Health Public Health Department Town Hall Croydon to whom they should be returned accompanied by copies (not originals) of not more than three testimonials of recent date not later than 10 a.m. on Wednesday May 5th 1937 endorsed "Assistant Medical Officer of Health".

Canvassing in any form is prohibited.
JOHN M. NEWMAN
Town Clerk

Town Hall
Croydon
April 14th 1937

COUNTY COUNCIL OF MIDDLESEX

HILLINODON COUNTY HOSPITAL, UXBRIDGE.

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £250 per annum together with board lodging and laundry. Candidates must be registered medical practitioners who have held resident appointments in a general hospital. Experience in anaesthetics is desirable.

The officer appointed will be required to work under the control of the Medical Superintendent and to devote his whole time to his official duties.

The appointment which will be subject to medical examination is for a period of six months in the first instance may be extended for an additional six months and is subject to one month's notice on either side. At the expiration of one year a service the officer appointed will leave the Council's service unless promoted to a higher grade. Relationship to any member or officer of the Council must be disclosed in the application.

Applicants, stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 15th 1937. Applications are not provided. Envelopes must be endorsed Junior Assistant Medical Officer Hillinodon. Canvassing directly or in directly will be a disqualification.

C. W. RADCLIFFE, Z.
Clerk of the County Council

Middlesex Ouldhall
Westminster S W 1
April 2nd 1937

COUNTY BOROUGH OF WOLVERHAMPTON

NEW CROSS HOSPITAL (350 Beds)

ASSISTANT MEDICAL OFFICER (RESIDENT)

Applications are invited from single gentlemen duly qualified for appointment as Assistant Medical Officer at the above hospital which contains Medical, Surgical, Maternity, Children's and Isolation Departments and is modernly equipped. Experience in anaesthetics a knowledge of clinical pathology and previous hospital experience will be deemed additional assets.

Salary will be at the rate of £200 per annum with apartments, board attendance, etc.

The appointment will be limited to a term not exceeding one year.

Further information as to the duties, etc., may be obtained from the Medical Officer of the hospital.

Applications, stating age, qualifications and nationality together with copies of recent testimonials should be addressed to
A. G. ALDRIDGE,
Public Assistance Officer

Stafford Street, Wolverhampton.

BOROUGH OF BECKENHAM

ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications for this appointment are invited from registered Medical Practitioners of not more than 40 years of age commencing salary £500-£600 (according to qualifications and experience) rising (subject to satisfactory service) by annual increments of £25 to a maximum of £700 per annum.

Candidates must have had at least three years professional experience and special experience in Ante-natal and Maternity and Child Welfare Work and the work of the School Medical Service. The possession of a Diploma in Public Health will be an advantage.

The person appointed will be required to devote the whole of his or her time to the duties and not engage in private practice. Duties to be performed under the direction of the Medical Officer of Health.

The post has been designated as established for the purposes of the Local Government and Other Officers Superannuation Act 1922, and the usual deduction of five per cent will be made from salary. The successful candidate will be required to pass a medical examination.

Applications must be made on forms obtainable from the Medical Officer of Health, Town Hall Beckenham to whom they must be returned (accompanied by copies of three recent testimonials not later than 12 noon on Tuesday May 4th 1937 in envelopes endorsed "Assistant Medical Officer").

Canvassing directly or indirectly will disqualify
C. ERIC STADDON
Town Clerk.

Town Hall
Beckenham
April 15th 1937

COUNTY BOROUGH OF OLDHAM.

Municipal Hospital RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer.
Salary £200 per annum with board residence and laundry.

Candidates should be unmarried.
The appointment will in the first instance be for a period of six months. The successful applicant, however, will be eligible for re-appointment for a further period of six months.

The hospital comprises 375 beds with facilities for gaining experience in medicine surgery midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health Town Hall Oldham and should be returned endorsed "Resident Assistant Medical Officer" as soon as possible but not later than Monday May 17th 1937.

JOSEPH J. WILLIAMS, LL.D.
Town Clerk.

Town Hall
Oldham
April 26th 1937

WEST SUFFOLK COUNTY COUNCIL.

ASSISTANT COUNTY MEDICAL OFFICER AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above whole-time appointment (men or women) which includes duties in School Medical Inspection Maternity and Child Welfare Tuberculosis Venereal Diseases, etc. work. Applicants must be registered Medical Practitioners, and not exceed 35 years of age, holding the Diploma in Public Health. Salary £500 per annum rising by annual increments of £25 to a maximum of £700 plus travelling allowance. Particulars of appointment and forms of application may be obtained from the undersigned by whom applications accompanied by copies of not more than three recent testimonials, must be received not later than May 19th 1937.

Canvassing in any form direct or indirect will disqualify. L. G. H. MUNSEY Clerk of the County Council Shire Hall Bury St. Edmund's May 1st 1937.

CITY OF MANCHESTER EDUCATION COMMITTEE.

APPOINTMENT OF PSYCHIATRIST—PART TIME.

Applications are invited from registered medical practitioners for appointment as Psychiatrist (part time) for Child Guidance work. Candidates should hold a Diploma in Psychological Medicine or its equivalent. They should have had psychiatric experience and in particular experience of child guidance work.

The salary will be £500 per annum. Application forms, with statement of conditions of service, can be obtained from the undersigned. Applications with copies of three recent testimonials must be received not later than May 4th 1937.

Canvassing, direct or indirect will disqualify.
W. O. LESTER SMITH
Director of Education

April 1937

LONDON COUNTY COUNCIL

Applications invited from MEDICAL PRACTITIONERS of at least one year's standing for undermentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available. There is no accommodation for women.

ASSISTANT MEDICAL OFFICERS (GRADE 11).—Salary £250 a year together with board lodging and washing. Appointment for one year only in the first instance (renewable for a second year under certain conditions).

(a) Archway Hospital Archway Road, Highgate, N 19 (2 positions).—Duties of both positions mainly medical but in one some surgery will be required.
(b) Mile End Hospital Bancroft Road Mile End E 1.—Duties mainly medical experience in anaesthetics desirable.

(c) St. Andrew's Hospital Devons Road Bow E 3.—Surgical duties experience of orthopaedics and ear nose and throat work desirable.

(d) St. Luke's Hospital Sydney Street, S.W. 3.—Duties mainly medical experience in anaesthetics desirable.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2A County Hall S.E. 1 returnable by May 10th. Canvassing disqualifies.

LONDON COUNTY COUNCIL

ASSISTANT MEDICAL OFFICERS (men or women) required for mental services. Candidates (under 35 years of age) must (i) be registered to practise both in medicine and surgery in England, and (ii) have held residential position in general hospital for 6 months or comparable general experience. Salary £470 a year rising by £25 to £570 (additional allowance of £50 to holders of D.P.N.). No emoluments. Charges for board lodging etc. (at present £2 9s a week) if required to be resident. Pensionable. In the case of women marriage terminates contract of service.

Application form returnable by May 10th obtainable from Chief Officer (B) Mental Hospitals Department Shell-Mex House Strand W.C.2. Canvassing disqualifies.

LONDON COUNTY COUNCIL

TEMPORARY DISTRICT MEDICAL OFFICER REQUIRED FOR AREA A DISTRICT II (WOOLWICH).—Provisional salary £250.

Person engaged required to carry out duties prescribed by Public Assistance Order 1930 and to reside in or near district. Engagement until March 31st 1938 in first instance. Remuneration and conditions subject to review.

Application form obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2A County Hall S.E. 1 returnable by May 18th. Canvassing disqualifies.

GREAT BARR PARK COLONY (Certified Institution for Mental Defectives)

Applications are invited for the post of JUNIOR (male) ASSISTANT RESIDENT MEDICAL OFFICER. Salary £275 per annum with board residence and laundry. The appointment is for a period of twelve months and offers good experience in Mental Deficiency to a recently qualified Medical Practitioner entering the Public Health or Mental Services.

Applications with copies of not more than three recent testimonials should be sent to the Medical Superintendent, Great Barr Park Colony Near Birmingham not later than May 18th 1937.

METROPOLITAN BOROUGH OF ST PANCRAS

ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Assistant Welfare Medical Officer under the Maternity and Child Welfare Scheme of the St. Pancras Borough Council. This office is required for infant welfare consultations on Tuesday afternoons (commencing on June 1st next) for sessions of two hours at a fee of 14 guineas per session. Applications with full particulars of previous experience in this special work must be received by the undersigned not later than first post on Monday May 10th, 1937.

A. POWELL COKE,
Town Clerk.

St. Pancras Town Hall
Pancras Road NW 1

NORTHAMPTONSHIRE

Applications are invited for a TEMPORARY ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH (male). Salary at the rate of £500 a year with travelling and subsistence allowance according to the County scale. The possession of a D.P.H. is essential.

Applications should be sent to me accompanied by two testimonials or references not later than May 8th.

J. V. MACKINTOSH
County Medical Officer of Health

Health Department
Guildhall Road Northampton
April 4th 1937

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate Study

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than May 31st, 1937

COUNTY BOROUGH OF PRESTON SHAROE GREEN HOSPITAL. MEDICAL SUPERINTENDENT

Applications are invited for the post of Medical Superintendent of the above-mentioned Hospital and of Medical Officer to the Public Institution. The Hospital is appropriated for public health purposes and consists of 20 beds of which 15 are maternity beds. A consultant obstetrician has been appointed and the appointment of a visiting surgeon will shortly be made. There are two Assistant Resident Medical Officers.

Preference will be given to medical men who have had administrative experience and hold higher qualifications in medicine.

Salary at the rate of £850 rising by biennial increments of £50 and a final increment of £130 to a maximum of £1060-10s. per annum. The salary is inclusive of house, coal and light, which are valued at £180 per annum.

The officer appointed will be required to pass a medical examination and to contribute to the Council's Superannuation fund.

Forms of application may be obtained from the Medical Officer of Health Municipal Buildings, Preston and must be returned to the undersigned by first post on May 8th 1937.

HERBERT E. NUTTER

Town Clerk.

Municipal Buildings
Preston

April 17th 1937

THE WELSH NATIONAL SCHOOL OF MEDICINE (UNIVERSITY OF WALES)

JUNIOR ASSISTANT IN THE MEDICAL UNIT

Applications are invited for the full time post of Junior Assistant in the Medical Unit in the Welsh National School of Medicine Cardiff. The appointment is a temporary one for a period not exceeding two years at a salary at the rate of £50 per annum and the person appointed will be required to commence duties on October 1st 1937.

Further particulars of the appointment may be obtained from the undersigned by whom six copies of application accompanied by copies of not more than four testimonials must be received by May 2nd 1937.

S. C. EDWARDS Secretary

The Welsh National School of Medicine
The Parade Cardiff
April 1937

BOROUGH OF LUTON APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOLS MEDICAL OFFICER

Applications are invited for the appointment of Medical Officer of Health and Schools Medical Officer at a commencing salary of £1000 per annum. The question of increments will be considered at the expiration of twelve months service. A motor-car allowance will be paid by the Council.

Candidates must have had a wide practical experience in Public Health Administration including Maternity and Child Welfare and School Medical Services. The person appointed will be required to devote the whole of his time to the duties of the office and will not be allowed to engage in private practice.

The appointment will be subject to the approval of the Ministry of Health and the Board of Education and to the provisions of the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass a medical examination.

Full particulars of the appointment and forms of application may be obtained from the undersigned to whom applications together with copies of three recent testimonials enclosed in an envelope and endorsed "Medical Officer of Health" must be delivered not later than May 10th 1937.

Canvassing directly or indirectly will disqualify
Town Hall W. H. JOHNSON
LUTON Town Clerk.
April 1st, 1937

MEDICAL COUNCIL OF INDIA

Applications are invited from medical graduates of not less than ten years standing preferably having experience of University medical teaching for the post of SECRETARY MEDICAL COUNCIL OF INDIA. Office will be located in Delhi. Appointment from November 1st 1937. Tenure for five years in the first place the first year to be on probation. Pay Rs 1700-5-1500 per mensem. Benefits of the Medical Council of India Provident Fund on permanency provided that if the incumbent is a pensionable servant or a pensioner he will not be eligible to subscribe to the Provident Fund. Will be governed by the Medical Council of India Regulations and Rules. Professional practice will not be allowed. Canvassing will be a disqualification. Applications with copies of testimonials which will not be returned must reach the Secretary Medical Council of India Simla not later than June 15th 1937.

CITY OF SALFORD ASSISTANT MATERNITY AND CHILD WELFARE MEDICAL OFFICER PART TIME. (REVISED)

Applications are invited for the above mentioned permanent post at a salary at the rate of £50 per annum for five sessions per week and £11s 6d per session for any extra services required.

The post is not pensionable. Form of Application and Conditions of Service may be obtained from the Medical Officer of Health 143, Regent Road Salford 5, Lancs to whom the form should be returned accompanied by copies of not more than three recent testimonials not later than Saturday May 8th 1937.

H. H. TOMLINSON
Town Clerk

THE RADIUM INSTITUTE RIDING HOUSE STREET LONDON W 1

Applications are invited for the post of RESIDENT MEDICAL OFFICER (male) Candidates must be unmarried.

The salary will be at the rate of £50 per annum board, residence and laundry being provided and the appointment is for six months commencing May 17th next.

Applications stating age, nationality, qualifications and experience with copies of three recent testimonials must be received at the Institute on or before May 5th next. Canvassing either directly or indirectly is not permitted.

THOS A GARNER
Secretary

WILST KENT GENERAL HOSPITAL (Incorporated) MAIDSTONE (10 Beds)

Applications are invited for the post of HOUSE SURGEON who must be a Male of British nationality.

Salary at the rate of £175 per annum with board apartments and laundry.

Candidates must possess registered qualifications. Applications stating qualifications and experience together with copies of testimonials should be sent to the undersigned not later than May 12th 1937.

The successful candidate will be required to take up residence on May 17th 1937.

EDWARD J GREGG
House Governor and Secretary

ROYAL SOUTH HANTS AND SOUTH AMPTON HOSPITAL.

(280 Beds.)

Applications are invited for the following appointments—

One HOUSE PHYSICIAN
One HOUSE SURGEON
One RESIDENT ANAESTHETIST AND HOUSE SURGEON to the Ear Nose and Throat Department.

One CASUALTY OFFICER for the six months commencing July 1st, 1937 each at a salary of £150 per annum with board lodging and laundry. Candidates must be male and unmarried. Applications, accompanied by not more than three testimonials, should be sent to the undersigned not later than May 22nd 1937.

H. L. TRUSSON

House Governor and Secretary

ROYAL SOUTH HANTS AND SOUTH AMPTON HOSPITAL.

(280 Beds.)

Applications are invited for the appointment of SENIOR HOUSE SURGEON for the period commencing June 1st, 1937 and ending June 30th 1938 at a salary of £200 per annum with board lodging and laundry. Candidates must be male and unmarried, and preference will be given to those holding the F.R.C.S. diploma. Applications, accompanied by not more than three testimonials, should be sent to the undersigned not later than May 15th.

H. L. TRUSSON

House Governor and Secretary

THE GENERAL INFIRMARY AT LEEDS.

(672 Beds.)

RESIDENT MEDICAL OFFICER (male) required Salary £200 p.a. with board residence and laundry etc.

Candidates must be qualified Medical Practitioners and registered and have held a previous Resident Medical post.

The appointment is for twelve months with eligibility for re-election.

Applications, together with copies of three recent testimonials, should be sent to the undersigned at once.

S. CLAYTON FRYERS

House Governor and Secretary

THE GENERAL INFIRMARY AT LEEDS

Applications are invited for the following posts:
(1) RESIDENT ANAESTHETIC OFFICER Salary £149 p.a.

(2) JUNIOR RESIDENT ANAESTHETIC OFFICER Salary £100 p.a.

With the usual residential allowances in each case.

The appointments are for twelve months and six months respectively and subject to renewal.

Candidates must be fully qualified and registered. Applications, with copies of testimonials, to be sent in at once to the undersigned.

S. CLAYTON FRYERS

House Governor and Secretary

April 26th 1937

THE GENERAL INFIRMARY AT LEEDS

RADIO-SURGICAL HOUSE SURGEON (male or female)

Applications are invited for the above post. Salary £100 per annum with board residence and laundry.

The appointment is for six months, subject to renewal. Candidates must be legally qualified and registered.

Applications, with copies of testimonials to be sent in at once to the undersigned.

S. CLAYTON FRYERS

House Governor and Secretary

April 26th 1937

STIRLING DISTRICT MENTAL HOSPITAL.

Larbert.

THIRD ASSISTANT MEDICAL OFFICER required (lady) with previous experience of modern laboratory methods and pathological work. Well equipped laboratory and facilities given for research work. Salary commencing at £250 per annum, with board lodging and laundry. Appointment subject to the provisions of the Asylums Officers' Superannuation Act. Apply stating age, with particulars as to experience in laboratory work and testimonials, to the Medical Superintendent.

BEDFORD COUNTY HOSPITAL.

Wanted at once to take over the duties of SECOND HOUSE SURGEON for a term of six months at a salary of £150 per annum. He must be fully qualified, male, unmarried and with previous hospital experience. Board lodging and laundry.

Applications, stating age, nationality, qualifications, and with three recent testimonials to be sent to the Hon. Secretary H.M. Medical Staff Committee.

HULL ROYAL INFIRMARY

Applications are invited from registered Medical Practitioners for the following post (male)—

SECOND CASUALTY OFFICER vacant now. Salary at the rate of £150 per annum plus board residence, and laundry.

In addition to carrying out duties in the Casualty Department the Officer appointed will act as House Surgeon to one of the Honorary Assistant Surgeons, and will be eligible for promotion to a more senior post when a vacancy occurs.

The appointment will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications, giving particulars of age, experience, and nationality, together with copies of recent testimonials should be addressed to the undersigned.

April 26th 1937

R. J. CARLESS

House Governor

MANCHESTER ROYAL INFIRMARY

ASSISTANT SURGICAL OFFICER (DENTAL)

The Board of Management invite applications for the above appointment from Dental Surgeons holding British or Irish qualifications.

The duties are to assist in the treatment of Dental Out-patients on two mornings per week. The appointment (non-resident) is for one year but the holder of the office is eligible to apply for re-election on two subsequent occasions for a similar period. Salary £35 per annum.

Candidates must state age and qualifications, and send twelve copies of their application and testimonials to the undersigned by Thursday May 13th 1937.

By Order

R. TINDALE,

General Superintendent and Secretary

April 26th 1937

THE ROYAL HOSPITAL, WOLVERHAMPTON

(Incorporated under Charter)

HOUSE SURGEONS required (General Surgery)

The Hospital contains 300 beds, includes the usual special departments, and is recognized by the various Examining Bodies for a part of the requisite attendance on Medical and Surgical Practice.

Candidates must be registered under the Medical Acts and unmarried.

The appointment is for six months. Salary at the rate of £100 per annum. Board, furnished rooms and laundry provided. Applications with copies of testimonials to be forwarded to the undersigned.

Wolverhampton

W. H. HARPER

House Governor

April 28th 1937

ROYAL SUSSEX COUNTY HOSPITAL

BRIGHTON

(Beds 272—Six R.M.O.s.)

HOUSE SURGEON (male) required about June 15th 1937. Charge of beds part casualties, and anaesthetics. Salary £150 per annum with board residence and laundry.

Candidates must hold medical and surgical qualifications of the British Empire, and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications, with copies of recent testimonials should be sent as soon as possible to the undersigned.

L. L. W. LANCASTER-GAYE,

Secretary Superintendent.

HOVE GENERAL HOSPITAL, HOVE.

(50 Beds.)

Applications are invited for the appointment of SENIOR RESIDENT MEDICAL OFFICER (male). Salary £150 p.a., with board apartments and laundry. The appointment offers excellent opportunities for surgical experience. Applications stating age and qualifications, together with three recent testimonials must be forwarded to the undersigned not later than Saturday May 8th, 1937.

H. AUBREY FROGGATT

Secretary Superintendent

HOVE GENERAL HOSPITAL, HOVE.

(50 Beds.)

Applications are invited for the appointment of JUNIOR RESIDENT MEDICAL OFFICER (male). Salary £10 p.a., with board apartments and laundry. The appointment offers excellent opportunities for surgical experience. Applications, stating age, qualifications together with three recent testimonials, must be forwarded to the undersigned not later than Saturday May 8th 1937.

H. AUBREY FROGGATT

Secretary Superintendent

THE PRINCE OF WALES'S HOSPITAL

Greenbank Road Plymouth.

(Formerly South Devon and East Cornwall Hospital.)
(264 Beds.)

Applications are invited for the post of HOUSE SURGEON. Salary £120 per annum, with board residence and laundry.

The appointment is for six months and is subject to renewal. Duties to commence May 25th.

The Hospital is officially recognised for the surgical practice required before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applicants must be registered under the Medical Acts.

Applications stating age and qualifications with copies of three recent testimonials, to reach the undersigned by May 8th.

ARTHUR R. CASH

Gen. Supt. and Secretary

April 19th 1937

ABERDEEN ROYAL INFIRMARY

The Board of Directors invite applications for the post of SUROICAL REGISTRAR. The post is a full-time one and the successful applicant will be required to perform the duties of a Junior-Assistant Surgeon attached to a General Surgical Ward.

Salary £200 per annum, with board and laundry. Six copies of applications (and testimonials) stating age, qualifications, and experience, should be lodged with the undersigned by 10 a.m. on Wednesday May 12th 1937.

JOHN A. MCCONACHIE,

Clerk and Treasurer

230 Union Street, Aberdeen.

ABERDEEN ROYAL INFIRMARY

There is a vacancy for a SECOND HONORARY OPHTHALMIC SURGEON.

Each candidate should submit a full statement of his qualifications and experience together with copies of recent testimonials.

Further particulars of the appointment may be obtained from the undersigned with whom twelve copies of applications and testimonials should be lodged not later than 10 a.m. on Wednesday May 19th 1937.

JOHN A. MCCONACHIE,

Clerk and Treasurer

230 Union Street, Aberdeen.

GENERAL HOSPITAL, NOTTINGHAM

(386 Beds.)

A HOUSE SURGEON is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out-Patient Department. The appointment is for six months, with salary at the rate of £150 a year with board, residence and laundry.

Candidates are desired to send applications stating age, qualifications and experience, together with copies of testimonials to the undersigned without delay.

Duties to commence early in May.

PETER M. MACCOLL,

House Governor and Secretary

GENERAL HOSPITAL, NOTTINGHAM

(386 Beds.)

A RESIDENT CASUALTY OFFICER (male) is required at the above Institution. The appointment is for six months, with salary at the rate of £150 a year with board residence and laundry. Candidates are invited to send applications stating age, qualifications and experience together with copies of testimonials to the undersigned without delay.

Duties to commence as soon as possible.

PETER M. MACCOLL,

House Governor and Secretary

SWANSEA GENERAL AND EYE HOSPITAL

(336 Beds.)

CASUALTY OFFICER REQUIRED Gentleman, single. Must have had previous hospital experience. Appointment for six months. Duties to commence immediately.

Salary £150 to £175 per annum according to experience, with board residence, and laundry.

Applications stating age, nationality, qualifications and experience, together with copies of three recent testimonials, to be forwarded to the undersigned.

O. C. HOWELLS

Secretary Superintendent

ESSEX COUNTY HOSPITAL COLCHESTER.

(160 Beds.)

Wanted immediately a HOUSE PHYSICIAN (male). Salary £140 per annum with board washing and residence in the hospital. Medical and surgical qualifications required.

Applications with three recent testimonials to be sent on or before Wednesday May 4th to

ALFRED G. BUCK,

Secretary

BRISTOL ROYAL INFIRMARY AND BRISTOL CENTRAL HOSPITAL ANALGESIATED

A meeting of the Joint Election Committee will be held at the Bristol Royal Infirmary on Tuesday, May 24th 1937, at 11 a clock, p.m. to appoint TWO HONORARY RADIOLOGISTS in the Joint Radiological Department which includes the Radium Centre. Dr. C. B. Buh and Assistant Radiologist will be a candidate for one of the appointments.

Candidates who must possess a medical diploma in Radiology are requested to send their applications stating age with copies of testimonials and proof of qualifications to the undersigned on or before Wednesday May 19th 1937 from whom further particulars may be obtained.

Every candidate is also required to forward a copy of his application and testimonials to each member of the Joint Election Committee.
THOMAS W. GREGG F.R.C.S.
Secretary Bristol General Hospital

THE GLEST HOSPITAL DUDLEY

(General Hospital—107 Beds—hereby to be increased to 160 Beds)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons

SECOND HOUSE SURGEON (male) required to commence duty immediately. Salary at the rate of £10 per annum with furnished apartments, board and laundry. Duties are of a general nature, more especially Surgical and Ophthalmic work and administration of Anaesthetics. Applications stating age, qualifications and experience accompanied by copies of testimonials, to be sent to the undersigned.

H. RAYMOND HURST
House Governor and Secretary

7th April 1937

ROYAL SALOP INFIRMARY SHREWSBURY (110 Beds)

Applications are invited from fully qualified un married gentlemen for the appointment of **RESIDENT HOUSE SURGEON**.

The appointment is for six months in the first instance, subject to reappointment for a further period of six months if desired.

Salary at the rate of £160 per annum with board residence etc.

Applications stating age qualifications and experience together with copies of three recent testimonials to be sent to the undersigned immediately.

J. W. NORBLE
Secretary Superintendent

Board Room April 2 1937

NORFOLK AND NORWICH HOSPITAL NORWICH (417 Beds)

Applications are invited for the post of **RESIDENT SURGICAL OFFICER**.

Salary £80 per annum with board residence and laundry. The appointment is for twelve months from June 1st. Preference will be given to candidates holding the F.R.C.S. qualification.

Applications stating age qualifications and experience accompanied by copies of recent testimonials should reach the undersigned not later than the first post on Tuesday May 11 1937.

FRANK NICH

House Governor and Secretary

April 23rd 1937

WEST SUFFOLK GENERAL HOSPITAL BURY ST EDMUNDS (112 Beds)

Applications are invited for the post of **HOUSE SURGEON**. Duties include charge of the Surgical Beds. Salary £180 per annum with Board Lodging and Laundry.

One other resident Medical Officer. Applicants must be registered Practitioners. Applications stating age experience and nationality with three copies of three recent testimonials to be sent to the Secretary by May 11th 1937.

E. E. HARDWICKE
Secretary

April 1th 1937

**HOUSE SURGEON REQUIRED FOR THE
NEWCASTLE THROAT NOSE AND EAR
HOSPITAL** Rye Hill Newcastle-upon-Tyne. preferably one who has had some experience in throat nose and ear work. As this Hospital is recognised for the D.L.O. the position is suitable for anyone preparing for that Degree. Salary £125 per annum together with board-residence and laundry. Applications giving age, qualifications and experience with copies of three recent testimonials to the undersigned not later than May 21st, 1937—**STEPHEN CROFT F.R.C.S.** Secretary Rye Hill Newcastle-upon-Tyne 4

WHITEHAVEN AND WEST CUMBERLAND HOSPITAL

FEMALE HOUSE SURGEON required. Six months appointment. Salary at the rate of £150 per annum with board residence and laundry. Applications with copies of three recent testimonials to be sent to Secretary.

RUNWELL HOSPITAL FOR NERVOUS AND MENTAL DISORDERS Near Wickford Essex

(East Ham and Southend-on-Sea Joint Mental Hospital)

HOUSE PHYSICIAN required for the above Hospital (1011 Beds). Salary £150 per annum with apartments board attendance and laundry. Six-monthly appointment renewable for a further six months. Excellent opportunities for post graduate work. The Hospital provides facilities for treatment in all its aspects and is equipped with up-to-date laboratories.

Application together with copies of recent testimonials (not more than three) to be forwarded to the Physician Superintendent Runwell Hospital near Wickford Essex to reach him not later than Friday May 14th 1937.

Envelopes to be marked **House Physician** in the top left hand corner.
H. J. WOODWARD
Clerk to the Visiting Cte

BATH AND WESTERN CHILDREN'S ORTHOPAEDIC HOSPITAL Combe Park Bath

HOUSE SURGEON (male or female) required to commence duty July 1st 1937.

The appointment will be for six months with salary at the rate of £10 per annum together with quarters board and laundry. Orthopaedic experience an advantage together with experience in administering anaesthetics. Applications with copies of three recent testimonials should be forwarded without delay to the undersigned.

HAROLD J. FRICKER
Secretary

April 6th 1937

THE OXFORD LVI HOSPITAL WALTON STREET OXFORD

Applications are invited for the post of **HOUSE SURGEON** in the OPHTHALMIC DEPARTMENT of the above institution. The post is tenable for 12 months from July 1st.

It is desirable that candidates should have some knowledge of refractions.

Salary is at the rate of £150 per annum with free board residence and laundry and share of school clinic fees amounting to from about £70.

Applications with copies of three recent testimonials should be sent to the undersigned.

MILES IRVING
Honorary Secretary

April 23rd 1937

QUEEN'S HOSPITAL BIRMINGHAM (Medical School)

RESIDENT SURGICAL OFFICER required. Candidates must be Fellow of the Royal College of Surgeons of England Edinburgh or Ireland and must have held a resident appointment in a teaching hospital.

Salary £150 per annum with the usual emoluments.

Applications with recent testimonials to be sent to the undersigned (from whom all further particulars may be obtained) not later than May 6th.

T. CROCKER

House Governor

Birmingham April 3rd 1937

BURLEIGH HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL Tunstall Stoke-on-Trent

Applications are invited for the post of **RESIDENT HOUSE SURGEON** salary £175 per annum with board residence and laundry. The appointment is for six months in the first instance reappointment may be applied for.

Applications stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

C. E. LOWNDES
Secretary

MOUNT VERNON HOSPITAL NORTHWOOD MIDDLESEX

Applications are invited for the appointment of **CLINICAL PATHOLOGIST** at a salary of £500 a year. There are good facilities for and the routine work allows of ample time for research in radiology and cancer. Preference will be given to applicants having experience in research work or in bio-chemistry.

Applications with copies of testimonials to be sent to —

W. J. MORTON Secretary
Offices 32 Fitzroy Square W.1

VICTORIA CENTRAL HOSPITAL WALLASEY (135 Beds)

Applications are invited for the position of **JUNIOR HOUSE SURGEON** (Male). Salary at the rate of £150 per annum with board residence and laundry.

Applications stating age experience and qualifications accompanied by copies of three recent testimonials, to be sent to the undersigned.

FRANK DEAN F.R.C.S.
Secretary Superintendent.

NORTH RIDING INFIRMARY MIDDLSBROUGH (General Hospital—143 Beds—3 Residents)

CASUALTY OFFICER required at once for a period of six months. (Third H.S. and H.P. is an appointment). The appointment will be for not less than six months and renewable. Salary £140 per annum with board residence and laundry.

Candidates who must be male unmarried and of British nationality are asked to state whether they are prepared to apply for the combined post of Third House Surgeon and House Physician (£140 per annum) in the event of the present Resident being appointed.

Applications stating age qualifications and experience together with copies of three recent testimonials should be sent to the undersigned forthwith.

CERARD A. KENYON Secretary Supt.

SAMARITAN HOSPITAL FOR WOMEN BELFAST

The Committee invite applications for the position of **HONORARY JUNIOR ASSISTANT VISITING SURGEON**. Candidates must be Fellows of one of the Royal Colleges of Surgeons of the British Empire or Fellows or Members of the College of Obstetricians and Gynaecologists. The person appointed shall confine himself to the practice of Obstetrics and Gynaecology. He shall be elected for a term of four years but shall be eligible for re-election. Canvassing directly or indirectly shall render a candidate ineligible for election. Date of election June 14th 1937.

Applications to be sent to The Secretary before May 31st 1937.

ROYAL NATIONAL SANATORIUM BOURNMOUTH

Applications are invited (from duly registered male unmarried Medical Practitioners) for the post of **ASSISTANT RESIDENT MEDICAL OFFICER**. Experience in pulmonary tuberculosis desirable. Duties to commence as soon as possible.

Salary £90 per annum with board residence and laundry. The appointment will be for one year (renewable).

Applications with full particulars and copies of recent testimonials should be sent to the Secretary **A. G. A. MAJOR** Secretary.

BOLINGBROKE HOSPITAL Wandsworth Common SW 11 (135 Beds)

CASUALTY OFFICER (male unmarried) required. The appointment is for six months commencing on June 1st 1937. Salary £140 per annum with board residence and laundry.

Candidates must be fully qualified and registered.

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before May 14th 1937.

W. S. RANDOLPH BISS
Secretary Superintendent

BOLINGBROKE HOSPITAL Wandsworth Common SW 11 (135 Beds)

HOUSE SURGEON (male unmarried) required. The appointment is for six months commencing on June 1st 1937. Salary £140 per annum with board residence and laundry.

Candidates must be fully qualified and registered.

Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before May 12th 1937.

W. S. RANDOLPH BISS
Secretary Superintendent

GROSVENOR SANATORIUM ASHFORD KENT (236 Beds)

Applications are invited from fully qualified men for the appointment of **RESIDENT HOUSE PHYSICIAN**.

The appointment is for a period of at least six months at a salary of £100 per annum with board lodging and laundry.

Previous experience not necessary. Applications stating age qualifications nationality and accompanied by copies of recent testimonials to be sent to the Acting Medical Superintendent.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN Dyke Road Brighton (100 Beds)

HOUSE SURGEON (male) required. Salary at the rate of £170 per annum with board lodging and laundry. Good experience. No canvassing. To take on duties immediately.

Applications in writing accompanied by testimonials should be sent to **PETER F. SPOONER** the Secretary.
April 26th 1937

HOSPITAL FOR TROPICAL DISEASES LONDON

The Committee of Management of the Seamen's Hospital Society invite applications for the appointment of HONORARY ASSISTANT PHYSICIAN with charge of beds at the Hospital for Tropical Diseases, 25 Gordon Street W.C.1 which institution constitutes the Clinical Division of the London School of Hygiene and Tropical Medicine. Candidates must (i) hold the degree, registered by the General Medical Council of Doctor or Bachelor of Medicine of a University in the British Empire and (ii) be Fellows or Members of the Royal College of Physicians of London or be prepared to take the Membership within a reasonable time. Candidates must have had experience of medicine in the Tropics, and possession of a Diploma in Tropical Medicine will be considered an additional qualification. The elected candidate will be appointed for twelve months but will be eligible for re-election. Applications with copies of not less than three recent testimonials to be sent in on or before July 3rd 1937 to the undersigned from whom further particulars can be obtained.

D A C PRICE,

Secretary

Hospital for Tropical Diseases

April 26 1937

HOSPITAL FOR TROPICAL DISEASES LONDON

The Committee of Management of the Seamen's Hospital Society invite applications for the appointment of PATHOLOGIST to the Hospital for Tropical Diseases, 25 Gordon Street, W.C.1. Candidates must be graduates of an approved University of the British Empire and preference will be given to applicants with experience of tropical pathology. It is anticipated that the post will carry with it an association with the London School of Hygiene and Tropical Medicine. Commencing salary will be £750 per annum and the elected candidate will be appointed for twelve months but will be eligible for re-election. Applications with copies of not less than three recent testimonials to be sent in on or before July 3rd 1937 to the undersigned from whom further particulars can be obtained.

D A C PRICE,

Secretary

Hospital for Tropical Diseases

April 26 1937

ROYAL NORTHERN HOSPITAL, HOLLOWAY N7

Applications are invited for the following appointments—

HOUSE PHYSICIAN vacant June 1st. The appointment is for nine months (3 months as Out Patient Medical Officer and Anaesthetist and 6 months as House Physician). Salary at the rate of £70 per annum with board residence and laundry.

HOUSE SURGEON vacant June 15th. The appointment is for nine months (6 months as House Surgeon and 3 months as Casualty Officer). Salary at the rate of £70 per annum with board residence and laundry.

Applications, with copies of testimonials should be sent by May 7th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G. PANTER

Secretary

THE ROYAL CANCER HOSPITAL (FREE) (Incorporated under Royal Charter) Fulham Road London, S.W.3

Applications are invited for the post of HOUSE SURGEON to commence duties on July 1st 1937.

Salary at the rate of £100 per annum. The appointment is for six months and subject to rules, a copy of which may be obtained from the Secretary.

Applications to be made on a form which will be supplied by the Secretary together with three (copies only) testimonials to be sent to the undersigned not later than the first post on Monday May 10th 1937.

CLEMENT COBBOLD

Secretary

THE ROYAL CANCER HOSPITAL (FREE) (Incorporated under Royal Charter), Fulham Road, London S.W.3

Applications are invited for the post of HOUSE SURGEON (non-resident) to be attached to the Radium Department. Candidates must be qualified Medical Practitioners. Facilities afforded for post-graduate study. The appointment is for six months commencing on July 1st, 1937. Salary at the rate of £200 per annum.

Applications to be made on a form which will be supplied by the Secretary, with copies only of not more than three recent testimonials to be sent to the Secretary not later than the first post on Monday May 10th, 1937.

CLEMENT COBBOLD

Secretary

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill London, SE 18

General Hospital. (112 Beds.)

There are vacancies for three HONORARY ANAESTHETISTS on the Staff of the Hospital and for which the Board of Management invites applications. The candidates appointed will be required to attend the following sessions respectively.

(a) Wednesdays 2 p.m. and Fridays 9.30 a.m.

(General Surgical)

(b) Tuesdays 8.30 a.m. (Ear, Nose and Throat)

(c) Tuesdays Noon (Gynaecological)

The Board also invites applications for the post of SURGICAL REGISTRAR for a period of one year from June 1st 1937. An honorarium of £100 per annum will be paid in respect of this appointment.

Applications accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him by Monday May 17th 1937. Short listed candidates will be required to attend for interview with the Appointments Committee on Friday May 21st.

KING GEORGE HOSPITAL, ILFORD (NEAR LONDON) (207 BEDS.)

Applications are invited for the following resident appointments (male) which become vacant on July 1st.

RESIDENT SURGICAL OFFICER (who must possess a Surgical Fellowship) £250 p.a.

MEDICAL REGISTRAR £150 p.a.

These appointments are for one year with eligibility for reappointment.

TWO HOUSE SURGEONS £100 p.a.

These appointments are for six months.

Forms of application may be obtained from the undersigned to whom they should be returned duly completed not later than June 1st.

(Signed) G. AUSTIN HEPWORTH

Secretary and Superintendent.

KING GEORGE HOSPITAL, ILFORD (NEAR LONDON) (207 BEDS.)

The Board of Management invite applications for the post of HONORARY CHIEF ASSISTANT to the ORTHOPAEDIC and FRACTURE DEPARTMENT of the hospital. Candidates must possess a Surgical Fellowship and the successful applicant will be required to attend the hospital twice weekly. Full particulars of the appointment may be obtained from the undersigned to whom applications, with copies of testimonials should be addressed not later than Monday May 17th.

(Signed) G. AUSTIN HEPWORTH

Secretary and Superintendent.

LONDON JEWISH HOSPITAL, Stepney Green E.1

General Hospital. (109 Beds)

Candidates (male) for the following resident appointments which are for a period of six months commencing June 1st next may obtain forms of application from the Secretary to whom applications, with copies of three recent testimonials must be sent on or before May 21st, 1937.

RESIDENT MEDICAL OFFICER AND HOUSE PHYSICIAN Salary at the rate of £150 per annum.

HOUSE SURGEON Salary at the rate of £100 per annum.

CASUALTY OFFICER Salary at the rate of £100 per annum.

EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road E.7 (100 Beds)

Applications are invited for the post of HOUSE SURGEON to Special Departments and CASUALTY OFFICER (male) for six months commencing July 1st 1937.

Salary at the rate of £170 per annum with board residence and laundry. Applicants should state age, nationality, experience and full particulars, together with copies of three recent testimonials, should reach the undersigned by May 20th.

REGINALD PERRY

Secretary

THE MIDDLESEX HOSPITAL, W.1

Department of Radio-Therapy (X Ray and Radium)

Applications are invited from medical men holding or working for the D.M.R.E. for the post of JUNIOR MEDICAL OFFICER in the above Department. The appointment in the first instance will be for one year from June 1st 1937. Salary £300 per annum. Applications, supported by copies of not more than three testimonials to be submitted by May 17th.

By Order of the Board

S. R. C. FIMSOLL

Secretary Superintendent.

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.3

APPOINTMENT OF CASUALTY SURGICAL OFFICER

Applications are invited from unmarried registered medical women for the position of Casualty Surgical Officer at the Out-patient Department of the hospital Bayham Street, Camden Town, which will be vacant on July 1st next. The salary will be at the rate of £100 per annum together with board residence, etc. and the term will be for six months.

Applications, to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on May 15th next.

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL, Haverstock Hill N.W.3

APPOINTMENT OF CASUALTY MEDICAL OFFICER.

Applications are invited from unmarried registered medical women for the position of Casualty Medical Officer at the Out-patient Department of the hospital Bayham Street, Camden Town, which will be vacant on June 1st next. The salary will be at the rate of £100 per annum together with board residence etc. and the term will be for six months.

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on May 15th next.

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL, Grays Inn Road W.C.1

RESIDENT HOUSE SURGEON (MALE)

There will be a vacancy for a THIRD RESIDENT HOUSE SURGEON to enter on duty on June 1st, 1937. The appointment will be for a period of seven months one month as Third House Surgeon three months as Second House Surgeon and three months as First House Surgeon. Remuneration at the rate of £75 per annum. Applications accompanied by copies of not more than three testimonials should be sent to the undersigned on or before May 17th.

JOHN H. YOUNG

Secretary Superintendent

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL, Grays Inn Road W.C.1

ASSISTANTS IN THE OUTPATIENT DEPARTMENT

There are the following vacancies—THIRDO ASSISTANT to attend on Saturdays for the first session at 9.30 a.m.

SECONDO ASSISTANT to attend on Saturdays for the second session at 11.30 a.m.

The duties are to assist the Surgeon in seeing the patients and the posts are honorary ones.

Applications which may be for periods of three six or twelve months should be sent to the undersigned immediately.

JOHN H. YOUNG

Secretary Superintendent.

THE ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S.E.1

RESIDENT CASUALTY OFFICER

Applications are invited from qualified male practitioners for the post of RESIDENT CASUALTY OFFICER vacant on May 14th 1937 to work in the Out-Patient Department at £150 per annum. Candidates for this post should have held a previous appointment. The appointment is in the first instance for a period of six months. Applications with copies of testimonials should be forwarded not later than May 4th to the Secretary at the Hospital from whom further particulars can be obtained.

THE SALVATION ARMY THE MOTHERS' HOSPITAL, LOWER CLAPTON ROAD CLAPTON E.5

Applications are invited from Medical Women for the post of JUNIOR RESIDENT MEDICAL OFFICER—

One vacant June 1st 1937—appointment to terminate on December 31st, 1937.

One vacant June 15th 1937—appointment to terminate on December 31st, 1937.

Salary £50 per annum with board residence and laundry.

Applications with testimonials, must be sent to the Secretary on or before Monday May 10th 1937.

EDGAR DIBOEN Secretary

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B M A House Tavistock Square, W C 1 (in the case of Scottish appointments with the Scottish Medical Secretary, 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE (cont'd)	CONTRACT PRACTICE (cont'd)
ABERTYSWYG MEDICAL AID SOCIETY (Medical Officer)	LLWYNFIA CLYDACH VALE PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Il yndham Colliery Medical Aid Society) (Il o kinen's Medical Scheme)
BLACKPOOL AND FYLDE FRIENDLY SOCIETIES COUNCIL (Medical Officer)	MID RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	CARMARTHENSHIRE COUNTY COUNCIL (Assistant County Medical Officer of Health)
GRANTHAM FRIENDLY SOCIETIES MEDICAL INSTITUTE (Medical Officer)	GWADALF MON (Medical Officer for Medical Aid Association)	FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B M A House Tavistock Sq, W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (All Friendly Societies' Appointments)	The Medical Secretary New South Wales Branch 135 Macquarie St., Sydney N.S.W.	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association (Medical Society Hall, Albert St. East Melbourne Victoria.	WESTERN AUSTRALIA (Contract and Locum Practitioners)	Hon Sec Western Australian Branch British Medical Association Shell House 115 St. George's Terrace Perth Western Australia
QUEENSLAND (Brisbane Associate Friendly Societies Institute)	The Hon Sec Queensland Branch British Medical Association Building 3 rd Adelaide St., Brisbane				

April 28, 1937

By Order of the Council

G C ANDERSON, Medical Secretary

BURY INFIRMARY (LANCS) (17 Beds)

APPOINTMENT OF CASUALTY OFFICER (MALE)

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of an R.S.O. a House Surgeon a House Physician and a Casualty Officer.

In addition to his duties in the Casualty Department the Casualty Officer is also responsible for the In-patient and Out-patient work in connection with the Eye and Ear Nose and Throat Departments.

The appointment is for six months at a salary at the rate of £150 per annum with board, residence, and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age, qualifications, and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible endorsed "Casualty Officer".

Further particulars may be had on application
H WILKINSON, Supt.

SWINDON AND NORTH WILTS VICTORIA HOSPITAL SWINDON (86 beds)

Applications are invited for the following posts:

(a) HOUSE PHYSICIAN (Male) Salary £150 per annum with board residence and laundry. Dispensing forms part of the duties of the appointment.

(b) HOUSE SURGEON (Male) Salary £145 per annum with board residence and laundry. Appointments are for a period of six months from June 8th but are terminable at any time by one calendar month's notice on either side. Applications, stating age, qualifications, and experience and accompanied by not more than three recent testimonials should be sent to the undersigned not later than May 10th.

K N KNAPP Secretary

COUNTY MENTAL HOSPITAL WHITTING HAM PRESTON LANCs

RESIDENT JUNIOR ASSISTANT MEDICAL OFFICER required. Salary £500 rising by annual increments of £25 to £600. No emoluments £50 per annum is paid when the successful candidate obtains the Diploma in Psychological Medicine. The successful candidate will be required to live in the Hospital and charges at the rate of £150 per annum will be made for board furnished apartments and washing. Candidates must be duly registered under the Medical Act. Applications stating age which must not exceed 30, qualifications and copies of testimonials should reach the Medical Superintendent not later than the morning of May 11th 1937. The successful candidate will be required to undergo medical examination. The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 and the Regulations of the Lancashire Mental Hospitals Board.

VICTORIA HOSPITAL FOR SICK CHILDREN PARK STREET HULL

The Board of Management of the above Hospital requires a RESIDENT HOUSE PHYSICIAN (Lady) at a salary of £120 with Board Residence and Laundry. Applications with copies of recent testimonials stating age, qualifications and when at liberty to be sent to the Secretary.

April 16th 1937

STROUD GENERAL HOSPITAL Stroud Glos

RESIDENT MEDICAL OFFICER required. Candidates must be fully qualified and registered. Six months appointment from June 1st. Salary £160 per annum with board and laundry. Applications stating nationality together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

C FORD SPENCER
Secretary

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital 191 beds now in course of extension to 255 beds)

RESIDENT MEDICAL OFFICER (male) required to commence duty June 1st 1937. The appointment is for one year including a three months probationary period with the option of extension.

Candidates must have held at least one appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist either separately or in conjunction with the former.

He must reside in the Infirmary and devote his whole time to the service of the Infirmary. Salary £250 per annum with board residence.

Applications with copies of testimonials to be sent to the House Governor and Secretary by May 21st 1937.

DARLINGTON MEMORIAL HOSPITAL (200 Beds)

Wanted HOUSE SURGEON (male) British fully qualified for the Ophthalmic Ear Nose and Throat and Children's Surgical Department. Salary £150 per annum with board residence and laundry.

Applications stating age and qualifications, together with copies of three recent testimonials, to be addressed to the undersigned.

ARTHUR RIDDLE, A.C.S.

Secretary Supt.

CITY MENTAL HOSPITAL HUMBERSTONE LEICESTER

Wanted LOCUM TENENS ASSISTANT MEDICAL OFFICER for the summer months from May 2nd 1937. Experience of Mental Hospital practice is desirable.

Terms ten guineas per week. It will be necessary for the gentleman appointed to live out. Apply without delay giving particulars and three references to The Medical Superintendent.

(Appointments continued on p. 59)

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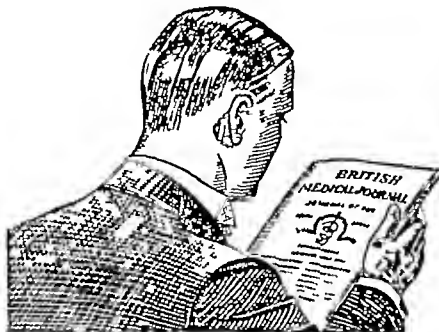
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ASSISTANCIES

WANTED AT EARLY DATE, ASSISTANT Indoor (outdoor if married) For mixed practice in Yorkshire. Suit recently qualified man Salary acc. to experience £300-£400. Car provided.—Address No. 3333 B.M.A. House Tavistock Square W.C.1

WANTED AT ONCE—An ASSISTANT with previous general practice experience with a view to early Partnership in a firm of four in a Thames Valley suburb of London. All details on application to Address No. 3367 B.M.A. House, Tavistock Square, W.C.1

WANTED AT ONCE, SINGLE MALE IN DOOR ASSISTANT Industrial practice West Riding second assistant kept ample time off £312 p.a. with £50 p.a. car allowance all found Suit recently qualified.—Address No. 2722, B.M.A. House, Tavistock Square, W.C.1

WANTED IMMEDIATELY—INDOOR AND OUTDOOR ASSISTANTS For Town and Country Practices with and without view to Partnership Good salaries offered State full particulars.—BRITISH MEDICAL BUREAU 33 Cross Street, Manchester

WANTED FOR JULY 1st MALE ASSISTANT under 30 years, with University Degree, must have held hospital appointments, preferably reading for higher degrees must be keen temperate able to drive a car Good-class practice and small panel in Malvern area Salary £350 outdoor all found.—Address No. 3361 B.M.A. House, Tavistock Square, W.C.1

WANTED IMMEDIATELY INDOOR ASSISTANT (British) for London Practice. Duties light. Position suitable for young qualified man requiring time for study Salary £300 per annum.—Address No. 3355 B.M.A. House Tavistock Square, W.C.1

WANTED IMMEDIATELY RELIABLE OUTDOOR ASSISTANT mixed practice 29 miles from London Salary £450 p.a. the assistant to supply own car and living accommodation.—Address No. 3357 B.M.A. House Tavistock Square W.C.1

WANTED FOR OLD-ESTABLISHED LARGE panel and private practice in Lancashire, ASSISTANT (Indoor) with view to partnership after a few months.—Address No. 3360 B.M.A. House, Tavistock Square London W.C.1

WANTED—INDOOR MALE ASSISTANT IN semi-country Industrial and colliery practice Little night work Protestant preferred. Apply stating age, qualifications and essential particulars.—Address No. 3359 B.M.A. House, Tavistock Square W.C.1

WANTED IN FOUR WEEKS NEWCASTLE on Tyne, ASSISTANT English or Scottish University graduate Ex.H.S. I/P preferred Abolisher Protestant Under 30 Send fullest particulars.—Address No. 3339 B.M.A. House Tavistock Square W.C.1

WANTED—LANCASHIRE SEAPORT town Indoor ASSISTANT to commence duties at once Salary £325 per annum with prospect of increase to suitable man. Experience in Midwifery preferable Car provided.—No. 3358 B.M.A. House, Tavistock Sq W.C.1

WANTED LONDON OUTSKIRTS MARRIED ASSISTANT view early partnership. House partly furnished available Salary £30 coal and light.—Address No. 3327 B.M.A. House Tavistock Square W.C.1

WANTED MALE ASSISTANT FOR GROWING country town practice West of England Able to do locum from May 25th for about three weeks an advantage Duties commence after holidays Prospect of partnership next year Are under 35 Ex hospital resident preferred.—Address No. 3352, B.M.A. House, Tavistock Square, W.C.1

WANTED—MALE ASSISTANT (WITH view) capital not essential for a busy Industrial practice in South Staffs Address stating age, nationality experience and all essential particulars No. 3311 B.M.A. House Tavistock Square, W.C.1

WANTED MALE INDOOR ASSISTANT FOR mixed General Practice in pleasant seaside resort Salary £300 per annum Must be able to drive a car Send particulars and photograph.—Address No. 3331 B.M.A. House Tavistock Square W.C.1

WANTED—MALE INDOOR ASSISTANT Scottish preferred Mixed practice near Birmingham Salary £300 Car provided or £20 car allowance.—Address No. 3133 B.M.A. House, Tavistock Square W.C.1

WANTED—ASSISTANTSHIP WITH VIEW to partnership Some capital Suburban or country district preferred ex.H.P. and 1 1/2 years a practice.—Address No. 3706 B.M.A. House, Tavistock Square W.C.1

ASSISTANTSHIP WITH HOUSE AVAILABLE wanted by M.B. and Conjoint man English Age 29 married Ex.H.S. 3 years GP Own car Good refs Free mid-May.—Address No. 3715 B.M.A. House Tavistock Square, W.C.1

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WOMAN DOCTOR WANTS ASSISTANTSHIP with or without view Experienced in general practice and hospital work.—Address, No. 3701 B.M.A. House Tavistock Square W.C.1

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Change of Press-date

OWING to our normal
press-date coinciding
with the date of the Coro-
nation ceremony, the issue
of the Journal for May
15th, 1937, will close for
press at noon on Tuesday,
May 11th

Advertisements and all
communications intended
for publication in this issue
should accordingly reach
this address by not later
than first post on Monday,
May 10th

**BRITISH MEDICAL JOURNAL,
B.M.A. HOUSE
TAVISTOCK SQUARE,
LONDON, W.C.1**

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OFFICER required for the months of June
and August 1937. Salary one guinea per day
together with usual residential emoluments. Appli-
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Vols I and II of the BRITISH
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THE MANAGER,
BRITISH MEDICAL JOURNAL,
B.N.A. HOUSE, TAVISTOCK SQ.,
LONDON W.C.1

APPOINTMENTS—Contd.

**BRISTOL ROYAL HOSPITAL FOR SICK
CHILDREN AND WOMEN**
(Usually known as the Children's Hospital)
ST MICHAEL'S HILL.

Applications are invited for the position of
HOUSE PHYSICIAN. Salary £125 per annum
with board rooms, attendance and laundry.

Applicants should state age, qualifications, experience and send testimonials to the undersigned on or before April 24th.
REGINALD C. THOMAS
Secretary

**PRINCESS LOUISE KENSINGTON
HOSPITAL FOR CHILDREN**
St Quintin Avenue W.10 (81 Beds)

HOUSE SURGEON (Male) required for six months from May 10th 1937. Salary at the rate of £120 p.a. for the first three months and £150 p.a. for the second three months, with board residence and laundry. Applications with copies of three recent testimonials should be sent to the undersigned not later than Thursday May 6th.
H. J. ELEY
Secretary

**ROYAL FREE HOSPITAL, GRAY'S INN
ROAD W.C.1**

Applications are invited for the appointment of ASSISTANT PHYSICIAN. Intending candidates (men or women) who must be Fellows or Members of the Royal College of Physicians, London should submit applications, accompanied by copies of three recent testimonials to the undersigned on or before May 29th 1937.
RICHARD T. BARTLEY
Secretary

COUNTY BOROUGH OF CROYDON PUBLIC HEALTH DEPARTMENT

Appointment of DEPUTY MEDICAL OFFICER
OF HEALTH AND DEPUTY SCHOOL
MEDICAL OFFICER

Applications are invited from qualified Medical Practitioners for the appointment of a Deputy Medical Officer of Health and Deputy School Medical Officer.

Applicants must be medical men holding a special qualification in State Medicine or a Diploma in Public Health and must have had three years' experience of the practice of medicine since obtaining their medical qualification.

Preference will be given to applicants who (a) Have had some definite experience of School Medical work

(b) Have enjoyed special opportunities for the study of Diseases in Children

(c) Have had experience in Infectious Diseases

(d) Have held one or more Resident Hospital appointments and

(e) Have held or are holding a position as Assistant Medical Officer of Health elsewhere.

The candidate appointed will be required to produce a recent satisfactory medical certificate of health and to devote the whole of his time to the duties of the office.

The minimum salary will be £70 per annum. The post is an established post under the Local Government and Other Officers Superannuation Act 1928.

Applications to be made on forms to be obtained by sending a stamped addressed foolscap envelope to the Medical Officer of Health, Public Health Department, Town Hall, Croydon, to whom they should be returned accompanied by copies (not originals) of not more than three testimonials of recent date not later than 10 a.m. on Wednesday May 19th 1937, endorsed "Deputy Medical Officer of Health, Croydon" in any form is prohibited.

Town Hall, Croydon
JOHN N. NEWNHAM
Town Clerk
April 26th 1937

SURREY COUNTY COUNCIL

Boileys Park Colony (Certified Institution for Mental Defectives) near Chertsey, Surrey

APPOINTMENT OF MEDICAL
SUPERINTENDENT

Applications are invited from registered Medical Practitioners (male) for the whole-time appointment of Resident Medical Superintendent at the above-mentioned Certified Institution. The first section of the Colony which is now in course of erection will provide accommodation for 1,200 patients and the necessary resident staff and will eventually provide 1,500 patients' beds. In addition there is accommodation for another 300 patients in an immediately adjacent institution which is under the same administration as the main colony. Commencing salary £1,000 rising by annual increments of £50 to a maximum of £1,375 per annum with emoluments valued for superannuation purposes at £125 per annum.

The appointment will be subject to the provisions of the Asylums and Certified Institutions (Officers' Pensions) Act, 1915 and to the Council's Staffing Regulations. The person appointed will be required to undergo a medical examination and to commence his duties on October 31st 1937.

Applications stating age and whether married or single accompanied by copies of three recent testimonials must reach the undersigned not later than Monday May 24th 1937. The envelope should be marked "Boileys Park Medical Superintendent".

DUDLEY AUKLAND
Clerk of the Council
Mental Hospitals Department
County Hall, Kingston-upon-Thames
April 27th 1937

BOROUGH OF BARKING

RESIDENT MEDICAL OFFICER

Applications are invited before May 17th 1937 from qualified medical practitioners for the designated appointment of Resident Medical Officer at the Council's Upney Maternity Hospital comprising 24 beds.

Previous medical appointments in a maternity hospital and experience in ante-natal work is essential and preference will be given to candidates holding or reading for membership of the College of Obstetrics and Gynaecology.

Salary £150-£250 plus emoluments valued at £150 per annum.

Particulars of duties and application forms may be obtained from the undersigned.

Town Hall, Barking, Essex.
S. A. JEWERS
Town Clerk.

ANNIE MCCALL MATERNITY HOSPITAL

Jeffreys Road, London, S.W.4
MEDICAL WOMAN required July 1937 p.a.
Residence in Hospital Post graduate vacancy with view to appointment Good experience

COUNTY BOROUGH OF WEST HAM

APPOINTMENT OF MEDICAL OFFICER OF
HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from qualified medical men holding a Degree or in Diploma of Public Health for the appointment of Medical Officer of Health and School Medical Officer at a salary of £1,400 per annum rising by annual increments of £50 to a maximum of £1,750 per annum inclusive of all fees and emoluments.

Applicants must not be more than 45 years of age (except in respect of applications from persons already in the service of the Council) and be fully qualified to carry out and perform all the duties of Medical Officer of Health and School Medical Officer and appertaining to the medical services of the Council including those as Administrative Officer under the Mental Deficiency Acts and such other duties as may from time to time be prescribed by the Council.

The appointment will be subject to the approval of the Ministry of Health and the Board of Education, and will be terminable on three months' notice on either side. The person appointed will be required to devote his whole time to the duties of the office and to pay over to the Council all moneys received by him in connection with the appointment from whatever source such moneys are received.

The appointment will also be subject to the provisions of the Local Government and Other Officers' Superannuation Act 1928, and to a medical examination as required by the Council for the purposes of that Act and the statutory contributions to the Superannuation Fund under the Act will be deducted from the salary.

Applications on the form provided (which will be forwarded by the undersigned on receipt of a stamped addressed foolscap envelope) must reach me not later than June 11, 1937.

Canvassing members of the Council is prohibited and will be disqualified.

Town Hall, West Ham E.15
CHARLES E. CRANFIELD
Town Clerk
April 30th 1937

THE LEEDS VOLUNTARY HOSPITALS COUNCIL THE GENERAL INFIRMARY AT LEEDS.

The Council invites Applications for the post of HONORARY PHYSICIAN to the above Institution. Candidates must be Fellows or Members of the Royal College of Physicians of London.

Information relating to the post will be supplied on reference to the House Governor.

Twenty-five copies of applications accompanied by copies of not less than three recent testimonials, to be addressed in and received by the undersigned not later than May 31st.

Envelopes to be endorsed "Private-Honorary Staff".

S. CLAYTON FRYERS
Secretary to the Council
April 26th 1937 General Infirmary at Leeds

LINCOLN COUNTY HOSPITAL

Wanted about the end of May JUNIOR
HOUSE SURGEON male unmarried. Salary at the rate of £140 per annum rising to £200 per annum at the conclusion of six months approved service. Board residence and washing will also be provided.

Every candidate for the appointment must be registered under the Medical Act.

Applications stating age and other particulars, with copies of not more than three testimonials are to be sent to the undersigned from whom further particulars may be obtained.

Lincoln
ARTHUR MOORE,
April 26th 1937 Secretary Superintendent.

BRISTOL ROYAL INFIRMARY AND BRISTOL GENERAL HOSPITAL AMALGAMATED

The Joint Radiological Committee invites applications for the appointment of a whole-time RADIO-DIAGNOSTICIAN. Salary at the rate of £400 per annum.

Candidates who must possess a special diploma in Radiology are requested to send their applications stating age with copies of testimonials to the undersigned on or before Saturday May 15th 1937 from whom further particulars may be obtained.

THOMAS W. GREGG F.R.C.S.
Secretary Bristol General Hospital

WORTHING HOSPITAL

Applications are invited for the post of HOUSE SURGEON. The appointment is for six months. Salary at the rate of £130 per annum with board lodging and laundry.

Candidates (male) should forward application stating age, nationality, qualifications and experience, accompanied by testimonials, to the undersigned.

Applications to be received at once.
A. V. OAKTON

NATIONAL SANATORIUM BENENDEN KENT

MEDICAL SUPERINTENDENT

The Council of the National Sanatorium Association invites applications for the post of Medical Superintendent.

The salary will be £600 per annum rising by £50 per annum to a maximum of £750.

A house will be provided and lighting will be free. Fuel will be supplied at cost price to the Association.

Annual leave will be four weeks and generally speaking every other Sunday will be free.

Applications stating age, nationality, qualifications and experience of the candidate with copies of three recent testimonials should be addressed to C C LAWRENCE, Hon. Secretary.

National Sanatorium Benenden Kent.

And should be received by him not later than May 16th 1937. Letters should be marked "Personal".

ROYAL LONDON OPHTHALMIC HOSPITAL MOORFIELDS EYE HOSPITAL CITY ROAD E.C.1

Applications are invited for the post of OUT PATIENT OFFICER to attend on Tuesdays and Fridays (mornings) each week.

Candidates must be registered Medical Practitioners.

Salary at the rate of £100 per annum. The Out Patient Officer will be appointed for a period of one year and will be eligible for re-appointment.

Copies of regulations can be obtained on application.

Applications with testimonials stating age and qualifications together with photograph must be received by the undersigned not later than May 10th 1937.

A J M TARRANT
Secretary

ST BARTHOLOMEW'S HOSPITAL

OFFICE OF ASSISTANT AURAL SURGEON

Notice is hereby given that a Meeting of the Election Committee will be held on Tuesday June 8th 1937 at 4 o'clock in the afternoon to elect an Assistant Aural Surgeon to the Hospital.

Candidates who must be Fellows of the Royal College of Surgeons of England are required to lodge fifty copies of their applications and testimonials with the undersigned on or before Saturday May 2nd 1937.

THOMAS HAYES
Clerk to the Governors.

April 22nd 1937

KETERING AND DISTRICT GENERAL HOSPITAL

Applications are invited for the following posts: RESIDENT MEDICAL OFFICER and SECOND RESIDENT MEDICAL OFFICER (male).

Salaries £160 and £140 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months.

Applications, stating age, nationality and qualifications together with copies of three testimonials to be sent to the undersigned as soon as possible.

O W JACKSON
Secretary Supt.

BECKETT HOSPITAL AND DISPENSARY BARNLEY (143 Beds)

CASUALTY OFFICER (male) required June 1st to deal with the injuries and fractures. Capability to perform emergency operations a recommendation.

Salary £250 per annum together with board residence and laundry.

Applications stating age, qualifications and experience (Ophthalmology desirable) accompanied by testimonials should be sent to the undersigned by May 11th.

ARTHUR L. BOURNE
April 27th 1937
Secretary Superintendent

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London, E.2.

HOUSE SURGEON required June 1st.

Six months appointment. Salary at the rate of £100 per year with board lodging and laundry.

Applications must be made on forms to be obtained from the undersigned, and must be sent in with copies of not more than four testimonials on or before May 1st.

CHARLES H. BESSELL
April 6th, 1937
Secretary

CHESHIRE JOINT SANATORIUM MARKET DRAYTON

Wanted immediately RESIDENT LOCAL (male). Salary £6 6s per week.

For further particulars and form of application apply to Medical Superintendent.

DORSET COUNTY HOSPITAL Dorchester

APPOINTMENT OF HOUSE SURGEON

The Committee of Management are open to receive applications for the position of House Surgeon (male only) to take up his duties about the middle of May 1937.

Every candidate must be unmarried and possess a registered qualification to practise medicine and surgery from some recognized body in Great Britain or Ireland. Salary £150 per annum with board and lodging.

The appointment is for a period of six months. All applications accompanied by copies of three recent testimonials, should be sent to the Secretary Dorset County Hospital as early as possible.

Candidates must be of British birth and nationality.

ROYAL BERKSHIRE HOSPITAL, READING (338 Beds.)

Applications are invited for the following resident appointments:

ONE CASUALTY OFFICER (male)

ONE HOUSE SURGEON TO THE SPECIAL DEPARTMENTS (Eye, Ear, Nose and Throat) (male).

Applications are for six months and candidates must be fully qualified and registered.

Remuneration at the rate of £150 per annum with board residence and laundry.

Applications stating age and experience with copies of testimonials, to be sent to the undersigned as soon as possible.

H E RYAN
Secretary and House Governor

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St. Quintin Avenue North Kensington W 10

The Board of Management invite applications for the post as from July 1st 1937 of HONORARY OPHTHALMIC SURGEON. The candidate appointed will also be required to take the London County Council Clinic which is held on one morning a week. Candidates must hold the F.R.C.S. (Eng.).

Applications with copies of three testimonials, should be submitted not later than May 29th 1937 to the undersigned from whom any further information can be obtained.

H J ELEY
Secretary

CONNAUGHT HOSPITAL Walthamstow E 17

118 Beds with five Resident Medical Officers

CASUALTY OFFICER (male) required at once. Salary £100 per annum with residence, board, and laundry. Appointment for about six months.

Applications, stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials, should be received on or before Wednesday May 5th.

KENELM S. ELLISON
General Secretary

PLAISTOW MATERNITY HOSPITAL (60 Beds)

Applications are invited for the post of RESIDENT HOUSE-SURGEON open to either sex for 6 months.

Salary at rate of £75 per annum. Option by mutual agreement, of further six months service, salary at rate of £100 per annum.

Applications to be sent to the Secretary together with copies of three recent testimonials before May 12th. Post vacant from June 1st.

C H ANDREWS (Secretary)

PLAISTOW MATERNITY HOSPITAL CONSULTING PAEDIATRICIAN

Applications are invited for the above post. Duties include 12 Lectures to Central Midwives Board candidates each year.

Hospital has 60 beds and large Infant Welfare Clinic.

Fees of £. 2s per lecture, and Honorarium £70.

Applications to be addressed to the Secretary Plaistow Maternity Hospital, Howards Road, Plaistow, E.13.

THE MIDDLESEX HOSPITAL W 1 DEPARTMENT OF PHYSICAL MEDICINE

Applications are invited from fully qualified Medical Men for the post of WHOLE TIME ASSISTANT in the above Department. The appointment will be for one year from June 1st 1937 at a salary of £300.

Applications supported by copies of not more than three testimonials should be submitted by May 19th 1937.

S R C PLIMSOLL, Sec. Superintendent

KENT AND SUSSEX HOSPITAL, TUNBRIDGE WELLS (44 Beds)

EAR, NOSE AND THROAT DEPARTMENT

Applications are invited for the appointment of HOUSE SURGEON (male) to the above department. Previous experience desirable but not essential. Duties to include those of Resident Anaesthetist. Salary £150 per annum board residence and laundry in the hospital. The hospital is approved by the University of London for the purpose of the M.D. and M.S. Examinations.

Applications, stating qualifications together with certificate of registration and copies of not more than three recent testimonials should be sent to the undersigned as soon as possible. Duties to commence May 1st, 1937.

TOM B HARRISON
Superintendent Secretary

THE CHILDREN'S HOSPITAL, HAMPSHIRE 30 College Crescent N.W.3 (45 Beds)

Applications are invited from registered Medical Practitioners for the post of RESIDENT MEDICAL OFFICER for the period from June 7th to December 31st, 1937. Includes Salary at the rate of £150 per annum with board residence and laundry. Applications stating age, nationality, qualifications and experience with copies of three testimonials should reach the undersigned on or before May 15th 1937.

H W WALLIS GRAIN
Secretary

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRY

307 Beds Main Hospital
40 Beds Convalescent Hospital

RESIDENT CASUALTY OFFICER WANTED. Position vacant May 16th. Salary £125 per annum with board, laundry and attendance.

Candidates must be duly qualified and registered. Applications, stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately.

(MISS) R HOOPER
April 26th 1937
Secretary



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LONDON E 17—Old-established better middle-class PRACTICE in thickly populated residential locality. Detached non-basement house with large garden and garage for sale. Receipts over £2,000 p.a. Panel 2,500. Premium for Practice £5,000.

LONDON S.W. 12—Old-established better middle-class PRACTICE. Large attractive house part sub-let, for sale freehold or would rent. Receipts £1,500 p.a. Panel 400. Premium for Practice 11 years purchase.

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2. **SOUTH COAST**—Good mixed PRACTICE. Receipts well over £1,200 p.a. (Auditor's figures). Panel 1,300. Good scope. Excellent house, all services.
3. **YORKS**—East Coast Town—Old-established Private and Panel PRACTICE. Receipts at £1,400 p.a. panel well over 800 and both increasing. Good house.

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2. **KENT—WELL KNOWN COAST TOWN**—Old-established good-class PRACTICE. Receipts last year nearly £1,500 including select panel of 500. Excellent premises on rental. Premium £3,000.
3. **MIDLANDS—LARGE TOWN**—Old-established PRACTICE. Receipts average £500. Very small recently started panel but excellent scope for same. Splendid house 4 or 5 bedrooms. Rent £60 p.a. Vendor wants larger Practice. Premium only £300 for quick sale.
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7. **NEAR KILBURN N.W.**—Old-established mixed-class PRACTICE. Receipts last year about £700 p.a. including panel nearly 500. Nice corner house on rental. Premium £950.
8. **LONDON E**—Densely populated well-established PRACTICE. Receipts last year £400—£500 p.a., including panel of 370 increasing. Premises on rental. Splendid scope. Premium only £300 payable £200 down.
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WALES £1,400 P.A. INCREASING 98 per cent panel and contract. Very busy midwifery. Good house 5 bed 2 recep. surgery etc. Rent only £40 p.a. Premium £2,000 including drugs, fixtures, etc.—2.

SOUTH EAST COAST POPULAR RESORT Over £1,450 p.a. Panel 500 or more. Visits 31. 6d. 10. 21s. Premium 2 years purchase. 2 recep. 3 bed consulting room etc. to rent—3.

ESSEX SUBURB ABOUT £880 p.a. PANEL 750. Visits 31/6 surgery 21/6 up. House 4 bed garage and garden. Rent only £52 p.a. Premium £1,700 incl. lease fixtures, etc.—4.

SURREY SHARE OF £2,100 p.a. IN STEADILY Increasing PRACTICE. Visits 21/6. Midy 41/6. Large panel. Premium £1,350. Choice of houses to rent or buy—5.

LONDON SE SUBURBAN GOOD-CLASS Non-panel non-dispersing. Over £800 p.a. Rent 7/ up. Impenetrable corner family house to rent at £55 p.a. Premium £1,250—6.

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MIDDLESEX NUCLEUS ESTD 21 MTIS Receipts last year £350. Panel 70. Detached house 3 bed etc. Rent £90 p.a. Premium £340—8.

OXFORD—NUCLEUS DIVER £300 P.A. with excellent scope. Panel 100 increasing. Fees 1/6 to 21/6. Midy £3 5/ up. Aprt £10. Good house 41/6 bed garden etc. Rent £90 p.a. Premium for quick sale £500—9.

KENT COAST—FAVOURITE RESORT Very old estd. Vendor retiring through ill-health. Average over £600 p.a. Better class, non-panel non-dispersing. Visits 21/6. Surgery 10/6. Good house, 6 bed. Sell or let. Premium £1,000 or offer—10.

SIA PRACTICE—ABOUT £1,400 P.A. Old est. Fees £1/ upwards. Premium 2 years purchase. Excellent detached house, 3 recep. room, 4 large and 4 small bed etc. Close to hotel and Pump Room. £3,000 freehold—11.

MIDLANDS—PARTNERSHIP SHARE PRO- ducing about £1,250 p.a. to large practice. Increase later surgical scope. Premium 2 years purchase. Choice of house—12.

S MIDLANDS—ABOUT 60 MILES FROM Town. £1,000—£1,100 p.a. Increasing panel and appts worth over £600. Very old estab. country practice. Good sporting district. Premium £2,500 to include fixtures, etc.—13.

DEVON—COUNTRY UNOPPOSED ABOUT £1,000 p.a. Panel over 400. Fees 2/5 to 10/6. Premium £1,500. Charming house. 2 recep. 6 bed surgery etc. 1 acre. Price £2,300—14.

LONDON W—ABOUT £1,000 P.A. SMALL selected panel. Middle and better-class. Premium £1,250. 2 recep. 4 bed. Cons. Wait etc. large garden. Rent £200 incl. on lease—15.

LONDON SE. NEAR OVAL—CASH PRACTICE. £500 p.a. Panel 500 increasing rapidly. Ample scope—rehousing area. House with 3/4 bedrooms etc. Rent £80 p.a.—16.

KENT—OVER £600 P.A. PANEL WORTH £220 approx. Fees 3/6 to 10/6. Several appts. House, 3 recep. 4 bed., etc., garden. Rent £70 p.a.—17.

EASTERN COUNTY—1/3 OF OVER £2,500 p.a. Panel nearly 1,800. Very old estab. Practice. Premium 2 years purchase or near. House £55 p.a. 4 bed., 2 recep. surgery etc., and large garden—18.

ESSEX SUBURB—ABOUT £1,450 P.A. Medium panel. Fees 3/6 up. Prem 2 years purchase. Detached house (4 bed etc.) Sell or let—19.

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FULL TERMS ON APPLICATION

Practices and Partnerships for Disposal

Full particulars sent free

- 1 S DEVON—Very old-established PRACTICE, averaging over £1 600 p.a. in beautiful country district near the coast. Panel 850. Visits 5/ to £1 1s. Good house (5 bedrooms bathroom electric light) garage and good garden for sale. Premium one and a half years purchase.
- 2 SW OF ENGLAND—FAVOURITE WATERING PLACE—THIRD PARTNER required in old-established and increasing middle-class non-dispensing Practice about £3 000 p.a. Panel over 1 800. Detached house (7 bedrooms, etc.) with garage and good garden to rent on lease. Considerable scope especially in Midwifery. Good Hospital. One third share at two years purchase with prospect of further share in two years.
- 3 HOME COUNTIES—PARTNERSHIP (after preliminary Assistantship) in old-established Practice over £4 000 p.a. in delightfully situated country town easy reach of coast. One third share offered to suitable man at two years purchase. Applicant must hold the F.R.C.S. and should be aged about 30.
- 4 MIDDLESEX—Well-established and increasing middle-class non-dispensing PRACTICE in residential district. Gross earnings last year £3 800. Panel about 1 050. Corner house in residential part (4 bedrooms) with garage and small garden for sale. Premium two years purchase based on cash receipts for past three years. Hospital.
- 5 LONDON SW—Close to West End. Well-established good-class PRACTICE about £1 250 p.a. Fees £1 1s mostly few £2 2s some 10/6. Very desirable modern up-to-date ground floor flat with consulting and waiting rooms 2 bedrooms etc. Good scope. Premium £1 850.
- 6 YORKSHIRE (NR)—Very old established and steadily increasing country PRACTICE between £1 400/£1 500 a year including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden for sale. Good schools and sport. Scope. Premium one and a half years purchase.
- 7 LONDON SW—Well-established PRACTICE averaging £1 735 p.a. including about £130 from eye work. Panel 1 940. Rent of private residence with ample accommodation and garage for sale or rent. Net rent of surgery premises about £10 p.a. Scope for increase. Premium £3 500.
- 8 WESTERN AUSTRALIA—Old-established PRACTICE averaging £1 235 p.a. in small town in centre of one of the best and most prosperous pastoral areas. Brick built house (4 bedrooms) electricity and water. Rented on lease. Premium £640 sterling. Two Hospitals in town.
- 9 LONDON SE—Increasing PRACTICE in populous outlying suburban district. Receipts last year £1 120. Panel nearly 1 200. Large house for sale or rent. Two Branch Surgeries. Scope for increase. Premium £2 000.
- 10 CANARY ISLANDS—Small compact PRACTICE in one of the healthiest and pleasantest parts. Cash receipts 1936 over £550. Fees 10/6 and £1 1s. Excellent scope. Premium 300 guineas.
- 11 OPHTHALMIC PRACTICE in S Rhodesia—Gross receipts 11 months ended March 31st 1937 £1 536. Possibilities of expansion for man with D.O.M.S. or D.O. and operative experience. Good well-equipped Hospital.
- 12 DEATH VACANCY—BOURNEMOUTH DISTRICT—Old-established PRACTICE doing about £250 p.a. but offering good scope. Panel recently started with 20 patients. Excellent non-basement house (6 bedrooms etc.) with garage and small garden. Price freehold £3 150.
- 13 LONDON, SW—Old-established and increasing middle-class PRACTICE averaging nearly £3 200 p.a. in suburban district. Panel 1 200. Visits 3/6 to £1 1s mostly about 5/ to 7/6. House with 4 bedrooms to rent on lease. Also Branch Surgery valued at £800. Premium £6 000 or near offer or one half share would be sold.
- 14 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village. Cash Receipts last 12 months £1 240. Panel over 500. Small expenses. Detached house (5 bedrooms) with electric light main water etc. garage and garden for sale. Premium £2 100.
- 15 EAST ANGLIA—PARTNERSHIP in old-established country practice about £3 700 p.a. Easy distance of the coast. Panel over 2 000. House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale. Freehold. Premium two-fifths share two years purchase. Partner must be married aged 35-40. Preliminary Assistantship.
- 16 LONDON NW—Increasing PRACTICE of £725 p.a. in growing district 30 minutes from Piccadilly. Panel about 530. No midwifery or night work. Semi-detached double fronted freehold corner residence (4 bedrooms) garage and garden for sale. Scope. Premium £1 450.
- 17 SCOTLAND—PRACTICE averaging over £1 300 p.a. In important city. Panel over 900. Good house for sale.
- 18 LANCs—Rapidly increasing mixed class PRACTICE of £3 800 p.a. in manufacturing town. Panel about 2 670. Two houses to be purchased or rented at first. Alter natively a one half share would be sold at two years purchase.
- 19 S COAST—Good middle-class non-dispensing PRACTICE about £1 100/£1 200 in popular watering place. Panel about 200. Fees 3/6 to 10/6. Very attractive detached residence (3 bedrooms etc.) with garage and garden. Price £3 000. Freehold. Scope. Premium £2 250.
- 20 EASTERN COUNTY—PARTNERSHIP (after short preliminary Assistantship) in very old-established Practice in market town in hands of Medical Woman. Receipts £2 000. House available. Applicant must be Medical Man aged 30-35 and graduate of Cambridge or London preferred.
- 21 W OF ENGLAND—PARTNERSHIP (after short preliminary Assistantship) in old-established non-dispensing Practice of £1 800 in residential town. Panel 2 000. Fees 3/6 to 10/6. Four tenths share would be sold to suitable man at two years purchase.
- 22 E ANGLIA—Partnership in Country PRACTICE in agricultural district with good appointments and substantial panel. Visits 3/6 to 10/6. Charming old country house (6 bedrooms and dressing room) garage and 31 acres of ground for sale. Premium for share of about £1 700 p.a. two years purchase.
- 23 LONDON SW—Well-established mixed PRACTICE of £1 725 including about £130 from appointments and a panel between 1 600/1 650. Rent of flat £105 p.a. and surgery £91 p.a. inclusive. Premium £4 500 to include drugs etc. etc.

British Medical Bureau

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Practices and Partnerships for Disposal (continued)

24 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2,500 p.a. Panel 1 1790 House with 4 bedrooms and separate surgery accommodation garage and garden to rent at £55 p.a. Scope Premium one third share two years purchase

25 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London. Panel 900 Well-built house (5 bedrooms etc.) available for sale One third or two-fifths share at two years purchase

26 HOME COUNTIES—Old-established good-class easily run PRACTICE in a beautifully situated country district Cash receipts average over £1,570 p.a. Panel just over 500 Visits 3/6 to £1 1s medicine extra Nice house (6 bedrooms) with main electric light gas and water 2 garages and 1/2 acre of garden for sale Premium 2 years purchase Good Hospital in district

27 S OF ENGLAND—Well-established Practice averaging nearly £1,200 p.a. in a seaside resort Panel over 700 Visits 3/6 to 10/6 mostly 5/ Very little midwifery Good corner house (5 bedrooms) with central heating garage and small garden for sale Well-equipped Cottage Hospital Good scope Premium 2 years purchase

28 N WALES WATERING PLACE—Partnership in middle and upper-class Practice averaging nearly £3,800 p.a. including selected panel 245 Fees 5/ to 10/6 without medicine—some £1 1s Detached house (4 bedrooms etc.) with good garage and small garden to rent on lease Scope Premium one half share £3,900 to include surgery fittings drugs and book debts Hospital

29 LONDON W 2—Practice averaging over £800 p.a. including panel 165 Consultations 5/ upwards Private residence to rent at £120 p.a. and surgery premises at £60 p.a. Scope to increase Premium two years purchase

30 LONDON SW—Partnership in well-established working-class Practice nearly £3,150 p.a. in Favourite Suburban District Panel 3,000 One half share would be sold at two years purchase

31 SW OF ENGLAND—Partnership in well-established mixed Town Practice about £4,200 p.a. Panel 1,950 Visits 2/6 to £2 2s medicine extra Detached house (5 bedrooms) with large garden garage etc for sale One fourth or one third share at first at two and a quarter years purchase Applicant who must be experienced in General Practice and major surgery—F.R.C.S. preferred—would be appointed to Staff of Hospital

32 LONDON, W—Practice of about £700 p.a. in residential district Panel 500 Large corner house (7 bedrooms) with separate surgery entrance and good garden Price of lease £1,350 Scope Premium £1,250

33 MIDLANDS—Partnership in old-established increasing Practice in pleasantly situated Country Town Good appointments and panel Visits 3/6 to £1 11s 6d medicine extra Suitable house obtainable Incoming partner must be good Surgeon—English or Scottish—aged 30-35 Small well-equipped Hospital Share worth £1,250 p.a. at first at two years purchase

34 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town Receipts average £750 p.a. including P.M.S. worth £125 p.a. and panel about 750 Pleasantly situated house (5 bedrooms attics, etc.) on main road Price (freehold) £3,200 Ample scope Premium one and three-quarter years purchase

35 E. ANGLIA—Partnership in old-established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town Panel 1,850 House to rent at £60 p.a. Good society and sport Scope One third share at first Premium two years purchase

36 N DEVON—Old established Practice averaging over £1,050 p.a. in small Watering Place Panel about 400 Well built semi-detached house (5 bedrooms etc.) garden for sale Beautiful surrounding country All kinds of sport Scope Premium two years purchase

37 TASMANIA—Practice doing £1,500 a year, including good appointments Fees range from 10/6 to £1 1s House with 2 bedrooms etc and garden for sale Par chaser should be able to do major surgery Premium £900

38 ESSEX—Old established Practice in outlying Suburban District Receipts average £2,125 p.a. including appointments worth about £260 p.a. and a panel of 1,784 Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance Garage and fair size garden Rent £120 on lease Premium two and a quarter years pur Purchaser must be English Scottish or Irish

39 LONDON, N—Well-established Practice averaging £450 p.a. in pleasant growing District Panel about 600 Well situated house on main road to rent at about £65 p.a. Good scope—building going on Premium £600 or offer to include surgery fitting and drains

40 SURREY—Increasing middle and working-class PRACTICE in thickly populated Suburban District Receipts 1936 £1,720 Panel 660 Small house Rent £78 p.a. (branch £55 p.a.) Ample scope Premium £2,600

41 SOUTH SUFFOLK—Partnership in sound old-established Practice over £6,000 p.a. in most desirable Country Town Good appointments and panel over 3,000 Not much midwifery Choice of suitable houses One sixth share at first at two years purchase

42 LONDON, N—Medical Woman's Practice in populous district Receipts average £560 p.a. including panel 470 House (4 bedrooms) to rent at £100 p.a. Premium £850

43 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3,300 p.a. in Market Town No panel Fees 5/ to £1 1s Suitable house obtainable Premium one half share two years purchase

44 CO. DURHAM—Well-established Practice about £1,100 p.a. in Residential Colliery District within easy distance of Newcastle Appointments worth £85 p.a. and panel 840 Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent Premium one and a half years purchase

45 N WALES WATERING PLACE—Good-class non panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden Scope for panel work if desired Prem one year's purchase

46 HOME COUNTIES—Old established Practice of £500 p.a. in first rate town 20 miles from London Panel over 500 Visits 5s No midwifery Modern nine roomed house with garage and attractive garden—about quarter of an acre Premium freehold house and Practice £2,000

47 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3,500 p.a. in an important town Appointments £250 Suitable house available to rent A one third share would be sold at two years purchase to a suitable man preferably one holding the M.D. or M.R.C.P.

48 LONDON SE—Old-established Practice of about £1,000 p.a. in outlying residential district Panel 100 Detached house (4 bedrooms etc.) for sale Premium two years purchase

49 LONDON N—Old-established Practice in suburban district Cash receipts 1936 (10 months) £1,450 Panel 1,240 increasing Fees 2/6 upwards Suitable house (9 rooms) to rent at £160 p.a. Premium £3,400

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- 1 NORTH LONDON—Sound mixed class PRACTICE. Established over 40 years producing last 12 months nearly £2,900. Substantial panel. Nice house in good repair. Rent £104 p.a.
- 2 LONDON S W 2 DISTRICT—Well established mixed class PRACTICE. Gross cash receipts for last 12 months approximately £800. Including panel of 1,200 to 1,300. Fees from 2/6. Suitable house stated to be in good repair. Premium £1,600.
- 3 LONDON SOUTH EAST—Old established middle and working class PRACTICE. Gross cash receipts for last 12 months about £1,320. Panel of approximately 900 and P.M.S. worth £25 p.a. House contains 2 reception, 4 bedrooms, small garden. Can be rented on lease at £100 p.a. Premium £2,250.
- 4 OUTLYING SOUTHERN DISTRICT—Mixed class PRACTICE steadily increasing and situated in rapidly developing neighbourhood. Gross cash receipts for last 12 months approximately £1,200. Panel of about 1,200. Fees from 2/6. Well situated house with 2 reception, 4 bedrooms, good garden. Can be leased. Premium 11 years purchase or near offer.
- 5 NORTH LONDON—Old-established PRACTICE producing about £700 p.a., including panel of nearly 600 patients. Suitable house ample accommodation and good garden garage to rent at £100 p.a. Premium £1,200.
- 6 DEATH VACANCY—SOUTH COAST TOWN—PRACTICE producing about £250 p.a. Five years ago it was doing £1,000 p.a. but has decreased owing to ill-health. Modernised house with ample accommodation. Price for freehold and practice £3,150.
- 7 WEST OF ENGLAND—Seaside resort combined with lovely country—good middle and better working-class PRACTICE, established over 50 years. Gross cash receipts average £1,670 approximately. About £650 is derived from panel and P.M.S. Fees 3/6 to 2/1. Well-built house with 3 sitting rooms and 6 bedrooms, good garden, tennis lawn and garage. Can be rented on lease.
- 8 LONDON, WESTERN AREA—Mixed class PRACTICE in populous district. Gross cash receipts for last 12 months about £700 but capable of increase. Panel of 500. Well situated house with ample accommodation, will be put into thorough repair. Good garden. Price for Practice and house £2,500. £500 down.
- 9 WELSH BORDERS—Unopposed chiefly agricultural PRACTICE in beautiful district. Average gross cash receipts £913 p.a. (last year £998). Panel produces about £370 p.a. and appointments worth about £132 p.a. Very low expenses. Suitable house in own grounds with tennis court, etc. containing 2 reception, 6 bedrooms, etc. Freehold for sale £1,200. £700 on mortgage. Premium £1,500.
- 10 WEST COAST OF SCOTLAND—Old-established mixed class non-dispensing PRACTICE held by vendor many years. Gross cash receipts average about £1,000 p.a. Panel of 1,213. Appointments worth about £30 p.a. Fees 2/6 to 1/5. Purchaser can choose his own house. Good golf and other sport. Premium 11 years purchase.
- 11 CUMBERLAND—Old-established unopposed PRACTICE held by vendor who is retiring, for 30 years. Gross cash receipts average about £800 p.a., including panel worth over £250 p.a. and appointments worth nearly £80 p.a. Suitable 8 roomed house with bathroom, surgery, dispensary, etc. garden, garage. Rent £30 p.a. Shooting, fishing golf etc. Premium 11 years purchase.
- 12 SOUTHERN RHODESIA—Hospital Town on Railway. Beautiful climate and country. Good-class prescribing PRACTICE easily run. Visits 7/6 to 10/6. Midwifery £10 10s. 0d. Average income for past 5 years £1,900 p.a. Well appointed house with tennis court, garage, surgery etc., can be rented or bought. Good operating surgeon will greatly increase practice. Excellent schools. Sport of all kinds, big game shooting, fishing, etc. Income tax 6d in the £. Premium £2,000 to include drugs, surgery fittings and furniture.
- 13 LONDON NORTH—Old-established chief working-class PRACTICE. Receipts for last 12 months approximately £1,600 with panel of about 2,700. Suitable accommodation can be rented at £92 p.a.
- 14 LONDON WEST 2—Old-established mixed-class PRACTICE producing £935 for the last 12 months. Panel 1,143. Visits 3/6 to 10/6. Roomy house with small garden can be rented at £130 p.a. Premium 2 years purchase.
- 15 LONDON SOUTH WEST—Well-established mixed PRACTICE averaging £3,100 p.a. Panel of 1,200. Appointments worth about £300 p.a. Fees from 3/6. Good house with large garden can be rented at £100 p.a. Premium £6,000.
- 16 SOMERSET—MARKET TOWN—Established over 40 years, and averaging about £1,000 p.a. Panel of nearly 900 and appointments worth over £100. Non-dispensing with fees from 5/ to 2/1. Midwifery not encouraged. Good house available freehold containing 3 reception, 6 bedrooms, with separate surgery, 11 acres of productive garden and garage for two cars. Electric light and water. Price £1,400. Premium 2 years purchase.
- 17 EASTERN COUNTIES—COUNTRY PARTNERSHIP—ONE THIRD SHARE available in mixed-class Practice over £2,500 p.a., including panel of nearly 1,800. House contains 2 reception, 4 bedrooms, large and attractive garden and good garage. Rent £55 p.a. Sport of all kinds. Premium 2 years purchase or near offer.
- 18 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 19 DEATH VACANCY—YORKSHIRE—Better class PRACTICE in good residential district. Gross cash receipts average about £650. Panel of about 400. Suitable house can be rented at £100 p.a. Offers invited.
- 20 WESTERN DISTRICT OF LONDON—Old-established good mixed class PRACTICE producing between £1,600 and £1,700 p.a., including panel of 1,500. Roomy corner house in excellent position with garage. Freehold for sale or rented on lease.
- 21 NORTH LONDON—Old-established mixed class PRACTICE held by vendor many years. Gross cash receipts approximately £2,800 p.a. Panel of over 2,800. Suitable house and branch surgery can be rented on lease.
- 22 LONDON SOUTH EAST—Old-established PRACTICE producing about £1,830 p.a., including select panel of 500. Fees from 3/6. Suitable house available with 2 reception, 5 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 23 LONDON WEST—PARTNERSHIP—ONE THIRD SHARE with increase later is offered in well-established practice producing £2,400 p.a., with scope. Suitable house can be obtained. Premium 2 years purchase.
- 24 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1,100 p.a. including selected panel of about 350. Fees from 5/1. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.
- 25 NORTH WALES—FAVOURITE SEASIDE RESORT—A ONE THIRD SHARE (with increase later) is offered after short preliminary assistantship in old-established better-class practice producing about £3,400 p.a. Panel of 1,100. Suitable flat available for ingoing partner who should be experienced. Premium 2 years purchase.
- 26 LONDON NORTH WEST—PARTNERSHIP—A ONE THIRD SHARE is for disposal in steadily increasing middle-class practice producing last year £2,400. Small panel. Fees 7/6 to 2/1. Choice of houses. Premium £2,000.
- 27 DEATH VACANCY—FAVOURITE SOUTH WEST COAST TOWN—PARTNERSHIP WITH SURGICAL SCOPE—A one third or one-half share is for disposal (owing to recent death of senior of two partners) in good-class non-panel Practice stated to average £3,600 p.a. for past 5 years. Fees 7/6 upwards. Suitable house, with ample accommodation can be rented or purchased. Premium for share 2 years purchase. Ingoing partner must be experienced, over 35 and able to undertake major surgery.
- 28 LONDON—WESTERN DISTRICT—Well-established very sound mixed-class PRACTICE. Panel of 1,630. P.M.S. 200. Receipts approximately £1,700 p.a., including large proportion ready cash. Excellent professional accommodation. Suitable bachelor or family of not more than three.
- 29 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing for last 12 months approximately £940. Selected panel of 400 to 450 patients. Visits from 5/4. Very nice house in good repair, with ample accommodation. Garden. Garage. Price for freehold £2,000. Premium £1,250.
- 30 MIDLANDS PARTNERSHIP—ONE HALF SHARE in mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1,369 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 2 years purchase.
- 31 LONDON—SOUTH EAST—Well established middle class increasing PRACTICE producing for last 12 months £1,270. Panel of 960. Fees 2/6 to 7/6. Scope for development as building is in progress. Good house in excellent condition containing 2 reception, consulting 4 to 6 bedrooms, dressing room, etc. Price £300. Premium £2,400.
- 32 MIDLANDS—PARTNERSHIP—A SHARE representing approximately £1,300 p.a., with increase later is offered in exceptionally sound good mixed-class practice averaging about £9,000 p.a. with substantial panel and very good appointments. Excellent scope for major surgery. Suitable house available. Premium 2 years purchase.
- 33 YORKSHIRE—GOOD TOWN WITHIN EASY REACH OF COAST—A ONE FOURTH SHARE, with increase later is offered in very old-established middle-class practice producing for last 12 months nearly £4,000. Substantial panel. Fees from 3/6. Suitable house with 2 reception, 4 bedrooms, etc. Garage. Stabling and garden. Electric light. Gas. Can be rented at £65 p.a., or freehold purchased. Premium 2 years purchase.
- 34 MIDLANDS—COUNTRY TOWN PARTNERSHIP—A ONE-QUARTER SHARE (with increase later) is for disposal in mixed-class practice averaging over £2,500 p.a. including panel of 2,800. Fees from 3/6. Suitable house can be obtained. Preliminary assistantship if wished.
- 35 SOUTH COAST—PARTNERSHIP—ONE THIRD SHARE is offered in old-established non-dispensing practice in favourite town producing last year £3,461. Selected panel of 400. Fees 3/6 to 2/1. Suitable freehold house for sale. Ingoing partner must be well qualified and accustomed to better-class work. There are two hospitals and one partner is on the staff.
- 36 RESIDENTIAL DISTRICT WITHIN 7 MILES OF CHAIRING CROSS—Good middle-class PRACTICE averaging £1,450 p.a. Panel of 750. Very low expenses. Suitable house with 2 reception, 4 bedrooms, etc., separate professional rooms. Garden. Garage. Can be rented at £90 p.a. Premium 2 years purchase.

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EAST YORKSHIRE.—Old-established unopposed PRACTICE in nice country district. Cash receipts approximately £1 040 p.a. Panel 700 Excellent detached house, 3 reception, 4 bedrooms, 3 professional rooms (separate entrance), garage. Rent £50 p.a. or would sell for £750 Three-quarter acre garden Premium—1½ years purchase or near offer for quick sale—No 959

NEAR MANCHESTER.—PARTNERSHIP in sound old-established Practice. Cash receipts last year £4,900 Panel 3,200 Excellent house 3 reception, 5 bedrooms, garage and nice garden. To rent. Premium—2½/3th share—(approximately £1 950 p.a.)—2 years purchase—No 944

MANCHESTER.—Old-established mixed Panel and Private PRACTICE. Cash receipts £1,200 p.a. Panel 850 Appointment £380 p.a. Good house 2 reception, 4 bedrooms, 3 professional rooms (separate entrance) For sale or would rent Premium—1½ years purchase Vendor retiring—No 958

CHESHIRE TOWN.—Very old-established mixed-class PRACTICE. Cash receipts £1,500 p.a. Panel 1,700 Good house 3 reception, 4 bedrooms, and dressing rooms, 3 professional rooms, garage and garden. Premium—2 years purchase—No 957

NEAR MANCHESTER.—PARTNERSHIP in old-established middle and working-class Practice Cash receipts approximately £2,600 p.a. Panel 2,300 Good detached house 2 reception 5 bedrooms, garage and garden. Rent £80 p.a. Great scope Premium—4 9th share—(about £1 000 p.a.)—2 years purchase—No 949

NEAR NOTTINGHAM.—PARTNERSHIP in practically unopposed mixed-class Practice Average cash receipts £3,500 p.a. Panel over 1,600 Appointments £120 p.a. Attractive house 2 reception, 5 bedrooms, garage and pleasant garden. Premium—1½/3rd share—2 years purchase—No 953

WIRRAL COAST.—PARTNERSHIP in old-established mixed-class Practice Cash Receipts last year £2,830 Panel 2,815 Scope Excellent corner house 2 reception, 4 bedrooms, garage Premium—1 share—2 years purchase—No 946

MANCHESTER.—Middle and better-class PRACTICE in present hands 40 years. Cash receipts last year £2,151 Panel over 600 Good house, 3 reception, 6 bedrooms, garage and garden. Premium—Practice and house—£1 000 Long introduction if desired Vendor retiring—No 858

EASTERN COUNTY.—Partnership in old-established Country PRACTICE with income of about £2,500 p.a. Panel 2,000 Excellent house 3 reception, 5 bedrooms, garage and good garden. Rent £60 p.a. Premium—half share—£2,200—No 933

NEAR MANCHESTER.—Sound middle and working-class PRACTICE Average cash receipts £2,600 p.a. Panel £2,500 Scope Detached corner house 2 reception, 4 bedrooms, 3 professional rooms, garage and garden Premium—1 years purchase—No 952

SHEFFIELD.—Old-established mixed-class PRACTICE Cash receipts last year £1 112 Appointment (transferable) £100 p.a. plus bonus Panel 600 Scope Detached house 2 reception, 3 bedrooms small garden. Rent £52 p.a. Premium—1½ years purchase—No 940

DERBYSHIRE.—Old-established PRACTICE in pleasant district near large town, offering great scope for increase owing to building developments Suitable for two men in partnership Cash receipts last year £3 000 Panel 3,359 Two good houses, with ample accommodation and modern conveniences, each with garage and tennis court. Premium—best offer—No 955

LANCS TOWN.—Mixed panel and private PRACTICE, in present hands 30 years. Cash receipts approximately £1,500 p.a. Panel 1,500 Great scope. Good house, 2 reception, 4 bedrooms, garage and small garden. Rent £50 p.a. Premium, best offer—No 945

NEAR LIVERPOOL.—Well-established middle-class PRACTICE in pleasant district. Ample scope as district developing. Cash receipts £800 p.a. Panel 650 Nice house, 2 reception, 5 bedrooms and garden. Premium—1 year's purchase Vendor retiring—No 928

NORTH WALES.—Old-established middle-class PRACTICE in beautiful Seaside and Country district. Average cash receipts £1 417 p.a. Panel 415 Well built house in good position 3 reception, 7 bedrooms garage for 2 cars and garden. Good sport and educational facilities. Premium—Practice—£2,100—No 929

LANCS TOWN.—Well-established Panel and Private PRACTICE. Earnings last year £2,254 Panel 1,750 Good house available Premium—1½ years purchase Partnership if desired—No 920

WELSH BORDER.—PARTNERSHIP in well-established Practice in Country district. Panel 2,432 Excellent house 4 reception 7 bedrooms, garage and garden of half an acre Premium—for share worth £800 p.a.—£1 100—No 956

NORTH STAFFS.—PARTNERSHIP in old-established mixed Panel and Private Practice Cash receipts last year £5,521 Panel 7,500 Incoming partner may choose own residence—Premium—2½/9th share (about £1,200)—2 years purchase Further share later—No 941

CAMBRIDGESHIRE.—Old-established PRACTICE in pleasant Country town Cash receipts last year £817 Panel 450 Good house 3 reception, 5 large and 2 small bedrooms, garage, and garden of one acre Rent £60 p.a. Premium £1,200 Vendor retiring—No 938

LANCS TOWN.—Old-established mixed class PRACTICE about 12 miles from Manchester Cash receipts last year £1 084 Panel 1,050 Scope Good house 2 reception, 5 bedrooms 3 reception rooms (separate entrance), garage and garden Premium—1½ years purchase—No 951

DERBYSHIRE.—Old-established mixed class PRACTICE. Cash receipts last year £765 Panel 662. Scope. House 2 reception, 3 bedrooms, garage and garden Rent (including rates) £80 p.a. Premium best offer—No 947

YORKSHIRE (W.R.)—Well-established mixed-class PRACTICE within easy reach of large city Cash receipts last year £1 167 Panel 850 Good house 2 reception 4 bedrooms, and maid's room garage, and garden. Premium—Practice, house and book debts, best offer—No 934

DERBYSHIRE.—PARTNERSHIP in old-established Country Practice near to large town Cash receipts last year £3,238 Panel 1,800 Scope as district developing Attractive house specially built, 2 reception 5 bedrooms, garage, and large garden. Electric light and main drainage Rent £80 p.a. Premium—1½/3rd share—2 years purchase—No 854

MANCHESTER.—Old-established middle and better working-class PRACTICE, in present hands 34 years. Average cash receipts £1 082 p.a. Panel 470 Scope for energetic man. Good house, 2 reception 5 bedrooms, garage and good garden Premium best offer Vendor retiring—No 875

NORTH WALES.—Old-established PRACTICE offering great scope near country and seaside Cash receipts last year £843 Panel 765 Good surgery premises. Premium best offer—No 905

LANCS TOWN.—PARTNERSHIP in old-established mixed Panel and Private Practice in large town about 10 miles from Manchester Income over £3 000 p.a. Panel about 2,000 Great scope House available Premium—1½/3rd share—2 years purchase Further share in 3 to 5 years—No 931

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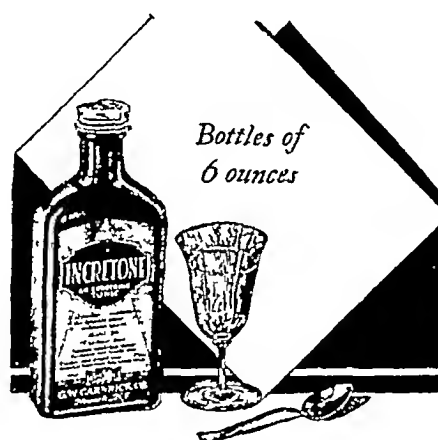
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JOURNAL OF THE



ASSOCIATION

SATURDAY MAY 8 1937

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So it is with the advertisements in the *British Medical Journal*. Sometimes it is true, the reader searches these pages to find a particular preparation or appliance for use in the treatment of a specific case. More often the advertised products are noticed and remembered pending their being required at some future time.

In this way an up-to-date knowledge of proprietary aids to medical practice can be maintained without expense and with very little expenditure of time.

Two helpful suggestions. Pages may be cut out and filed for future reference and it is always worth while to mention the B.M.J. when writing to advertisers.

BRITISH MEDICAL JOURNAL

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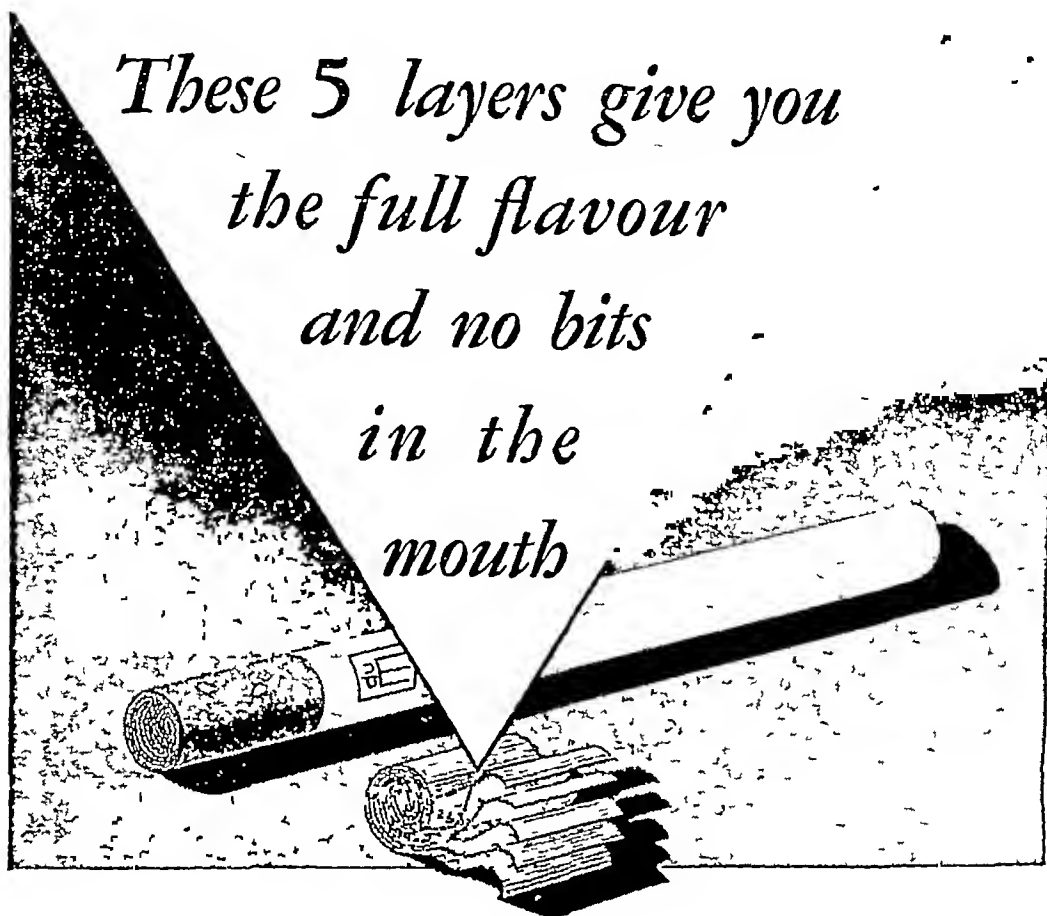
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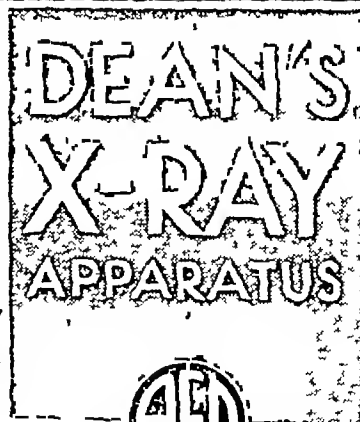
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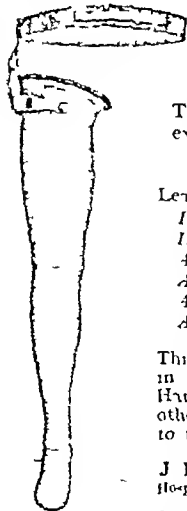
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oil (*Oleum Iodisatum*) is an iodine addition product of poppy-seed oil containing 39 to 41 per cent of combined iodine. It is a pale yellow, viscous, oily liquid, and is opaque to X-rays. Iodatol, 40 per cent, the original British-made iodised oil, conforms with this specification. Iodatol, 40 per cent, is available in bottles of 20 c.c. and 30 c.c. from the principal pharmacists.

Literature on request

THE BRITISH DRUG HOUSES LTD LONDON N.1

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Iron 'Jelloids' are an elegant and reliable means of administering the proto-carbonate of iron. The preparation has none of the disadvantages of Pil Blaud. The iron content remains fresh and unoxidized indefinitely, and injury to the teeth is avoided.

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'PEPULE' PEPSIN

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SUGAR-FREE TONIC WATER. . .
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Approved by the Institute of Hygiene and the Diabetic Association

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ANALYSIS SHOWED THE FOLLOWING RESULTS

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Carbohydrates	absent	6.2%	Carbohydrates	absent	9 1%	Carbohydrates	absent	11 8%
Protein	absent	absent	Protein	absent	absent	Protein	absent	absent
Fat	absent	absent	Fat	absent	absent	Fat	absent	absent

FOR FREE SAMPLES WRITE TO MESSRS SCHWEPES LTD 1 CONNAUGHT PLACE, LONDON W 2

In Chronic Infections and Chronic Complications

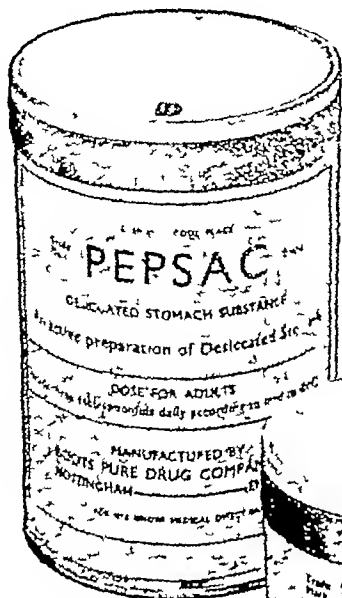
In the treatment of such chronic stages of disease as chronic rheumatism, chronic arthritis and fibrositis, whatever be the origin, Contramine has been used with considerable success for many years. Contramine also is of special

value as an antidote against metallic intoxications, and it is used as a preventive and a palliative in metallic poisonings of various kinds, indeed, as long ago as 1922 (*Lancet*, 1922 i, 733) it was used in the treatment of arsphenamine-jaundice.

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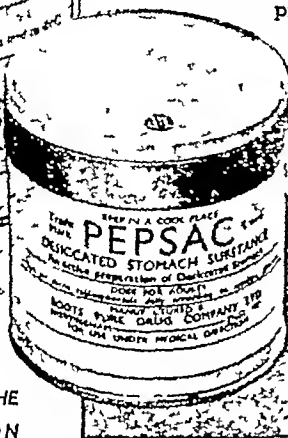
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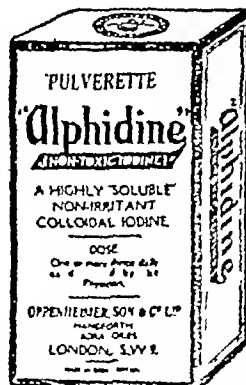
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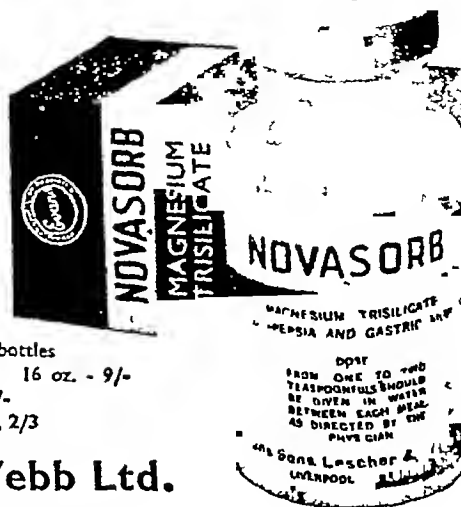
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which is sold in packets at 6½d, to make one pint of Delicious Table Jelly

The Crystals in the packet contain
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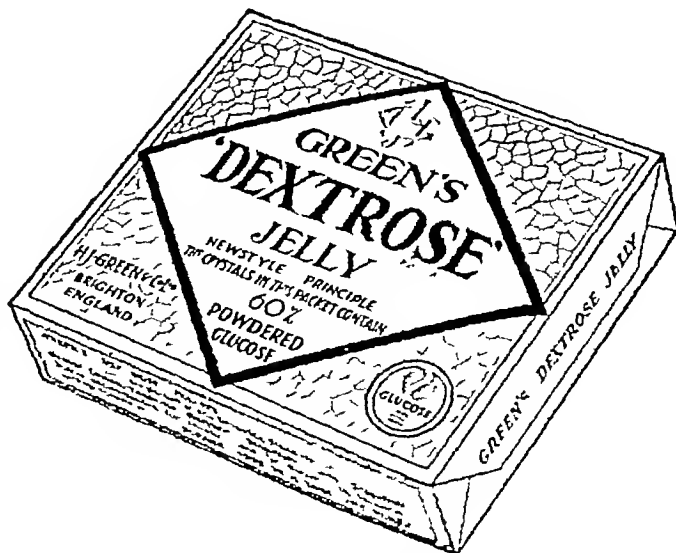
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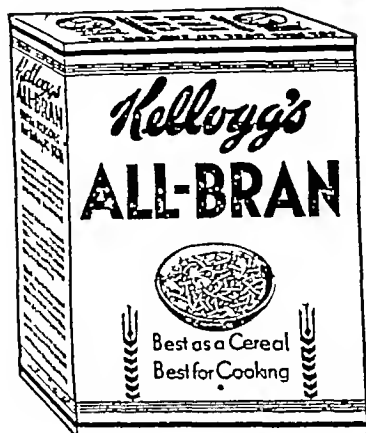
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4 fld oz. bottles	3/-	60 fld oz. bottles	40/-
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as effective as
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without the
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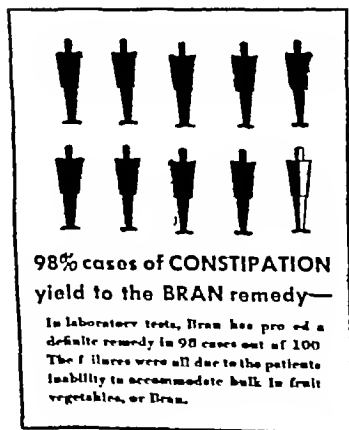
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Per
Packet

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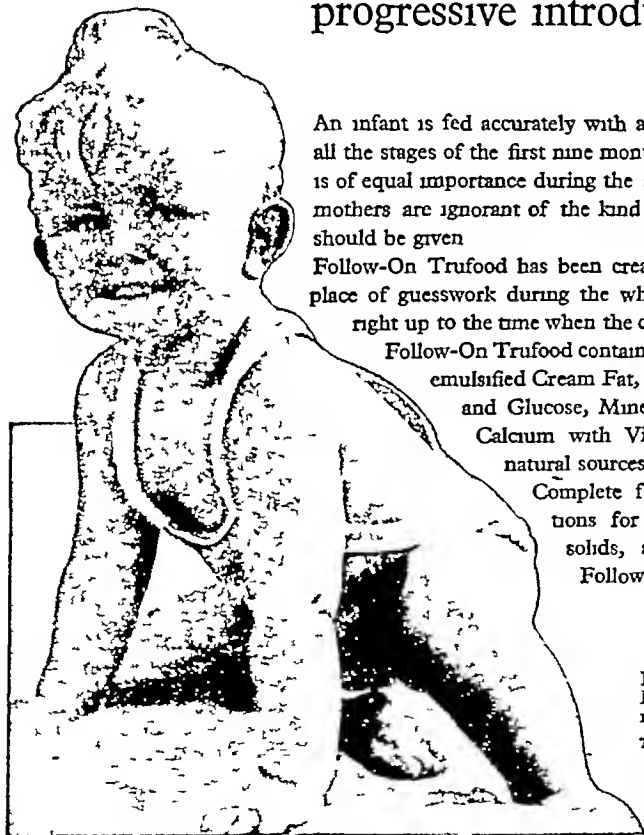
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I am glad to be able to say that the improvement in the case of furunculosis treated by Cystopurin has continued — no further recrudescence has occurred"

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kindly inform our Medical Department

BiSoDoL

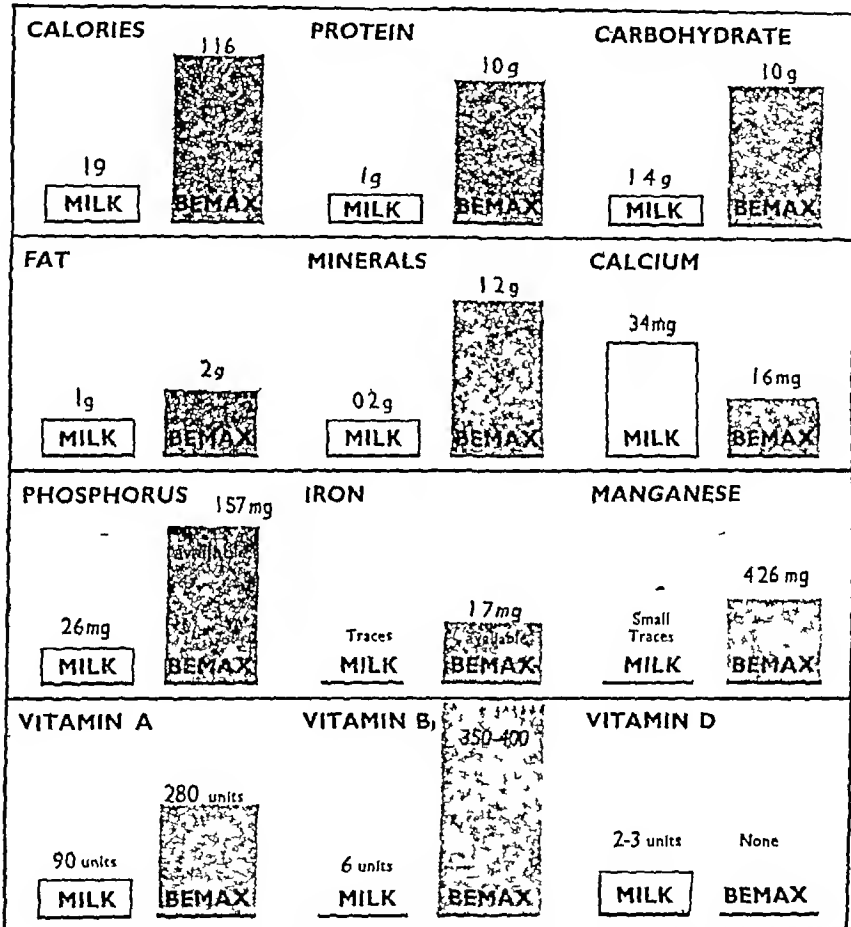
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FOR

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Two valuable foods compared

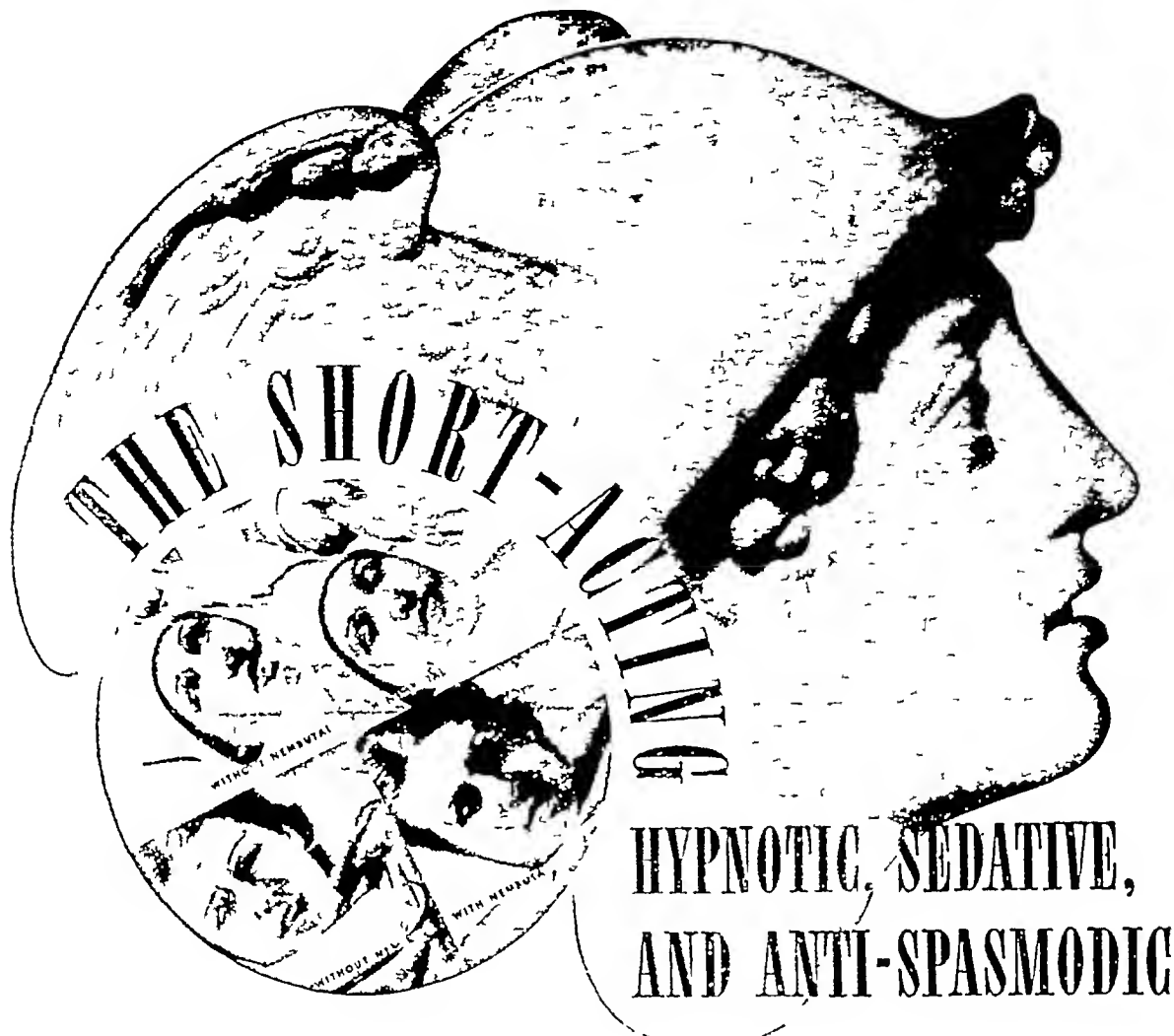


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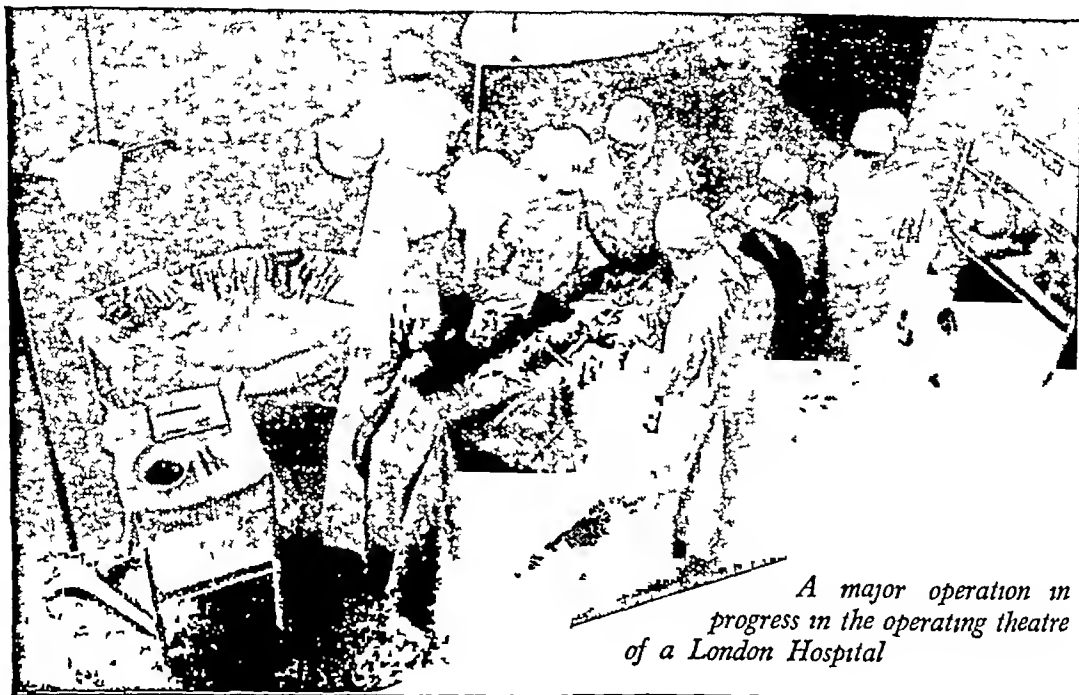
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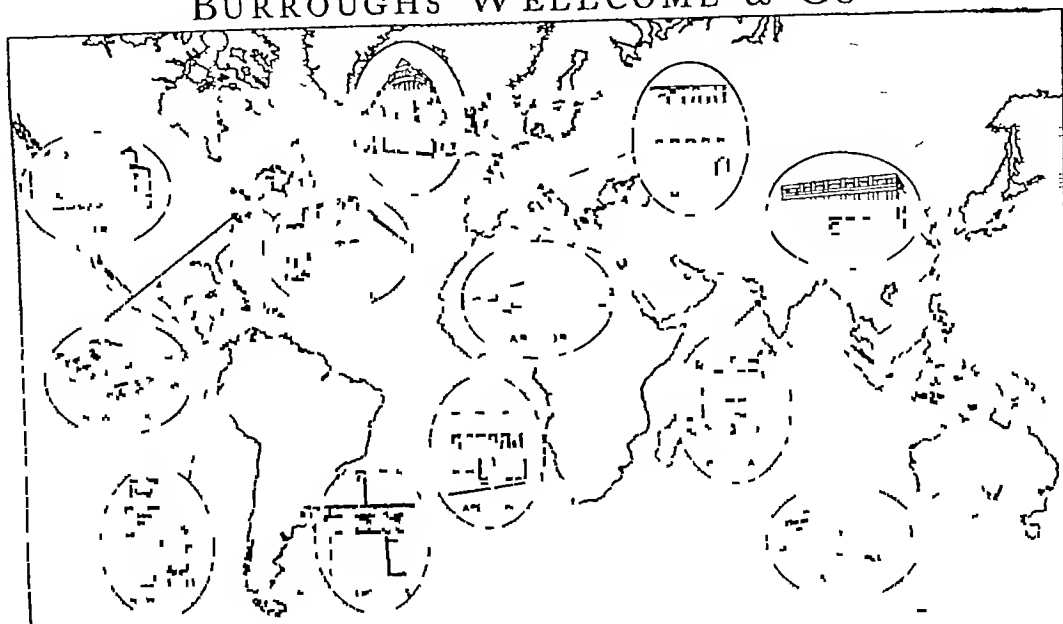
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THE HABITUAL ABORTION AND STILLBIRTH SYNDROME AND LATE PREGNANCY TOXAEMIA
VITAMIN E AND THE PROLAN-PROGESTERONE MECHANISM

BY

JAMES YOUNG, D S O., M D, F R C S., F C O G

Professor of Obstetrics and Gynaecology University of London Director of Department of Obstetrics and Gynaecology British Post Graduate Medical School Hammersmith Hospital London Consulting Obstetrician Edinburgh Royal Maternity and Simpson Memorial Hospital Consulting Gynaecologist Royal Infirmary Edinburgh

In previous communications I have published evidence for the view that the factors responsible for late pregnancy toxæmia tend in a high proportion of the other pregnancies of women so susceptible, to cause abortion, accidental hæmorrhage, etc., without toxæmia (Young 1914, et seq) From a study of the reproductive history of 220 successive cases of toxæmia at the Edinburgh Royal Maternity Hospital I (1927) concluded "that women with an eclamptic history commonly have resident within their body some morbid influence, which is not inconsistent with good health between their pregnancies, but which is inconsistent with the normal continuance of pregnancy to term Many of the damaged pregnancies in such women end in abortion, some end in premature birth or stillbirth but only in comparatively few such pregnancies does this constant and imminent x factor culminate in a toxæmic attack."

months For a fuller study of these questions and for the data on which we have built up the hypothesis of placental intoxication in an attempt to correlate the clinico-pathological data embraced within the toxæmia phenomenon the reader is referred to the previous papers mentioned. These papers also present evidence for the contention that the common attribution of the recurring obstetric disasters of such women to a persisting 'nephritic' factor (chronic nephritis, low reserve kidney, etc) has for long diverted attention from the realities of the situation and has sterilized much sincere effort directed to the elucidation of primary factors

The X Factor and Recent Discoveries

Recent investigations have opened out to us a possible new avenue of approach in our search for the missing factor in the habitual abortion-stillbirth-toxæmia syndrome This evidence has come from two directions In the first place since Wiesner (1931) showed that a negative A-Z reaction in a living pregnancy implied a high risk of abortion or premature birth, the luteinizing factor obtained from pregnancy urine or the corpus luteum hormone itself has been used with considerable success in the treatment of habitual abortion (Johnstone et al 1932, Krohn et al 1935, Kane 1936) We have ourselves the completed and consecutive histories of seventeen women who between them had fifty-one successive pregnancies ending in abortion, premature stillbirth, stillbirth, or early neo-natal death before coming under treatment In seventeen subsequent pregnancies under treatment with urinary prolan there were fifteen which ended in the birth of a surviving child—that is, a 100 per cent failure was transformed into an 88.2-per cent success The circumstances attending the administration of prolan and progesterone strongly suggest that it operates in the form of a true substitution therapy At the same time the pregnancy gonadotropic test may be positive in cases which respond to the therapy, and this makes it necessary for us in the absence of quantitative data to exercise caution in our interpretation of the phenomena This attitude of caution is all the more necessary in that successful therapy is obtained with a unit dose of hormone which is infinitesimal in comparison with the quantities known to exist in normal pregnancy Thus whereas 100 rat units of prolan twice weekly may be clinically sufficient it is known that the excretion of this hormone in healthy pregnancy reaches several and often many thousands of rat units per litre of urine

TABLE I—The Habitual Abortion and Stillbirth Syndrome in Toxaemia

Case	Pregnancy	Case	Pregnancy
1 (1543)	(1-7) Normal (8-10) Abortion (11) Eclampsia	6 (1442)	(1-2) Normal (3) Premature stillbirth No toxæmia (4) Eclampsia
2 (827)	(1-2) Normal (3-7) Abortion (8) Eclampsia	7 (1393)	(1) Full term Toxæmia (2) Accidental hæmorrhage Premature still birth. No toxæmia
3 (1551)	(1-2) Abortion (3) Eclampsia	8 (1312)	(1) Normal (2) Abortion. No toxæmia (3) Accidental hæmorrhage Premature stillbirth Toxæmia (4) Accidental hæmorrhage Premature still birth. No toxæmia
4 (1764)	(1) Normal (2) Premature live birth (3) Normal (4) Stillbirth (5) Premature live birth (6) Eclampsia		
5 (1422)	(1) Premature stillbirth (2-3) Abortion (4) Eclampsia		

In Table I which represents the reproductive history of cases selected from a large number of similar clinical records these facts are brought out in a striking manner They exhibit the frequently recurring nature of the phenomenon and demonstrate that this may begin with the first pregnancy or alternatively, it may only appear during subsequent pregnancies as an 'acquired' taint. Further they bring out the important circumstance that the toxæmic element, in general, only obtrudes itself where the damaged pregnancy has advanced to the later

Significance of the Results

In Tables II, III, and IV we have collated our personal cases, completed and otherwise. To appreciate the full significance of these results it is important to recognize that, in so far as they refer to women who present themselves for treatment because of their history of recurring obstetric disaster we can naturally to a large extent eliminate from the history such irrelevant causes of repeated abortion as intentional interference. Indeed, in the majority of instances their failure to carry is to such women a source of great distress. Further, it is to be noted that in all cases the Wassermann reaction is proved to be negative and there is no detectable pathology to account for their symptoms, such as retroflexion and deep cervical laceration.

The second important line of advance is based upon the recognition of the part which essential food substances play in the nutritional maintenance of the pregnant state.

TABLE II—*Habitual Abortion etc. Pregnancy Test Negative*

Case No	Age	Previous Pregnancies	Present Pregnancy
1 (O P)	33	(1) 7 mths. Lived 2 days (2) F T " 1 1/2 "	A. Z. — Full time 16 weeks Child alive and well
2 (X A.) (210)	19	(1) 2 mths. Abortion (2) 5 "	A. Z. — Full time 8 weeks Child alive and well
3 (2486)	25	(1) 3 " " (2) 3 " "	Friedman — Full time 12 weeks Child alive and well
4 (A. N. C.) (192)	41	(1) 2 " " (2) 3 " "	Friedman — Progressing at 25 12 weeks weeks
5 (307)	23	(1) F T Alive and well (2) 3 mths "	Friedman — Progressing at 28 20 weeks weeks
6 (6608)	24	(1) F T Alive and well (2) 4 mths. Twins (3) 8 " S B Hydrocephalus Macerated	Friedman — Progressing at 29 24 weeks weeks
7 (11321)	26	(1) 8 " Died 28 hrs. (2) 7 " " 8 hrs.	Friedman — Progressing normally at 33 weeks 27 weeks Toxic symptoms developed at 27th week Controlled ? by prolan

TABLE III.—*Habitual Abortion etc. Pregnancy Test Positive or not Made*

Case No	Age	Previous Pregnancies	Present Pregnancy
1 (H 434)	27	(1) 4 mths. (2) 3 "	Treatment from 6th week Full-time Child alive and well
2 (O P)	28	(1) 7 " Lived 3 hrs. (2) " 3 days	A. Z. + Treatment from 3rd month Full-time Child alive and well
3 (F 808)	31	(1) 37 wks. Alive and well (2) 7 mths. Lived 1 1/2 hrs. (3) 7 " " 1 1/2 " A.P.H. (4) 6 " " 6 days	Treatment from 3rd month 38 weeks Child died, 10 days
4 (O P)	24	(1) 1 mth. (2) 2 mths. (3) 3 " "	A. Z. + Treatment from 6th week Full time Child alive and well
5 (O P)	28	(1) 3 " " (2) 4 " " (3) 6 1/2 " "	A. Z. + Treatment from 6th week 5/12 abortion
6 (O P)	25	(1) 3 " " (2) 3 " "	A. Z. + Treatment from 3rd month Full-time Child alive and well
7 (O P)	38	(1) F T Alive and well (2) F T " " (3) 8 mths. " S.B. " (4) 3 " " (5) F T S.B.	Treatment from 5th month Full time Child alive and well

In lower animals it has for long been known that the reproductive processes are sensitive to dietetic influences and that imperfect feeding may in a variety of ways disturb the fertility of the animal by leading to sterility or to interference with the growth of the foetus in the uterus. Vitamins A and E would seem to occupy a special place in the reproductive processes, in that gross deprivation of either, whilst consistent with apparently normal health of the mother animal, is attended by serious interference with the intra uterine development of the foetus. So far, no adequate attempts have been made to assess the possible significance of the vitamin A factor in human pregnancy but there is now a considerable body of evidence in respect of vitamin E. The work of Evans and his collaborators (Evans and Burr, 1927, Evans, 1932) on the specific relation between vitamin E deficiency and a form of 'habitual abortion' in lower animals has inspired the use of this vitamin in human pathology. In rats (and the same facts have been shown to apply to some other animals) gross deficiency in E, without disturbing the general health and vigour of the animal, and without affecting oestrus and the faculty of fertilization leads to a progressive disturbance in the nutrition of the foetal placenta and to maceration and resorption of the foetuses in the uterus. Vitamin E administered during the earliest stages of pregnancy is capable of anticipating and preventing this foetal destruction but after the critical phase of placentation, replacement of vitamin E is valueless. Congestive and haemorrhagic changes of a secondary nature occur in the maternal placenta of such affected gestations, and this is associated with vaginal bleeding. Whilst analogies drawn from animal pathology are apt to be an insecure basis for argument it cannot but be regarded as suggestive that, in the case of the π factor that constitutes the background of the human problem and the E deficiency as it affects the animal, there are three striking points in common: first, the general health of the host remains apparently normal; secondly, repeated and often rapidly succeeding mating and impregnation is the rule; thirdly the successive pregnancies are blighted. To these three admittedly striking analogies we have to add a fourth, the fact that in each case the exhibition of a preparation containing vitamin E (wheat germ oil) at a sufficiently early stage breaks the sequence and, in a large proportion, enables the normal carrying of the pregnancy to full term. There is now considerable evidence in the literature (Vogt-Moller 1931 1933 Juhász-Schäffer, 1933 Watson and Tew 1936) as to the efficacy of wheat germ oil in habitual abortion and stillbirth in women, and Shute (1937) has employed it with success in cases of accidental ante-partum bleeding.

The outstanding nature of the progress to which these discoveries witness can be best realized by those who recall the hopelessness with which the subject of habitual abortion and stillbirth was regarded in former days. Writing in the 1917 edition of his textbook Whitridge Williams (1917) expressed the views then current when he said: "nor will the most extended clinical study give a clue to the cause and consequently the treatment of such patients is empirical and altogether unscientific. And again the treatment of repeated abortion is in general so unsatisfactory as to constitute one of the opprobria of obstetrics."

It remains for the future to establish a correlation between two discoveries which have so strikingly and so unexpectedly converged towards the solution of one of our most baffling clinical problems. Meanwhile the available data are consistent with the view that vitamin E possesses specific significance for the nutrition of the

TABLE IV—*Habitual Abortion etc and Toxaemia and Ante partum Haemorrhage*

Case No	Age	Previous Pregnancies	Present Pregnancy				
			Pregnancy Test	Treatment commenced	Ante-partum Bleeding	Toxaemia	Result to Child
1 (A 445)	37	(1) 7 mths. Induction for toxaemia (2) 7 " Spontaneous. Toxaemia. Lived 2 days	A.Z. +	5th month	Nil	37th week albuminuria B P 140/90	Induction 38th week Alive and well
2 (H 427)	31	(1) 6 " " (2) 3 " "	A.Z. +	3rd month	3rd month	39th week albuminuria oedema	Full time— Alive and well
3 (O P)	31	(1) F T Alive and well (2) F T Died 4 days (3) 2 mths. (4) 3 " (5) 2 " (6) 3 "	A.Z. +	4th month	3rd and 4th months	Nil	Full time Alive and well
4 (O P)	23	(1) 3 " (2) 5 " (3) 3 "	—	3rd month	8th month	Nil	Twins Full time 1 alive and well 1 died 10 days—convulsions
5 (R M H)	40	(1) 3 " (2) 3 " (3) 5 "	—	3rd month	4th month	38th week albuminuria B P 145/90	Full-time Alive and well
6 (P C.)	36	(1) 2 " (2) 2 " (3) 4 " (4) 7 " Hyperemesis Severe toxaemia albumi- nuria jaundice coma (5) 3 " (6) 5 " Placenta praevia (7) 6 "	—	Early months	Nil	Nil	Full time Alive and well
7 (9774)	23	(1) F T S B (2) F T Lived few hours (3) F T Lived 1 week	Friedman +	7th month	2nd to 8th month	Vomiting. Albuminuria B P 140/90	Full-time Alive and well
8 (11321)	26	(1) 8 mths Died 28 hours (2) 7 " Died 8 hours	Friedman —	7th month	Nil	27th week Headaches, visual disturbances	Progressing normally at 8th month Toxaemic symptoms subsided

placenta, and that, in some manner which is not clear it operates through the activation of the luteinizing mechanism. The problem is complicated by several physiological uncertainties regarding the site of origin of prolan and progesterone in human pregnancy which are not directly germane to the subject of this paper. It is generally believed that during the pregravid and the early gravid periods the anterior pituitary is responsible for the elaboration of the luteinizing hormone and the ovary for the production of progesterone, but that in the human subject this dual function is during the later stages of pregnancy performed by the placenta. We have no means of knowing which part or parts of the placenta are concerned in this reciprocal action. From the large output of the luteinizing substance in hydatid mole and chorion epithelioma we might by analogy be justified in ascribing the source of this hormone to the foetal elements of the placenta in ordinary pregnancy. From the excessive formation of luteal tissue which in these abnormal chorionic states may take place in the extrachorionic or maternal tissue of the ovary, we might by analogy ascribe the source of the luteal hormone to the maternal placenta in an ordinary pregnancy. If it could be established that the two hormones spring from different biological sources in the placenta it would be interesting to speculate whether vitamin E bears any special and differential relation in regard to the tissues concerned. In this connexion some recent observations on the effect of vitamin E deficiency on the gonadotropic functions of the anterior pituitary possess a special interest. It has been shown (Rowlands and Singer, 1936) that the pituitaries of rats fed on an E free diet are markedly defective in the luteinizing or ovulation producing hormone as tested on oestrous rabbits. At the same time neither anterior pituitary nor luteinizing pregnancy urine extracts are capable of preventing the resorption of the foetuses in an E free rat (Diakov and Krizenecky 1933, Geller, 1933, Rowlands and Singer 1936).

Toxaemia and the X Factor

While there is still some uncertainty in regard to the interpretation of the scientific data, there would seem to be no room for doubting that these recent discoveries have brought us within measurable distance of a solution of the habitual abortion-stillbirth complex in women. The fact that we can eradicate the underlying taint in a percentage which in different records varies between 75 and nearly 90, and that the earlier the treatment is instituted the higher the success helps to establish this claim on a secure basis. In view of the significant part which we have shown a habitual abortion-stillbirth sequence to play in the toxaemic phenomena, it might be assumed that the further step—namely, the merging of these phenomena within the same deficiency ambit—should be easy. We, indeed, began our investigations on this aspect of the question in the hope that the possession of the therapeutic key to the abortion sequence would automatically enable us to unlock the major secret. In this we have been disappointed. At the same time, certain data which have emerged during these investigations have seemed to us worthy of being placed upon record, especially as they relate to observations that can only be adequately tested on a larger scale than is generally possible in a single clinic. These observations can conveniently be discussed under four headings.

1 Influence of Prolan and Progesterone on Confirmed Cases of Toxaemia

Over a period of about five years (since the discovery of the efficacy of prolan and progesterone in abortion) we have at different times and as the clinical potency of the commercial preparations improved, exhibited urinary prolan or progestin preparations as also vitamin E concentrates to a considerable number of cases of established toxaemia. The results of these experimental trials have been almost uniformly negative. Except that in a few

instances of previously persisting hypertension we have noted a maintained lowering of the blood pressure and that in several cases severe headache and visual disturbance exhibiting the usual toxic character disappeared at once after the administration of urinary prolan we have been unable to arrest or control confirmed and aggravated cases. In the majority of instances there has been no effect on the hypertension and in none has the degree of albuminuria been appreciably lessened.

It is of course conceivable that, as in the habitual abortion of women and the blighted pregnancies of the lower animal, failure may be attributable to the fact that, unless commenced before the critical stage in placentation the damage may be irrecoverable. This view would necessarily imply that where toxæmia occurs in the later months the causal factor from which it springs has in general operated during the early months, and that an interval clinically non-toxaemic separates the two events. The observations of Henry (1936) may, however, possess some relevance in this connexion. From a retrospective study of a large group of toxæmic patients this worker claims that in a high proportion evidence of the toxæmic process in the shape of a steadily mounting blood pressure may be discovered from as early as the fourth month. While they do not necessarily conflict with this view there is especial interest attached to the claims made by Shute (1937) that cases of premature separation of the placenta, even in the later months, can be successfully treated with vitamin E. This observation has an added interest on account of the close clinical relation known to exist between this condition and the toxæmic phenomena.

A factor which has militated seriously against the institution of an adequate testing of the preventive possibilities of the new therapy has been the paucity of material which our present management of toxæmia necessarily implies. It is obvious that the most suitable clinical material for such a purpose is the woman in whom, as we have shown in previous communications, the recurrence of toxæmia in two or more successive pregnancies enables us to infer an almost 100 per cent risk in any succeeding gestation. But this has been just the class of case in which, with our existing knowledge, we have in general felt constrained to urge limitation by means of sterilization or failing that by contraception. This has left for experimental purposes a small group which are set out in Table IV, where, despite previous toxæmic stillbirths or a recurring series of alternating non-toxaemic and toxæmic pregnancies the patient has insisted upon making a further attempt during which the opportunity for the institution of early therapy has become possible. The results are suggestive especially when we have regard to such apparently hopeless clinical prospects as are represented by Cases 1, 6, 7 and 8 (Table IV). Cases 1 to 8 further raise the question as to how far early commencement of the therapy may have succeeded in preventing or in controlling the toxæmic manifestations destined to develop in the later months and in this way to enable the gestation to be carried in safety to the birth of a living child.

2. Unmasking of Toxæmic Taint in a Pregnancy Successfully Carried to the Later Months

We have shown (Table I) that women with a history of repeated abortion seem to be exposed to a special risk of toxæmia in a pregnancy which extends into the later months. Similarly, in a case under treatment because of a history of repeated abortion the successful carrying of the pregnancy to the last trimester by means of the substitution therapy may unmask the toxæmic taint (Cases 2,

5, 7, and 8, Table IV). This may imply that the factor making for toxæmia is identical with that responsible for abortion and that, whilst the latter has been prevented there has been left behind damage sufficient to initiate a toxæmia at a later date. It is clear that considerable evidence on this subject is required before we can speak with certainty. In the present state of our knowledge it is impossible to deny either that the previous abortions and the toxæmia may arise from one and the same source—a source other than that under consideration—or, alternatively, that the toxæmia has an entirely independent origin appearing merely because the pregnancy has been steered into the later and more vulnerable stage. That this unmasking phenomenon is by no means infrequent is demonstrated by the fact that we have recently obtained records from obstetrical colleagues of four further cases.

TABLE V—Toxæmia and Negative Friedman Test

Case No.	Age	Previous Pregnancies	Present Pregnancy		
			Pregnancy Test	Toxæmia	Result to Child
1 (11357)	22	Nil	Friedman— 35 weeks	B P 170/105	Induction at 35 weeks Alive and well
2 (11425)	34	Nil	Friedman— 17 weeks	B P 158/98 Severe headaches	Progressing at 20 weeks
3 (11321)	26	(1) 8 mths. 28 hrs. Died (2) 7 mths. 8 hrs. Died	Friedman— 27 weeks	Headaches Visual disturbance	Progressing at 33rd week Toxæmic symptoms subsided

3 The Gonadotropic Pregnancy Test in Toxæmic Cases

In two recent cases of toxæmia (Table V, Case 1, thirty five weeks pregnancy and Case 2 seventeen weeks pregnancy) the Friedman test, carried out to determine the question of foetal survival was negative although subsequently the foetus was found to be alive. In Case 3 (Table V) that of a woman with a history of two previous premature children that died shortly after birth, the Friedman test was negative at the twenty seventh week of the third pregnancy in association with mild toxæmic symptoms. On the other hand, in one woman (Case 7, Table IV) who had a previous history of three dead children born at full term, and who during her fourth pregnancy had long-continued ante partum bleeding with some mild toxæmic symptoms the Friedman test was positive at the twenty-eighth week. In a further case (Case 2, Table IV) with a previous history of two abortions, the Aschheim-Zondek test was positive at the third month, while toxæmia developed at the thirty ninth week. No test was made at this later date. The negative findings in the three first cases quoted possess a special interest in view of the observations of Smith and Smith (1935) who claim that late pregnancy toxæmia is associated with an increased output of gonadotropic hormone.

4 Breaking of the Chain

Where there has been an unbroken habitual abortion-stillbirth sequence in which toxæmia features, the breaking of the chain of disaster under treatment and the birth of a live child is one of the most suggestive findings (Cases 1 and 6 Table IV).

The fuller records of some of the cases epitomized in the tables are instructive.

Case 1 (Table IV) aged 37 had suffered from severe and progressive toxæmia during the two preceding pregnancies.

the first ending in a stillbirth after artificial induction at the seventh month the second ending spontaneously at the seventh month in the birth of a child which lived two days. She had been warned against further pregnancies. Disregarding this she was first seen by me at the fifth month of her third pregnancy when her health was good. The Aschheim Zondek test was positive. She was placed on prolan therapy and carried to the thirty-seventh week when the blood pressure began to rise (140/90) and a trace of albumin appeared in the urine. Induction at the thirty-eighth week resulted in the birth of a healthy child which survived.

Case 5 (Table IV) aged 40 had a history of sound health apart from three previous abortions between the third and fifth months. She suffered from hyperemesis during the third month of her fourth pregnancy for which hospital treatment was required. At the fourth month there was some vaginal bleeding. Under prolan treatment the pregnancy progressed satisfactorily till the thirty-eighth week, when albuminuria (0.05 per cent) appeared with moderate hypertension (145/90). She was delivered at full term of a strong infant.

Case 6 (Table IV) aged 36, had had six obstetric disasters before being seen by the writer. Two abortions each at the second month were followed by a third pregnancy in which there was very severe toxic hyperemesis ending in a four-months abortion. The fourth pregnancy ended at the seventh month in a stillbirth after very grave toxæmic manifestations associated with coma. The fifth pregnancy ended in a three-months abortion, and the sixth with placenta prævia at the fifth month. Between the fifth and sixth pregnancies she was examined by a London obstetrician who found her in the enjoyment of sound health. The writer first saw her after the sixth disaster when apart from some septic teeth and mildly inflamed tonsils which were removed she was found to be healthy. A full investigation revealed no evidence of renal disorder. Though I made careful observation during a seventh pregnancy the membranes ruptured spontaneously at the sixth month and four days later a macerated infant was delivered. There was no evidence of toxæmia. Despite this disastrous record the patient persisted and under prolan therapy gave birth to a live child at full term after an uneventful eighth gestation. The statement regarding this last pregnancy we have received from the medical attendant of the patient.

Case 7 (Table IV) aged 23 had had three previous deliveries all at full term. The first child was stillborn the second lived a few hours, and the third one week. No cause was given for the death of the infants. She was first seen at the ante-natal clinic at the twenty-seventh week of her fourth pregnancy with a history of what she described as a more or less regular monthly loss of blood from the vagina lasting for two days on each occasion and continuing from the second to the eighth month. There was occasional abdominal pain and nausea and vomiting had been present daily throughout. The Friedman test was positive. She was placed upon prolan therapy and apart from a transient albuminuria and a slight rise of blood pressure (diastolic 90 mm Hg) she went to term and was delivered of a child which was strong and thrived well.

Diet and Fertility

The gradual emergence of the specific significance of dietetic factors in relation to fertility necessarily raises questions the importance of which extends beyond the range of the problems that beset the clinician. For it is obvious that in so far as deficiency in these elements becomes increasingly identified with the factors responsible for abortion it assumes a place of first rate importance in the national economy. At the present moment it is impossible to state with any certainty the incidence of abortion which falls into this category. We may however safely assume that it constitutes a considerable proportion of "spontaneous" cases, and that it therefore must receive special attention in any future study of the factors which influence the national birth rate. The reorientation of our outlook on the bearing of diet on racial fertility which the

recent discoveries necessarily imply must awaken a new interest in the study of these problems and, more especially, as to the degree in which changes in the diet of the country have contributed to the steady decline in the birth rate during the past seventy years.

Summary

The evidence which has become available within recent years is consistent with the view that an important cause of the habitual abortion-stillbirth syndrome, which has baffled the clinician in the past, is a disturbance in the metabolism of pregnancy, in which a deficiency of vitamin E is involved. The evidence further raises the question as to the part which vitamin E plays in the prolan-progesterone mechanism of pregnancy.

The clinical applications of the results of recent research are simple and impressive.

In this communication some evidence is adduced for the view that the above considerations may likewise supply us with the missing factor which we have previously postulated to explain the non-toxæmic recurrence of abortion, stillbirth, and accidental hæmorrhage in women who are subject to eclampsia and pre-eclampsia. This evidence is consistent with the view that major degrees of deficiency tend to interruption of pregnancy in the early months without toxæmic manifestations, whereas if the deficiency is less marked the pregnancy is capable of progressing to the later months with a consequent risk of toxæmia.

The evidence reviewed in this communication raises the question as to the part played by diet in racial fertility and more especially as to how far changes in the consumption of essential dietetic elements may have contributed to the declining birth rate.

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The International Union of Local Authorities will hold a conference in Paris from July 5 to 11 under the patronage of the French Government. The two main questions for discussion are (1) pollution of the air by smoke gases and dust and (2) the supply of milk and the regulations necessary for public health. Dr Thomas Orr M.O.H. for Ealing is the British reporter on the question of milk and Dr J. Johnstone Jervis, M.O.H. for Leeds on atmospheric pollution. The sessions on these subjects will be held at the Maison de la Chimie, 28, Rue St. Dominique. The secretary for Great Britain is Mr I. A. Avis, 26 Abingdon Street, Westminster, S.W.1

THE TREATMENT OF MID-LINE VENTRAL HERNIA

BY

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A new surgical operation or modification has often the unhappy knack of leaving complications or ill effects in its trail, often so marked as to render null and void what at first promised to be a surgical success. It is a curious fact that since Lister's time, when abdominal operations first became prevalent incisional hernias should have been and still remain such an unfortunate complication. No surgeon, of whatever standing can claim exception to this misfortune, for as long as surgeons operate so long will it occur. It has been truly said that the sole method of avoiding incisional hernias is to avoid operating.

A small ventral hernia does not present any great difficulty in its repair. It is the large umbilical and incisional hernias which present difficulties to the surgeon, and I wish to direct attention to these and to report the results of my operation in these cases.

There are three layers of the abdominal wall which have to be taken into account in the repair of a ventral hernia: the fascia transversalis, the muscular layer, and the rectus fascia, all of which must be replaced in their natural position. Of these three the muscle is by far the most important, and, strange to say, it is this layer which has been neglected in almost all types of operative repair. To guarantee a successful operation it is of paramount importance not only to mobilize the recti muscles the whole length of the hernial opening but to see that they are approximated in the mid line. Failure to achieve this will result in the rectus fascia having to shoulder the entire resulting strain. Fascia, however dense, will stretch in time and a recurrence will invariably follow.

Another consideration of great importance is that of tension. If at the completion of the operation any layer is under undue tension failure is almost certain to ensue. Tension causes strangulation of the tissues that results in sloughing and eventually the formation of scar tissue, which is a useless barrier to protrusion of the bowel. To quote Dickson (1935) on this subject: "It is much more important to direct effort to relieving wound tension than it is to devise some new type of suture material." A wound which is completely relaxed and without tension will have a good blood supply, and no matter what suture material is used whether absorbable or non absorbable or it might be said whether any at all is used, the wound will heal.

Scar tissue is a third factor which must be taken into consideration in the repair of a ventral hernia. It results from previous sepsis or interference with the blood supply at the neck of the sac. Such tissue is poorly supplied with blood, stretches easily, and forms a very inadequate medium for repair. If the operation is to be successful it is essential to excise all scar tissue and unite healthy normal tissue on both sides.

From the foregoing three aphorisms arise that are essential for sound operative technique in the repair of a ventral hernia:

- 1 Like tissue must be replaced by like tissue
2. There must be no undue tension on the wound at the completion of the operation
- 3 All scar tissue must be excised

Considerations of Operation

When confronted with a large umbilical or incisional hernia there are many points which have to be considered before embarking on an operation—the age of the patient, the condition of the heart and lungs, the blood pressure, the condition of the kidneys, the amount of obesity, and the general condition as a whole. Again, are we dealing with a simple hernia, or is there an obstruction or strangulation of the bowel beneath? Operations of this calibre in the aged (the type of case usually met with) are serious undertakings, for if the operation is carried out thoroughly it is a long and shock producing procedure. With so many factors to be taken into account it is obvious that no single type of operation can be suitable for all cases. When conditions are favourable and the patient not too old no operation can compare with the Gallie (1923) graft. I think this has been one of the great discoveries of the past decade and must have brought relief to countless sufferers. When carried out thoroughly the results are brilliant, and operations which before the advent of the Gallie graft were impracticable have now become commonplace.

But what of the patient whom we consider too great a risk for an operation of this length? What of the case with an underlying obstruction which we want to finish as quickly as possible? And again, what of the case to be operated upon for some other abdominal condition in which there can be no justification for spending a long time over the repair? If these patients can be cured of their hernias without endangering their lives it is obviously our duty to do so.

For some years I have been practising an operation that I have found eminently suitable for the "risky case" and for those cases complicated by obstruction or strangulation or in combination with other abdominal operations. It fulfils my three aphorisms, does not add a great deal of time to the operation, and, above all, the results have been most satisfactory and so far the hernia has not recurred.

Pre-operative Precautions

It is advisable to have these patients flat in bed for some days before operation provided there is no acute complication. This allows the bowel to settle in the abdomen and to get accustomed to its new position.

A second point we must guard against is increased post operative intra abdominal pressure which is a real danger to life following these operations. Pressure on the diaphragm interferes with respiration and predisposes to hypostatic pneumonia. It also produces cardiac symptoms from pressure on the heart and abdominal vessels. Acute dilatation of the stomach and ileus are fairly frequent complications. Ileus is a mysterious and grave complication of this operation. It is akin to the ileus associated with a tight spica plaster with which all orthopaedic surgeons are well acquainted. It is almost exclusively confined to hernias in the upper abdomen, and occurs whether the peritoneum has been opened or not. I have had two recent cases of ileus following the Gallie operation and strangely enough the peritoneum was not opened at either operation. One of the patients unfortunately succumbed, while the second recovered after several anxious days. This type of ileus is undoubtedly associated with increased intra abdominal pressure caused by sudden compression of the upper abdomen, for when it appears in conjunction with a spica plaster the mere act of splitting up the plaster will relieve the ileus. How increased intra abdominal pressure actually brings about an ileus I do not know, nor

have I ever had a satisfactory explanation of it, but that it is a grave complication there is no denying

As a precaution against post-operative ileus it is advisable to strap the upper abdomen for some days prior to operation. The strapping should be gradually tightened each day until the abdomen is firmly compressed. I believe that this gradually increasing pressure is a safeguard against post operative ileus

The Anaesthetic

Either local or spinal anaesthesia alone should be used in patients over 40 years of age. The older the patient the safer the operation becomes if local anaesthesia is used. A wide field of infiltration is often required, but this should not be a deterrent to its use. Spinal anaesthesia is very fine to work with, but it has many contraindications in the aged.

The Operation

For subumbilical hernias the modified Trendelenburg position is a definite aid in stout subjects, while the reverse position is true for upper abdominal work. The skin incision should extend well beyond the hernia at both ends of the wound, and any previous scar should be excised. In the case of umbilical hernias where the umbilicus has been obliterated or distorted a new umbilicus should be provided for when making the skin incision as practised by Bonney (1935). The sac, when reached, is freed from the subcutaneous tissues, the rectus sheath is then opened in a vertical direction, and this incision should extend into the normal area of the abdominal wall at each end of the wound. The sac can now be completely freed. Unless the sac is large, as in an umbilical hernia, it is quite un-

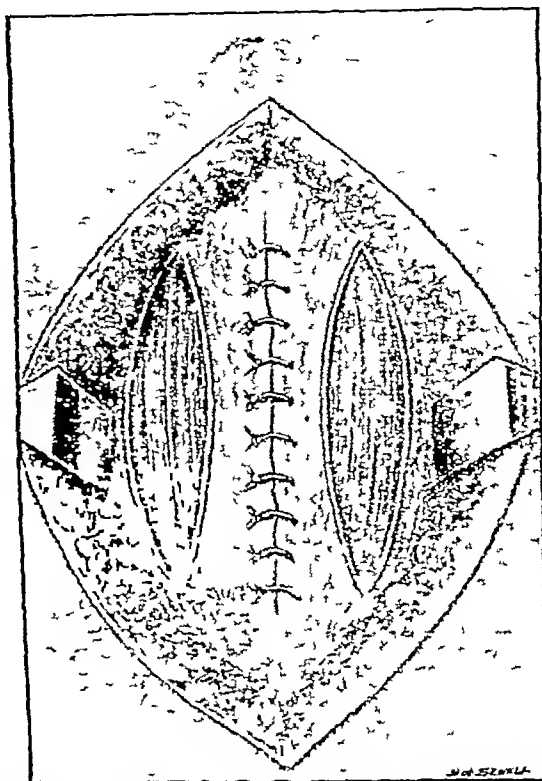


Fig. 2.—Showing the recti sheaths and muscles approximated by interrupted catgut sutures each suture passes through the muscle and fascia

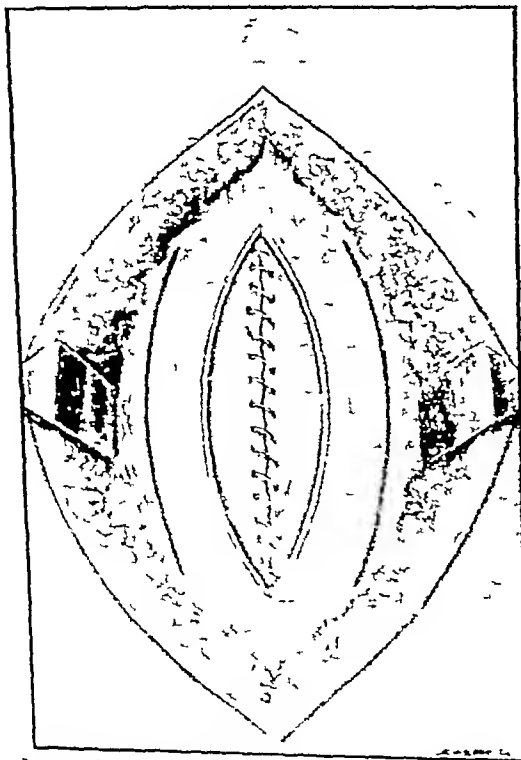


Fig. 1.—Showing the releasing sutures in the recti sheaths after the peritoneum has been closed and all scar tissue removed

necessary to open or remove it, if the sac is left an enormous amount of time can be saved. When such a sac is opened the bowel or omentum is often found adhering to it. If any attempt is made to free such adhesions large areas may be left that require reperitonizing, which is time absorbing and shock-producing to the patient. If it is possible the sac should be inverted and the fascia transversalis sutured.

The next step is the excision of all scar tissue associated with the rectus fascia. This must be all very carefully removed as far laterally as the rectus muscle on either side, so that when the fascia is sutured normal healthy tissue is left. It is of paramount importance that this part of the operation should be carried out with great care at each extremity of the wound for these are the danger-points and the most likely sites for recurrences to take place. The recti muscles are now freed from the peritoneum special care again being taken to mobilize the muscles thoroughly at either end of the wound. The subcutaneous tissue is next dissected back to the lateral border of the recti muscles and a vertical incision is made in the rectus fascia near the lateral border of the muscle as shown in Fig 1. The wound is now ready for suture. It should be noted that the anterior sheath of the recti muscles is not disturbed this is important in aiding the approximation of these muscles.

Interrupted No 5 catgut sutures are inserted each suture passing through the recti muscles and fascia on either side as shown in Fig 2. Figs 3 and 4 show a cross-section of the wound before and after the insertion of these sutures. The wound is then closed with drainage which should not be omitted.



Fig 3—Showing a cross section of Fig 1



Fig 4—Showing a cross-section of Fig 2. Note how the muscles return to their normal dimensions when approximated in the mid line

Commentary

Several points of interest arise in connexion with this operation. First, what is the effect of the aperture left in the rectus sheath? Does it cause any weakness of the abdominal wall, and will a hernia occur at this site? Does it remain devoid of fascial covering, or does the fascia regenerate? So far as I can ascertain from examination of these cases some time after operation there is no weakness of the abdominal wall at the site of the incisions in the recti sheaths. This bears out what has always been my contention—that it is the rectus muscle which is the important constituent of the abdominal wall in the prevention of hernia. Fascia has for ages past proved quite inadequate in preventing the protrusion of the bowel unless the muscles are approximated at the same time. Failure to appreciate this point has led to disastrous results in the past. The main function of fascia in the body would appear to be to facilitate the free and smooth working of muscle to prevent any undue mobility and to protect it against any undue pressure. It is strongest where pressure is likely to be greatest, as in the palm of the hand and sole of the foot and weakest where muscle play is greatest, as over the biceps and calf muscles. That the absence of fascia is no great handicap is shown in the thigh when strips of fascia lata are removed for the Gallie operation. In a similar way the absence of fascia over a portion of the recti muscles leads to no ill effect. I am certain that it will never lead to a hernia at this site, and my results so far have borne this out.

It is difficult to dogmatize about the gap in the rectus fascia, but in all probability it is filled by scar tissue. Nature generally attempts repair by this method.

A second question that arises is what are the merits of this operation as compared with the Gallie graft, and should it take the place of this operation?

I do not think this question can be answered on such a small series of cases as I can present for I have performed this operation only on cases which I have not considered suitable for the Gallie graft. The Gallie operation is so brilliant that one hesitates to suggest any other operation to displace it. In future I intend to apply my operation in all cases of ventral hernia. I do not say this to belittle the Gallie operation in any way but merely to explore the results over a larger series of cases. I feel convinced that there is a definite place for such an operation as I have described, particularly in the aged when acute conditions are present and also in connexion with other abdominal operations.

A third consideration of importance is that of increased post operative intra abdominal pressure which may be a grave complication of the Gallie operation in upper abdominal hernias. As already stated, I have had two such cases recently, one of which ended fatally. In the operation I have described there is no tension on the wound at the completion of the operation, so this complication is eliminated.

Finally my operation is based on the fact that muscle, if properly mobilized will stretch to any extent when supported by fascia, and that fascia itself has practically no elasticity. When the muscles are freely mobilized there is rarely any difficulty in approximating them in the mid line and the additional support of the fascia will prevent the possibility of the sutures cutting through the stretched muscles after the operation. That the fascia will not stretch to the mid line without undue tension is obvious but when the rectus fascia is incised as I have described tension is non-existent.

Results

I can report but thirteen cases of this operation. All the patients are alive and free from recurrence. These cases extend over a period of six years so that the majority have had several years' freedom from their hernias and may, I think, be looked upon as cured.

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HEREDITARY SEBACEOUS CYSTS

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(WITH SPECIAL PLATE)

Sebaceous cysts are common yet it is remarkable that little is known of their exact mode of origin. It is known that these cysts on occasion may be inherited. Paget (1870) noted that 'perhaps in the majority of cases the bearers of these have known one or more members of their family similarly endowed'. We describe below a family in which multiple sebaceous cysts occur in five members of three generations. We know of only five similar families reported in the literature.

Paget (1870a) refers to a case observed by Mr James Reid. The patient was a woman aged 80 years who had numerous sebaceous cysts on the scalp. Three of her daughters showed similar cysts. Two and a half years before the death of the patient one cyst became inflamed, it was opened, and a discharge of sebaceous matter followed. A tumour developed at the site and grew to a mass nearly five inches in diameter before she died. Klausner (1917) described two families showing inherited multiple sebaceous cysts. In one family two brothers aged 18 and 24 years, and one of their three sisters aged 15 years were affected, the cysts had existed from 'earliest youth'. In the second family cysts occurred in three generations. Two brothers, aged 32 and 31 years had cysts from childhood. Their mother and grandmother had similar lesions in the skin. Praliken (1933) described a case of multiple sebaceous cysts in a man aged 48 years. The cysts had been present from the age of 12. His sister and his father were similarly affected. Parkes Weber and Schlüter (1926) at the Royal Society of Medicine recently showed two brothers aged 50 and 59½ years who suffered from multiple sebaceous cysts. The swellings were first noticed

soon after the age of 20 years and one or two of the cysts were partially calcified. Each brother had a conspicuous nodule on the dorsal aspect of one ring finger as well as numerous cysts on the trunk and forehead. Their father was said to have had a similar ring finger nodule, and one of the elder brother's daughters had a few cysts of the same kind.

Non familial cases of multiple sebaceous cysts are more common. Rayer (1835) described cases in which multiple follicular tumours occurred. These tumours, he said, may be called wens, steatomata, or atheromata. He quoted cases of multiple cyst formation described by Dagorn (Paris, 1822) and Ludwig (1793). Rayer admitted that the aetiology was obscure, but declared that cysts occasionally appear due to an hereditary disposition. Jamieson (1873) reported a case of a man aged 40 years in whom there were 250 sebaceous cysts which were distributed all over the body with the exception of the hands. When examined with a lens no 'black point' was discovered in the skin over them. He considered that the cysts arose by obstruction of part or the whole of the sebaceous follicle. Maclaren (1886) showed a case of multiple sebaceous cysts at the Edinburgh Medico-Chirurgical Society in 1886. The patient was a man aged 19 years who presented 132 cysts, which were scattered all over the body with the exception of the palms of the hands and the soles of the feet. Radcliffe Crocker (1888) described a similar condition as "multiple atheromatous cysts." He believed that the cysts were caused by accumulation of epidermis and sebaceous matter in the follicle with hypertrophy of the wall. Chiari (1890) after a necropsy upon a man aged 74 years who had died of tuberculosis, undertook extensive histological studies of atheromatous cysts which were disseminated over the whole surface of the body with the exception of the palms of the hands and the soles of the feet. Chiari described two types of cyst. Both were retention cysts due to accumulation of horny masses—in the first instance in the neck of the follicle and in the second, in the duct of the sebaceous gland. After reviewing the literature, he discussed three possible modes of origin:

(i) Cystic dilatation of the sebaceous gland and the hair follicle by retained secretion.

(ii) Complete new growth of the cysts in the connective tissue.

(iii) Separation of parts of the ectoderm during embryonic life.

He favoured the first theory of origin for sebaceous and follicular cysts but stressed the anatomical and histological difference between these cysts and dermoid cysts, which arise as embryonic inclusion cysts.

Bossellini (1898) described a case of multiple sebaceous cysts occurring on the trunk of a man aged 40 years. Pringle (1899) described a similar case in a man aged 21 years calling the condition "steatocystoma multiplex" and Günther (1917) recorded one in a man of 22 terming the condition "sebocystomatosis." Orr (1923) showed a male patient aged 32 years at the Royal Society of Medicine from whom 150 sebaceous cysts had been removed and many hundreds of others remained on the chest and abdominal wall. Arzi (1926-1930) gave an account of two cases in males and one in a female. In the latter the cysts were localized to the intermammary region. At Rostock in 1929 another case was reported and the aetiology of the condition reviewed. Oscar Gans (1929) described the histological features of the cysts in sebocystomatosis.

On December 13, 1935, one of us (J. T. I.) presented, as familial sebocystomatosis, a family of father, daughter, and two sons, at a meeting of the Leeds and West Riding Medico-Chirurgical Society. An account of these cases is given below.

Case I

Dorothy T., aged 21 years was admitted to the General Infirmary at Leeds under our care on December 5, 1935. She complained of disfigurement due to numerous swellings on her face and body. The lumps had been noticed first when she was 10 years old and they had steadily increased in size. Those on her right leg had become inflamed and painful. They burst, discharging obnoxious cheesy material for some weeks. She had never suffered from acne. She said that two of her brothers, her father, and her paternal grandmother had similar swellings.

On examination the patient apparently was a healthy young woman. Numerous swellings however were visible all over her body. They were roughly circular or oval in shape, a quarter of an inch to two inches in diameter. Some were yellow in colour, most however were covered by normal pink skin. They were fluctuant but not translucent. Some were tense but most were soft and of the consistency of putty. They were closely attached to the skin but free from the deep tissues. No comedones were seen. There were two swellings in the region of the right eyebrow, three near the left eyebrow, two below the right eyelid and four below the left eyelid. There were three large cysts on the forehead, to hide which she had grown a fringe. There were two on the back of the neck, two on the back of the chest, five in the buttock region, three on the thighs, six on the legs and six on each forearm. There were no cysts on the palms of the hands or the soles of the feet. There were three irregular scars on the front of the right leg, marking the site of the previously inflamed cysts.

Treatment.—On December 9, 1935, twenty of the most disfiguring cysts were removed under ether anaesthesia. The wounds were closed with fine eyeless needles and plastic sutures. The patient was discharged on December 18, when the wounds had healed. Nine months later she returned and asked to have two more cysts removed. On September 15, 1936, one was removed from the centre of the forehead and one from the left leg, under local anaesthesia.

Case II

Walter T., Dorothy's brother, aged 11, was re-examined in the out-patient department of the General Infirmary at Leeds on September 15, 1936. From the age of 6 years his mother had noticed swellings on his face, scalp, back, and the front of his chest. A cyst on the front of his sternum had been removed in 1931 and the scar was still visible.

A cyst one inch in diameter was removed from the region of the right eyebrow under local anaesthesia. There were three cysts of about the same size on the hairy part of the scalp but as these were hidden by the hair the patient and his mother did not choose to have them removed.

Pathological Report.—A number of the cysts were submitted for pathological examination and we are indebted to Dr. Côté working in the pathological department of the University of Leeds for the microscopical report, which was as follows:

"The appearance in each case is almost identical. The cysts are lined by a continuous epidermic lining, consisting of rete Malpighi, stratum granulosum and stratum corneum, and are filled with varying amounts of keratinous matter and amorphous granular debris. None of the cysts shows calcification. Each is surrounded by a thick avascular connective tissue condensation capsule. None of the sections includes skin or dermal appendages. The subcutaneous tissues surrounding the lesions appear normal except in the case of the cyst from the eyelid where there are many cholesterol clefts with numerous foreign body giant cells in relation to them."

The result of examination of the other members of the family are given below

Case III—George T Dorothy's married brother aged 24 had sixty-one cysts scattered all over his body. The fourteen cysts on his face and forehead were most disfiguring. There were many large cysts on his scalp trunk and limbs. His only child aged 18 months was examined but showed no cysts

Case IV—William T Dorothy's father aged 53 had five cysts on his forehead and three large cysts on his scalp from the time when he was quite young. Three cysts had been removed from his forehead soon after he was married. His only sister had been free from cysts

Case V—John T Dorothy's brother, aged 26 was not affected but had suffered from severe acne on his face when he was about 20 years old

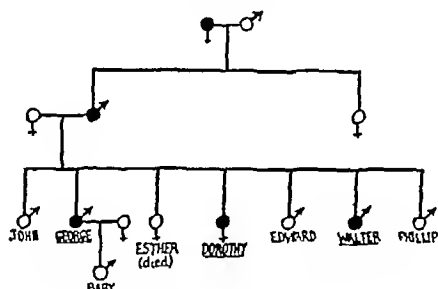
Case VI—Edward T aged 19 had no cysts but suffered from acne on his face

Case VII—Phillip T, aged 9 had no cysts.

Case VIII—Esther T who died when she was 18 years old from valvular disease of the heart, had been free from cysts

Mrs T, Dorothy's mother, was apparently free from cysts, but Dorothy's paternal grandmother was said to have had numerous swellings on her body, face, and chest

FAMILY TREE SHOWING AFFECTED MEMBERS OF FAMILY



The black signs indicate those bearing multiple sebaceous cysts. O free from cysts

It is interesting to note that alternate children in the third generation suffered from multiple sebaceous cysts. Cockayne (1933) believes that multiple sebaceous cysts may be inherited as a Mendelian dominant.

From the family table above the factor for multiple sebaceous cysts appears to be inherited in a Mendelian fashion, and resembles a dominant more than a recessive.

Commentary

Aetiology—Sebocystomatosis seems to arise most commonly in young adults. In many the cysts appeared at about 6 years of age. No case of congenital sebaceous cyst has been reported although Cockayne says they are first noticed in childhood and are probably congenital. According to Choyce (1932) cysts described as congenital sebaceous cysts are always dermoids. Men are more commonly affected than women. The Rostock view that the condition is confined to the male sex is certainly erroneous, female cases having been reported previously by Arzi (1930) Orr, Klausner, Prakklen, and others. Hereditary multiple sebaceous cysts are rare. In the family described above two of the unaffected members suffered from acne, but in no recorded case has attention been specially drawn to the presence of comedones associated with the cysts in a patient with

sebocystomatosis. Most cases appear for treatment because of the disfigurement, although itching in relation to the cysts has been described by Günther and Prakklen.

Pathology—The contents of the cysts in all the described cases have been yellowish or white pultaceous material, consisting of droplets of fat, chiefly cholesterol esters, fatty acids, and neutral fats. The epidermis over the cyst is usually normal. There is a narrow layer of cutis between the cyst and the epidermis. The cyst is lined by one or two layers of flattened epithelium. A layer of condensed fibrous connective tissue forms the outer wall of the cyst. In the immediate neighbourhood of the cyst, and sometimes embedded in the cyst wall, flattened atrophic sebaceous glands can be seen. Hyperkeratosis was noted by Bossellini and Prakklen in the upper part of the follicle near the orifice of the sebaceous gland. Giant cells embedded in the epithelial lining were described by Arzi.

In differential diagnosis it is important to distinguish sebocystomatosis from multiple lipomata and multiple xanthomata, molluscum fibrosum, neurofibromatosis, and epithelioma adenoides cysticum.

The cause of the condition is obscure. The common view is that the cysts are retention cysts, but the retention theory is not accepted by all, and there is much evidence to suggest that they are cysts of new formation. It is probable, however, that there are many types of sebaceous cyst.

1 Retention cysts

- (i) Follicular cysts, by obstruction of the infundibulum of the hair follicle
- (ii) Sebaceous duct cysts, by obstruction of the duct of the gland before it opens into the hair follicle

2 Cysts of new formation

- (i) Congenital in origin, arising from (a) epithelial rests, (b) overdevelopment of sebaceous gland structures
- (ii) Traumatic implantation cysts

Paget (1870) believed that most cysts of the scalp were cysts of new formation, although probably many cysts of the face and trunk and limbs result from distension of the hair follicles and their secretion. In support of this view he quotes Astley Cooper, South, Walther and Porta (Milan, 1856). However, he also refers to the work of Lebert and Bruns who described a slender cord traceable from the cyst to the skin which was supposed to be formed by the obliterated duct of the enlarged and obstructed hair follicle, but he remarks that this retention type of cyst must be rare.

1—Retention Theory

(a) **Hyperkeratinization**—Bossellini showed by serial microscopical sections that hyperkeratinization was present in the hair follicle above the orifice of the sebaceous gland duct, and as a consequence he believed that sebum was retained in the hair follicle, forming a cyst. Günther and Klausner confirmed these observations but Prakklen believed that cysts were formed sometimes by dilatation of the hair follicle and sometimes by dilatation of the sebaceous gland duct.

(b) **Primary Hypertrophy of the Sebaceous Glands**—Pringle regarded origin as hypertrophy of the sebaceous glands with retention of secretion. In support of this numerous hypertrophied sebaceous glands were seen in the neighbourhood of the tumours, which he removed.

and sectioned. Most other observers, however, have found that the sebaceous glands, far from being hypertrophied, are actually atrophied.

2—Cysts of New Formation

Many recent observers (literature by Benecke, 1931) have reverted to the view originally held by Paget that the majority of sebaceous cysts are cysts of new formation and that a true retention cyst of the hair follicle or sebaceous duct is rare. Benecke believed that the majority of the so-called sebaceous cysts met with clinically are more properly termed epidermoid cysts. These arise by the accumulation of secretion from isolated rests of epidermal cells lying within the corium. Other types of cysts of new formation have been described, arising as naevoid new growths or traumatic implantation cysts.

As evidence against the retention theory attention is drawn to (i) the rarity of cyst formation in cases of severe acne, (ii) the rarity of comedones in cases of sebocystomatosis, (iii) the difficulty of demonstrating by serial section an occluded or partially obliterated sebaceous duct, (iv) the occurrence of cysts of identical histological structure on the palms of the hands and the volar surface of the fingers, sites devoid of sebaceous glands and hair follicles.

Summary

A family presenting multiple hereditary sebaceous cysts is described. This type of case throws light upon the aetiology of the common sebaceous cyst. The evidence against the widely accepted theory of retention is discussed.

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OSTEOCHONDRITIS DISSECANS

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(WITH SPECIAL PLATE)

The differential diagnosis of certain diseases of bones and of joints is often a matter of difficulty, aetiological factors are obscure, and treatment and prognosis rest on insecure foundations. The condition known as osteochondritis dissecans is not an extreme rarity, and has been recognized for many years, but comparatively few cases have been recorded. In the present case we believe we have grounds on which to offer an opinion as to aetiology. The results of treatment will require to be reviewed later. Trauma is still held by one group to be the principal aetiological factor, while the 'non-traumatic group' to which we subscribe, disagree and believe that bone disease exists first and that following trauma the condition becomes more obvious and is diagnosed. Even then there is no unanimity of opinion as to the additional factor causing the peculiar features.

Case Record

This case, that of a well grown lad of 15 years was seen by one of us in August 1935, on account of some mild pain in the right elbow-joint with slight limitation of movement. Examination did not show any joint swelling—neither fluid from a synovitis nor synovial thickening—but on moving the joint it was felt that a loose body was present which on certain movements produced pain. The history was that about six to eight weeks earlier the boy had been hit on the elbow with a cricket stump—not a violent blow, and not causing much pain or disability at the time. Clinical examination showed no other abnormality, except that he has a considerable degree of bilateral congenital nerve deafness.

X-ray examination made on August 26, 1935, showed a small bony loose body lying between the head of the radius and the corresponding articular surface of the humerus. In the outer condyle of the humerus was an irregularly shaped area of decalcification. It was found impossible to demonstrate the loose body in a lateral view and accordingly accurate location could not be given. It was concluded that, as a result of injury, a small piece of bone had been detached from the outer condyle of the humerus and was now lying in the joint. These points are shown in the radiographs reproduced on the photogravure plate.

A surgical opinion was sought, it was decided that the loose body should be removed and this was done. At operation the synovial membrane appeared to be perfectly healthy, there was no thickening and no excess of fluid. The loose body was composed largely of cartilage with an ossified central portion was of the size and appearance of a white coat button—actually 2 cm. in diameter and 0.5 cm. thick at the centre—was smooth on the flat cartilaginous surface and rough with bony spicules on the concave surface. Some effusion occurred into the joint following operation, passive movements were not commenced for some days and were not well tolerated then. The boy was sent home after ten days with instructions to use the arm freely and to report in three months' time.

H. R. HATHAWAY, N. H. CISEL and R. M. WATERS (*Anesth. and Analges.* March-April 1937 p 89) review 491 administrations of oxygen in 408 patients. The oro-pharyngeal insufflation technique was used in 92 per cent of cases. This technique was conveniently and effectively applied with few objections and little discomfort. The authors were able to confirm statistically that early oxygen treatment of anaemic patients improves results. The fact that oxygen was not restricted to dangerously ill patients brought about a relatively low mortality rate.

curette edge. The tip of the instrument is made slightly conical but the lumen is left open (Figs 1, 2, and 3). Biopsy curettes of this type can also be made with a shorter tube at the tip so that mucosa is obtained from nearer the fundus—these have proved equally satisfactory in practice, except that the curetting is correspondingly shorter.

In obtaining the specimen the patient is placed in the lithotomy position and the usual antiseptic precautions are taken. The cervix is then pulled down with vulsellum forceps and the biopsy instrument is slid into the uterine cavity exactly as a uterine sound, no previous dilatation being necessary, in contrast to most other methods. The curette is placed against the mucosa of either the anterior or posterior wall drawn downwards for about an inch, and then withdrawn through the cervical canal avoiding any pressure of the curette edge against the cervical wall. After removing the curetting any further specimens of mucosa

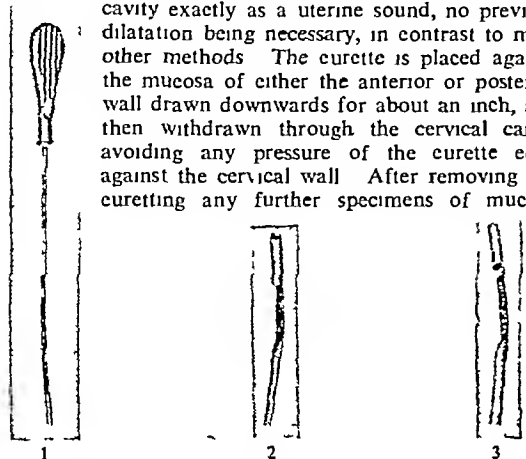


FIG. 1—Complete instrument (one-quarter actual size).
FIGS. 2 and 3—Details of head of curette (one half actual size).

required can be obtained by reinserting the instrument. Some discomfort is usually felt at the moment when the instrument first passes the internal os but this goes off immediately. There is also some discomfort when the tip of the instrument touches the fundus and to a much lesser degree during the actual curetting. This is referred to the lower abdomen. It is normally no more severe than to make the patient wince slightly. Neither at the time of the biopsy nor subsequently is the average patient any more disturbed than she is by an ordinary vaginal examination. No after-treatment or care of any sort is required. The absence of any real pain is very important from the point of view of obtaining the patient's co-operation when subsequent biopsies or a series of them are desired. On this point the present method appears to be a marked improvement on the suction methods. For example endometrial biopsy by this method has been performed in three cases every day for a whole month without any disturbance or concern to the patients at all.

The curetting is found lying flat with its mucous surface downwards in the tube at the tip of the curette. In most cases a solid piece of endometrium nearly 2 cm long and 3 mm in diameter is obtained—this is much more satisfactory than the fragmented material obtained by certain other biopsy methods though it is of course not possible to obtain such enormous curettings as those illustrated by Tamis (1936). The piece of endometrium is easily slid out of the tube by pulling its lower end gently with a needle, and is then placed, mucous surface upwards on a piece of thin card and dropped into fixative. In this way it is possible to orientate the block later so as to obtain longitudinal sections vertical to the mucous surface. This makes the histological interpretation much more easy and reliable. Fig. 4 (see Plate) shows the naked-eye appearance of a typical section of endometrium on an ordinary 3 inch by 1 inch slide and Fig. 5 its microscopical appearance.

Conclusion

There is no need here to stress the great diagnostic value of endometrial biopsy in many conditions particularly in the investigation of sterility in women and of disturbances of menstruation, but mention may be made of its definite scientific value in studying the endometrial responses to various hormones. It is obviously a great advantage to be able to obtain endometrium for examination by a simple out-patient or consulting room procedure without anaesthesia, without risk, and with no real pain. Endometrial biopsy has up to now not been employed as extensively as it might because the methods have not been sufficiently simple and reliable and also because the histological value of the material obtained has been rather uncertain. With the instrument described here the main difficulties in endometrial biopsy appear to have been overcome.

The instrument was made for us by G. B. Ritchie, 249 Buchanan Street, Glasgow.

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EPILEPSY AND CYSTICERCOSIS

By

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(WITH SPECIAL PLATE)

Clinical notes of the following case, with a radiograph are placed on record to call renewed attention to the fact that the cysticercus stage of *Taenia solium* though usually passed in the pig can develop in man and that patients so infected generally come under observation when suffering from attacks of 'epilepsy' or from other neurological symptoms and signs that cannot easily be accounted for by a single lesion in the nervous system.

Case Record

A man aged 32, a stone sawyer by trade, was admitted to the sanatorium in January, 1936 with a history of twelve months cough and a recent haemoptysis also that he was subject to epileptic fits.

History.—As a child he does not recollect any ill health. He joined the Army in 1919 and served until 1926. Most of this time was spent abroad first in Egypt, later in India. In 1920 he was in hospital for a brief period with a vague illness, which took the form of pains in the right side of the body. In 1922, 1924, and 1925 he believes he had slight attacks of malaria. In November, 1926 without previous warning he suddenly became dizzy and fainted but soon recovered. After a fortnight's interval he had a similar attack and at irregular intervals until the present time he has been subject to recurring seizures. At first there was usually a seven-day to ten-day interval between the fits. Latterly this was increased to as long as two to four months. Subsequent fits started with twitching in the right foot and right leg and often affected the right arm and right side of the face. Consciousness though temporarily dulled has never been quite lost. He has fallen but has never hurt himself. The tongue has not been bitten and there has been no

loss of sphincter control. Each convulsion continues for a varying period, generally five to fifteen minutes, the maximal duration being four hours. Headache, often severe with some mental dullness, remains for one to seven days after each attack.

In 1932 he began to lose power in the right side of the body, particularly following attacks, recovering only partially in the intervals between. Prior to admission he had been examined in a general hospital on five separate occasions and once in a special hospital. Complete examination of the central nervous system, including ventriculography, had failed to indicate the nature of the lesion, and radiographs of the skull appeared normal. No definite diagnosis was made; disseminated sclerosis and cerebral neoplasm having been put forward as tentative diagnoses.

Examination—Respiratory System. Signs indicative of pulmonary tuberculosis were found in the right apex. The purulent sputum showed tubercle bacilli. A radiograph of the lungs confirmed tuberculous infiltration of the right upper and middle zones, and showed scanty mid zone infiltration on the left side.

Nervous System. Memory good; can give a clear and concise history. Horizontal nystagmus present. Cranial nerves nothing abnormal. All arm movements are slightly weaker on the right side. Co-ordination is good, and there are no tremors. All sensory functions—that is, touch, pain, temperature, position, recognition of objects, weight and vibration—are present in both arms but are diminished on the right side. Tendon reflexes on the right side are all exaggerated. The right leg is weaker than the left, and the right tendon reflexes greater. The right sensory functions are diminished. Superficial reflexes abdominal present but the left weaker than the right, cremasters present, plantars—plantar flexion. During or following a fit the plantar reflex on the right side has been found to give an extensor response. Nothing else abnormal was observed.

A radiograph of the chest showed four small oval calcified opacities 4 mm long and 1-2 mm wide in the soft tissues on each side of the neck. The nature of these was not at first suspected. To discover if more were present elsewhere a film of the abdomen was taken. This at once cleared up the diagnosis. Subsequent films of the limbs and the skull have been taken and the film reproduced will speak for itself: the calcified cysticerci being clearly demonstrated. There was no history of tapeworm infection in this case.

Commentary

Cases of this nature are undoubtedly a great rarity but it is important to bear in mind the possibility of cysticercus infection in "difficult" nerve cases.

1 The onset of fits often Jacksonian in type in an adult and extending over a period of years—no obvious cause being found—is suggestive.

2 The clear history of residence abroad is important, but cases are described in those who have never left the country. A prolonged latent period may occur between infection and symptomatic or clinical manifestation.

3 Palpable recurring subcutaneous or intramuscular cysts sometimes a feature of this disease, have never been demonstrable in this case.

4 Once calcification has occurred radiological examination of the muscular and soft tissues is necessary if suspicion of the disease is aroused as radiographs of the skull are of negative value. Calcification of brain cysticerci occurring with extreme rarity.

On examination of the skull radiograph in this case one opacity appears to be in the masseter muscle. If the

calcified deposits are scanty or doubtful these can be excised and examined microscopically for hooklets.

Prognosis.—This is generally stated to be uncertain. Mental deterioration is to be looked for, though in this case, with symptoms since 1926, mental efficiency would appear to be normal.

Treatment.—This is purely symptomatic, and surgery has no place in treatment.

Clinical Memoranda

"Mixed Tumour" of the Lip

(WITH SPECIAL PLATE)

A man aged 49 had for twelve years a slowly growing painless swelling of the upper lip, which first appeared after a blow from the starting handle of a motor, which knocked out four teeth but did not cut the lip.

There was a visible protrusion of the right side of the upper lip. Eversion of the lip revealed a hemispheroidal tumour with a maximum diameter of about an inch having a flat surface on its inner aspect which was normally in contact with the maxilla. The mucosa over this surface was white and adherent to the tumour but apart from this attachment the tumour moved freely within the lip. At the periphery of the tumour several prominent vessels passing into it were visible. The tumour was uniformly firm in consistency. Its appearance when the lip was everted is shown in the photograph (Plate Fig. 1). The tumour was excised with the overlying attached mucosa.

Specimen.—A hemispheroidal tumour of diameters 2.5 cm and 1.5 cm. It is firm and encapsulated. The cut surface is smooth, opaque and white except for a central area which is brownish. Microscopically the tumour consists of a fibro myxomatous stroma in which are set groups of cells for the most part arranged in well formed acini containing pink staining material (Fig. 2). The acini occur singly and also in closely packed groups. At the periphery of the tumour, but without its capsule is a group of acini composed of larger cells and resembling a normal mucous gland. Mucicarmine shows the presence of intracellular mucin (Fig. 3). In the centre of the tumour there is much pigmentation, giving the Prussian blue reaction. The tumour belongs to the so-called "mixed" group that occurs in the salivary glands and other situations.

COMMENT

The lip is one of the rarest sites for mixed tumours but the occurrence of this rarity has long been recognized. Sir James Paget (1870) described a case that is almost identical with that reported here. It was 'that of a healthy looking man, some years ago under the care of Mr Lloyd. A tumour had been growing in his upper lip for twelve years. It was not painful but the protrusion of the lip was inconvenient and ugly, the swelling being an inch in diameter. It was embedded in the substance of the lip both skin and mucous membrane being tensely stretched over it. Its form was nearly hemispherical, its posterior surface being flattened as it lay close on the gums and teeth its anterior convex and smooth. Its whole substance was firm, tense and elastic. Mr Lloyd removed the tumour with the mucous membrane over it, leaving the skin entire. The tumour was firm, slightly lobed, yellowish white, smooth. In general aspect it resembled the mixed tumours over the parotid but in minute structure it presented as perfect an imitation of lobulated or acinous gland structure as any mammary glandular tumour. I heard some months afterwards that another tumour was growing in the same

lip but the patient was lost sight of. An earlier case, probably of the same kind, was reported by Sir W. Lawrence (1832). He removed a tumour from the lip of a young lady of 19. Its substance was whitish, compact, tough and almost of cartilaginous firmness, resisting the knife so as to cut with some noise.

Since that time many such cases have been reported. Ahlbom (1935), in his exhaustive monograph 'Mucous and Salivary-gland Tumours' has collected cases of his own and other authors. His figures and those quoted from other sources give an idea of the frequency of these tumours in the lip. In Ahlbom's 254 cases of mucous- and salivary-gland tumour there were two in the lip. In 422 cases reported by Ahlbom, Wood, Schreiner and Mattick, and Patey there were eight examples in the lip. These tumours of the lip are generally thought to originate in the labial glands in the lateral portion of the sub-mucosa of the upper lip.

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Precipitate Labour

From time to time unusual obstetrical cases are recounted in the *Journal* and the following case, having a number of points of interest, appears to be worth recording.

A married woman aged 35 who had borne two children the first twelve years ago and the second three years ago consulted me in October last about palpitation and debility. There was a very slight enlargement of the thyroid gland and just a perceptible degree of exophthalmos. The pulse rate was 100. She stated that her periods had been in abeyance for some five or six months, but at once added that she was satisfied she was not pregnant as no increase in girth or any other symptoms had shown.

She came to see me again twice before the year ended and it was evident that her symptoms of hyperthyroidism were improving. She made no further reference to the missed periods and I confess that aspect of the condition was not kept in my mind.

Early in January one midnight I had a telephone message to come to her as she had had a baby which the person delivering the message believed was dead. I found that she had gone to bed in her usual health and at 11.30 had wakened with a colicky pain and hurried to the water closet feeling that she was going to have diarrhoea. She had a bearing-down feeling and the baby was forthwith delivered into the pan of the closet. She got up quickly scarcely knowing what had happened. The cord snapped (about its middle part) as she rose. Then only did she realize that she had delivered herself of a child. She was able to lift the infant out of the pan lay it on the floor and stagger along the passage to her bedroom. She woke her husband and told him what had occurred then she rubbed her eyes and said 'Have I been dreaming?' She was unable to believe that what had happened was real.

When I arrived she was not losing any blood and the placenta was ready for expulsion. This was approximately one hour after the birth. On the bathroom floor still lay the little cold baby but it was breathing and indeed crying, and had suffered no injury from its precipitate delivery. There had been no bleeding from the torn cord. The child was a female its weight was 5½ lb. Both mother and child did well.

The mother assured me she had never for one moment considered she was pregnant and the birth was to her as astonishing as it was to her husband and to myself.

Edinburgh

A. F. WILLIE MILLAR.

Reviews

BIOCHEMISTRY AND METABOLISM

An Introduction to Comparative Bio-Chemistry By Ernest Baldwin, B.A., Ph.D. Foreword by Sir F. Gowland Hopkins, F.R.S. (Pp. 112 illustrated 5s net.) London: Cambridge University Press, 1937.
The Metabolism of Living Tissues By Eric Holmes, M.A., M.D. Foreword by Sir F. Gowland Hopkins, F.R.S. (Pp. 235 7s 6d net.) London: Cambridge University Press, 1937.

Comparative biochemistry has not hitherto appeared as a textbook subject. Such material as might be regarded as constituting this branch of biochemistry has been scattered in highly diffuse form through the literature of the various biological sciences. Dr Baldwin has collected and marshalled the more important and fundamental matter and presented it in a little volume which reads more like a fascinating story than a textbook. It is chiefly concerned with the relationship of the organism to its environment. Adaptation and evolution are shown to depend upon the development of special regulatory mechanisms to govern such closely interrelated phenomena as osmotic pressure, ionic equilibrium, excretion, and respiration. The several mechanisms are discussed in turn, with a wealth of illustration drawn largely from the lower forms of animal life. If special reference is made to the lower rather than to the higher animals this leaning is justified if only because the biochemistry of the former opens up what is, to the average student, a completely new territory, and the book gains considerably in interest accordingly. How few of those who are well informed on such subjects as the excretion of nitrogen and uraemia in man have ever heard of the physiological uraemia of the marine elasmobranchs! The comparative study is not only the youngest but also the most fundamental of the branches of biochemistry, and therefore such a simple, lucid, and stimulating presentation as is offered in the present volume can be thoroughly recommended to the attention of students beginning their biochemical studies. They are bound to acquire from it an interest in the subject which will carry them on to a deeper study of both this and other branches. Among those who in addition to the present-day student will find the volume of absorbing interest are members of an older generation whose approach to biochemistry was directed on entirely different lines and those of a wider public who take a general interest in fundamental scientific problems.

The Metabolism of Living Tissues by Dr Eric Holmes, is a companion volume to that which has been reviewed above. Both are written by distinguished members of Sir F. Gowland Hopkins's staff at Cambridge. They have been prepared simultaneously and have a complementary relationship. In this, the larger book biochemical concepts such as are made use of in the other are explained in fuller detail, and while the comparative branch is essentially devoted to the metabolism of the lower animals the present volume is chiefly based upon the results obtained by the investigation of mammalian tissues. The book covers a large field in fundamental biochemistry, but the treatment of subjects contrasts markedly with that of the usual textbook in which sections devoted to the chemistry of the biologically important substances are separated from and precede, discussion of metabolic problems. Here such pure chemistry as is germane to the subject is suitably woven into the text and in such a way as to put the emphasis upon the dynamic side of the activity of the

living tissues. Special attention is given to the discoveries achieved by recourse to the "tissue slice" technique, which has contributed so largely to our understanding of the metabolic changes taking place in individual tissues, especially the liver, but also the kidney, muscle, and nervous system. The book is exceedingly well written in clear easy flowing style maintaining a continuity which makes it a pleasure to read right through at one sitting even while recognizing that most sections will require much closer study afterwards. This particularly applies to those parts which deal with recent discoveries responsible for a complete reorientation of ideas. The newly established mechanism of the synthesis of urea is but one of a number of examples that might be quoted. Beginners especially will appreciate the inclusion of brief explanations of the nature of the actual methods of investigation, in that they contribute considerably to an intelligent understanding of the work of the specialist. The only critical comment that might be made is that towards the close of the chapter on the nervous system a number of special terms are left unexplained, and that the hormones have become such a vast subject in themselves that the short chapter devoted to them suffers from the necessity of over-compression. But mention of these minor points in no way alters the general conclusion that the book represents a contribution of major importance to biochemical literature and the high commendation expressed in the foreword by Professor Hopkins will be universally endorsed.

GUIDANCE IN CHOOSING A CAREER

Handbook of Vocational Guidance By C. A. Oakley B.Sc. Ed.B. and Angus Macrae M.A. M.B. (Pp. 337 10s. 6d. net) London: University of London Press 1937

This book has been written for school teachers and others who have to advise on the choice of a career for secondary and public school children. Dr C. S. Myers in his introduction says: "The art of vocational guidance is still too immature and is in a stage of too rapid development to allow for a treatise being yet written upon its theory and practice. Nor is it a technique which can be learned from a textbook. Vocational tests and intelligence tests must be the advisers' servant; they must never be his master. The greater part of the work 'is of the nature of a book of reference consisting of notes of the chief abilities and qualities which the vocational adviser should seek to assess. The rest sets out the results of a survey of occupations undertaken by one of the authors, who approached directors or secretaries of over fifty organizations with a view to ascertaining the length of training and the psychological and physical qualities required of entrants to certain occupations, and the numbers of annual vacancies which usually occur in each occupation."

The modest almost depreciatory tone of the claims made for this book disarm criticism. But we think that price might have been found for a fuller description of the methods and tests themselves and for more guidance concerning the actual choice of tests. Perhaps also insufficient emphasis is placed upon the importance and the actual diagnosis of the emotional background of success in work. It seems to us that wider use could be made of vocational guidance as a means of discovering those children who are in need of expert medical and psychological treatment. It is not enough to know that John is unfit to be a doctor; it is more important to find out whether his unfitness is really constitutional or intellectual in origin or whether it is due to faulty emotional

habits or adjustments. It is more important still that those emotional faults should be properly treated. When further experience of vocational guidance has been obtained it will probably be found that occupations can be classified much more simply than Chapter VI of this book would suggest. Many of the intellectual physical manual, and other "dexterities" which are studied by persons engaged in vocational testing will take a subordinate place in career selection in comparison with the importance that will be accorded to emotional, social and medical factors. It is not fair however to judge a book by what it does not contain. When all is said, experience shows that a great deal of very valuable help in the choice of a career can be obtained by expert vocational guidance.

The handbook shows how important is the field of work which is opening out before those who are prepared to make a thorough study of vocational guidance. It begins with a chapter in which the need for vocational guidance is explained. Chapter II discusses the nature of intelligence and of 'special' abilities, and contains a statement of the degrees of intelligence considered to be necessary for various classes of occupations and a tabular summary of the educational standards to which students must attain before they can enter the universities etc. In Chapter III brief accounts are given of the various tests that have been and are being used for "testing" both intelligence and a number of special abilities. A short (and we feel inadequate) chapter on the technique of vocational guidance follows. Two hypothetical cases are then described in Chapter V, and the rest of the book consists of a survey of the 'occupational requirements' which are thought to be desirable for about 124 occupations suited to secondary and public school children. This chapter occupies nearly 200 pages and contains valuable information though with a good deal of repetition.

This volume should be a useful reference book for teachers, doctors and parents and others who are concerned with the choice of a career for young people.

A CONNOISSEUR OF NATURE

Traveller's Rest By Philip Gosse (Pp. 281 8s. 6d. net) London: Cassell and Co. Ltd. 1937

In the opening chapter of *Traveller's Rest* Dr Philip Gosse suggests that he and the reader should "stroll along together, calmly, unhurriedly in friendly and intimate converse, ready on the slightest pretext to stop and admire a flower to watch a beetle cross the path to mourn over a dead shrew, to listen to the song of a bird, or to sit and gaze up at the clouds or at a distant view." This sentence is an epitome of the book. Dr Gosse knows how to find 'sermons in stones, books in the running brooks and good in everything' though he would qualify the last word of the quotation by vigorously excepting the vandals and iconoclasts who are rapidly destroying the beauty and character of our countryside and the charm of our villages. The collectors of birds' eggs deservedly provoke his generous rage. He also gives a timely warning to genuine but thoughtless bird-lovers. The careless breaking or displacement of a twig may expose a carefully concealed nest to the keen sight of a bird's natural enemies; traces of human or tobacco scent may blaze the trail for a destroyer. Dr Gosse draws these conclusions from his own observations at Beaulieu where as a country practitioner before the war he ringed more than fourteen hundred birds of fifty nine different species in one season. The four chapters devoted to birds also include a charming study of bird lore, the fruit of happy researches in long forgotten books, blended

with the unwritten legends which still persist in country places. From birds the author passes to a spirited defence of coarse fishing stoutly maintaining that a tench or a perch is as handsome as a trout, and citing Confucius as an addict of the poor man's sport. Another chapter deals with Sussex saints. St Cuthman, whose memory is still cherished in the town of Steyning, and the virgin martyr, St Lewinna, whose holy remains were abducted from the church at Alfriston where they had lain for nearly four hundred years and removed to Dunkirk.

This is a delightful book, a worthy successor of *Go to the Country*. Dr Gosse is a connoisseur in the best and widest sense, who shows a generous determination to share his pleasures not only with his friends but also with the wide circle of his readers.

CONGENITAL HEART DISEASE

Atlas of Congenital Cardiac Disease By Maude E. Abbott, B.A. M.D., F.R.C.P. Canada (Pp 62 200 figs 550 dollars New York American Heart Association 1936)

No name has become more closely linked with a specialized branch of medicine than that of Dr Maude Abbott, who is an acknowledged authority on congenital heart disease. Her present work, an *Atlas of Congenital Cardiac Disease* has several claims to the attention of those interested in cardiology and the history of medicine. In the first place the author's name gives this volume the stamp of expert knowledge, secondly, it integrates a vast mass of material gathered from the literature, and by presenting a tabulated analysis of 1,000 cases of congenital heart disease gives a valuable impression of relative frequency or rarity of the various forms of congenital lesions, thirdly, the individual abnormalities are explained not only by the text on the left-hand side at each opening but also by photographs, diagrams, x rays and electrocardiograms in apposition. For the most part these illustrations are clear and apt, they relate to human morbid anatomy, and also to comparative anatomy and embryology.

Dr Abbott has adopted the classification by which all lesions incapable of producing cyanosis are grouped under acyanotic lesions, while those in which a shunt between the right and left side of the heart gives permanent cyanosis are referred to as the 'cyanotic group', those in which a shunt only produces cyanosis in certain circumstances when the relative pressures on the two sides of the heart are disturbed belong to the category of 'cyanose tardive'. This volume must be included among the few modern medical publications destined to become classics.

EXTRA-ORAL MEDICATION

Parenteral Therapy By Walton Forest Dutton M.D. and George Burt Lake M.D. (Pp 386 90 figures 34s.) London Baillière Tindall and Cox 1936

This book contains a large amount of useful information. Its scope is described by the subtitle, 'A ready reference manual of extra-oral medication for physicians, dentists, pharmacists, chemists, biologists, nurses, medical students and veterinarians'. A surprisingly large number of methods of administering drugs other than by the mouth have been devised, and these have steadily increased in popularity during recent years. Many of these methods involve somewhat complex techniques and mistakes can have extremely undesirable results. The authors have collected this varied and scattered information into a single volume. Apart from the general methods of hypodermic,

intravenous, and intraspinal injection, many other special techniques are described, such as continuous intravenous infusion, blood transfusion, pneumothorax, sclerosis of varicose veins and haemorrhoids and ionic medication. The chief methods used in each case are described fully, and the description is amplified by the free use of illustrations. These descriptions take up half the book, and the second half is occupied by a therapeutic index and by a dictionary of drugs used parenterally. These latter sections do not, however, present any strikingly original features.

The volume will be found of practical service by a wide variety of practitioners of medical and allied sciences, because it describes numerous techniques, the successful employment of which depends on accuracy in regard to detail. The prominent role assumed by the hypodermic needle in modern medicine is often a subject for comment, and it is interesting to note that this volume includes a table detailing about two dozen types and sizes of needles and their appropriate uses.

Notes on Books

It may fall to the lot of any practitioner in this country, however imperfectly qualified for so specialized an undertaking to perform a post mortem on a case either of death from natural causes or of poisoning or some other condition of medico-legal importance. To such occasional morbid anatomists Dr JOAN ROSS'S *Post mortem Appearances* (third edition H. Milford 7s 6d) is an indispensable guide. Unlike most other such works, it departs from a regional arrangement and describes the essential findings to be expected in each disease or other morbid condition, it is thus possible for the operator with any clue to the nature of the case to refresh his memory beforehand and approach the task with a knowledge of what to look for. The amount of information given is surprisingly large for so small a book, and the student engaged in the post mortem room can also benefit from its use, with the added advantage that when he detects a departure from the usual appearances he should be able to ascertain its why and wherefore by personal inquiry. We are not suggesting for one moment that reference to these pages can take the place of a sound knowledge of morbid anatomy but in so far as lack of experience can be compensated for in such a way this book provides reliable information in an easily intelligible form.

In *L'Année Thérapeutique* (Masson, 20 fr) Dr A. RAVINA has again collected the recent advances in treatment and arranged them in three groups—maladies and symptoms, methods and technique and medications. Within each group the arrangement is alphabetical and treated by an oestrin ointment is the first article, and the use of vitamin C for such conditions as herpes zoster and asthma completes the book. This is the eleventh year of issue of this useful little work and it contains a special index for the volumes covering 1931–5.

As a result of considerable hospital and private experience Mr B. A. KOPKIN has attempted, and with considerable success, the difficult task of writing a *Dental Surgery for Medical Practitioners* (H. Kimpton, 5s). The author has aimed at presenting briefly the fundamentals of dental practice and in eighteen short chapters delineates the dental conditions that cross and often darken the path of the general practitioner. The descriptions are mostly clear and sufficient, but now and then a curious word appears—for example, at page 26, *undermined* which seems to mean *underlain*. The author draws special attention to the chapter on 'gas' administration, and if he can do something to counteract the whiff of gas attitude so common among doctors he will deserve the thanks of the dental profession. He

describes also the use of local injection anaesthesia, but his list of contraindications both for gas and injection anaesthesia are so similar that the reader may wonder whether there be not a third unmentioned anaesthetic.

The book entitled *The Diary of Vaslav Nijinsky* (V Gollancz, 10s 6d) represents a translation by his wife Mme ROMOLA NIJINSKY of the great dancer's account of various incidents in his life, including his homosexual attachment to Diaghilev. The diary which was written in 1918-19 after the onset of the psychosis which has been diagnosed by psychiatrists as schizophrenia shows the characteristic features of a disordered mind such as incoherence, megalomania and delusions of persecution. The text is interspersed with portraits of Nijinsky at different stages of his career and with several of his drawings, which are similar to many of those made by subjects of schizophrenia.

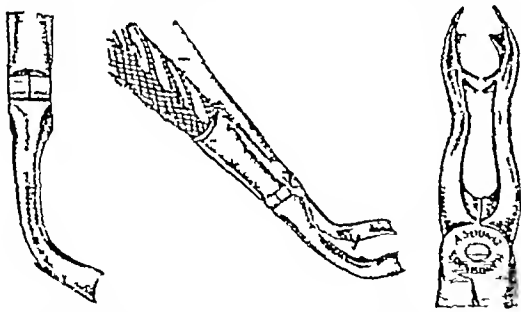
In our issue of April 20, 1935 we reviewed *Oxygen and Carbon Dioxide Therapy* by Drs ARGYLL CAMPBELL and E P POULTON. These authors have now issued in pamphlet form an addendum on The Oxygen Tent and Nasal Catheter, most of which appeared in the article by Dr Poulton and Mr T W Adams in the *British Medical Journal* of March 21 1936. The pamphlet will be supplied gratis to purchasers of the book who notify the Oxford Medical Press, Amen House Warwick Square, EC4.

Preparations and Appliances

LION FORCEPS FOR HALLUX VALGUS OPERATION

Mr I S SMILLIE F.R.C.S. (Ed) (Orthopaedic Department Royal Infirmary Edinburgh) writes:

The recent controversy on the operative treatment of hallux valgus and hallux rigidus prompts me to describe an instru-



ment which will be found of service to exponents of removal of either the head of the metatarsal or the base of the phalanx. Most surgeons will confess to a certain difficulty in the control of either fragment after division of the shaft before the separation of the remaining capsular and ligamentous attachments. This forceps which consists of a

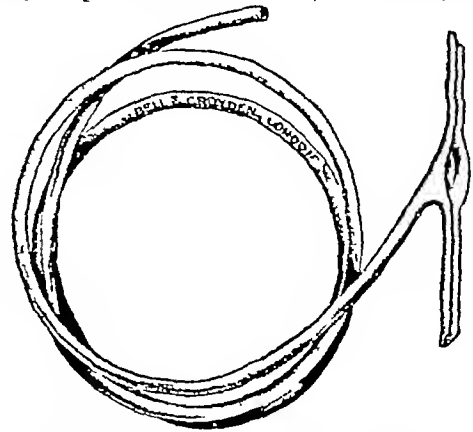
lion tooth grip set at an angle of 110° to the handles provides adequate control of either fragment. The lion grip is so arranged that the proximal teeth are set closer together than the distal teeth thus conforming to the tapering of the base of a phalanx or head of a metatarsal. Other uses will be found for it in minor orthopaedic operations on the hand and foot. The instrument was made for me by Messrs Archibald Young and Son Ltd., 57 Forrest Road Edinburgh.

NEW T-TUBE FOR DRAINAGE OF BILIARY DUCTS

Mr KENNETH MUNGOT F.R.C.S. (London W 1) writes:

There are several types of T-tube for draining the common duct most being modifications of Keir's pattern. During the last few years the indications for exploration and drainage of the biliary ducts have been greatly extended and this is now

rarely omitted in operations for cholelithiasis as soft pigment stones collections of biliary sand inspissated pus, and inflammatory debris cannot always be palpated even when present in large amounts. The T-tube I use of which an illustration is given is made to my specification by Messrs.



John Bell and Croyden Wigmore Street, London W 1. The tube is No 7 English catheter gauge, and is twenty-five inches in length. The transverse trough-shaped piece is two inches long and is fitted obliquely to the tube. The soft rubber trough is easily inserted into the incision in the common duct being securely fixed into position by stitching over it the edges of the incision in the duct by means of a few interrupted catgut sutures. The long limb of the tube is led through the abdominal wound or through a special stab wound, and is anchored to the skin margin to prevent it from being inadvertently withdrawn. By means of a glass connexion which is attached to another length of rubber tubing the bile is made to drain through into a small medicine bottle fixed to the patient's side or to the bed. Some of the bile thus collected is returned per rectum two or three times a day. I find this tube very easy to insert into the common duct and, what is more, it is easily removed after it has done its work. Provided there is no obstruction in the lower reaches of the duct there is no discharge of bile through the wound after the tube has been withdrawn.

SUPPLEMENTARY FOOD PREPARATIONS

We have received from Cow & Gate Ltd Guildford the following preparations intended chiefly for supplementary feeding of pregnant women and of infants.

Prenatalac is a milk food for ante-natal cases designed to meet the heavy demands made during the later stages of pregnancy on the maternal reserves of fat-soluble vitamins and of iron. This is a dried preparation of full-cream milk fortified by the addition per pint of reconstituted food of 250 international units of vitamin D, 2,000 international units of vitamin A and 10½ grains of iron salts. Clinical tests have shown that it is well tolerated by expectant mothers and is free from any constipatory effects.

Glucose AD is a preparation of glucose which contains 2 per cent. of calcium glycerophosphate together with 6,000 international units of vitamin A and 2,000 units of vitamin D per pound. The makers point out that an increase in sugar consumption usually involves a decrease in fat consumption, and that the presence of the fat-soluble vitamins and calcium in their preparation provides a means of giving additional sugar without disturbing the vitamin and calcium balance of the diet. The preparation is particularly recommended for the treatment of acidosis and also for a variety of conditions where it is desirable to provide increased sugar intake without reducing the vitamin intake—for example pre-natal dietary lactation infant feeding and convalescence.

Cerex CG is a malted wheat food in which a considerable proportion of the starch has been converted to dextrins, malto-dextrins and maltose. The preparation is intended for use during weaning. It contains enough unaltered starch for the exercise of normal amylolytic actions, but the presence of partly digested starch renders easier the transition from milk to starch-containing foods.

INVESTIGATION OF MATERNAL MORTALITY

THE MINISTRY'S REPORTS

The Ministry of Health published last week as a White Paper¹ the long-expected report of the special inquiry into maternal mortality in England which has been carried out by medical officers of the Ministry, with Sir Comyns Berkeley's assistance in a consultative capacity, during the past two years. The areas investigated were those of forty-five authorities in which maternal mortality has been more than 5 per 1,000 live births during 1924-33, and twelve other areas with maternal death rates above the national average of 4 and also twelve areas in which they were below this average. In the course of the survey 770 deaths were inquired into. The investigators find that there are many factors in this problem which cannot be dissociated and separately assessed—there is, for example, no necessary relation between maternal mortality and housing conditions.

Local authorities, the report says, should secure proper team work between health visitors, midwives, and doctors—whether in general practice attached to hospitals or clinics, or specialists—and the Minister, Sir Kingsley Wood, is making suggestions to them for this purpose. Under the Act passed last year every mother should be able after July 1 next to have a properly qualified midwife for her confinement, and the following points are stressed. Every doctor who does midwifery cases under a local authority's scheme should be interested, experienced, and actively engaged in such work, have enough time for unhurried work, and be ready to co-operate with the local authority's own officers and others concerned in maternal welfare. Every local scheme ought to provide specialist consultants, and their services should be fully used. Lives should not be risked by taking patients to hospital when they are too ill to be moved, and the Minister is urging local authorities to arrange for 'flying squads' of skilled hospital staff to be brought to the patient in such cases.

A section of the report is devoted to abortion. Attempted abortions appear to be frequent and to be increasing and to be responsible for a number of deaths from puerperal sepsis. Mr Norman Birkett, K.C., will act as chairman of a Departmental Committee to be set up at once to inquire into the prevalence of abortion and the legal position in relation to it, and to see what can be done to reduce mortality from this cause.

Sir Kingsley Wood has recently called upon all maternity and child welfare authorities to overhaul their present arrangements so as to secure enough milk or other suitable food for women throughout pregnancy. The report suggests the need of further research into the possible influence of diet on child bearing and the Minister is in touch with the Medical Research Council on this subject. The mother herself it is insisted should take full advantage of the facilities everywhere available for ante-natal and post-natal care. Local authorities should encourage this by arranging talks and lectures, besides personal advice from doctors, midwives and health visitors. Mother and infant will be the subject of one of the main divisions of the national campaign this autumn to give wider publicity to the health services and thus encourage their fuller use.

Corresponding steps are being taken as regards Wales which is the subject of a separate report.² Summaries of the English and the Welsh reports are given below.

In his prefatory letter Sir Arthur MacNalty acknowledges the help given to the Ministry's medical officers in conducting their arduous local inquiries, in particular, he thanks representatives of local authorities, medical officers of health and members of the staffs of the public health departments, representatives of the local Branches of the British Medical Association, consultant obstetricians, and the staffs of maternity departments and hospitals, general practitioners, midwives, and representatives of voluntary agencies.

THE ENGLISH REPORT

The inquiry was instituted to try to find out why the puerperal death rate in this country has not fallen and why it has tended to remain persistently high in certain regions notwithstanding the increased interest taken in maternal welfare, the great extension of the maternity services and the remarkable improvement in the general health of the community. The trend of the puerperal death rate in England and Wales has indeed been slightly upward from 1924 to 1934. In 1935, for the first time since 1931 the rate showed a slight decrease and the provisional figure for 1936 shows a further decline.

The present investigation included visits to the areas of sixty-nine local authorities in England and statistical studies carried out in the Central Department. The field investigation was undertaken by six medical officers of the Ministry three of whom had special knowledge of maternity services and three had knowledge of health work in general. The services of Sir Comyns Berkeley were secured to assist with his counsel and advice during the investigation and in the preparation of a report.

After the visits of the Ministry's medical officers official letters were sent by the Department to each authority containing suggestions for any improvement or extension of the services which were thought to be necessary. The response has on the whole been most gratifying, and there is every reason to believe that substantial improvement in the scope and efficiency of the services in many of the areas has already taken place or is in process of being effected.

Factors Bearing on Mortality

For many years the regional distribution of puerperal mortality has been higher in Wales and the North West of England than in the country as a whole. This regional inequality is, however, not confined to maternal mortality rates, with certain exceptions the distribution of the general death rates, infant mortality, tuberculosis, and other rates show some correspondence with the rates from puerperal causes.

Caution is necessary, it is stated, in comparing the puerperal death rates of one area with those of another because the differences are those of degree only and in certain areas may depend upon relatively small differences in the number of maternal deaths. One death more or less occurring in the year under review may cause a marked rise or fall in the puerperal death rate of an area if the annual number of births is small.

Apart from the more specific causes of death other factors which might possibly have an influence on puerperal mortality were considered, such as social environment and economic circumstances, occupation, housing and overcrowding, diet and nutrition, age and parity, epidemiological associations and the climatic conditions prevalent in the districts. With regard to housing and economic conditions the available evidence on the effects of bad housing and overcrowding on puerperal mortality shows that districts in which there are areas with bad housing and overcrowding are just as likely to have low rates of puerperal mortality as those in which the housing is good and the overcrowding less. In the districts visited it was not generally found that the puerperal death rates were higher in the areas with most overcrowding.

¹ Cmd 5422 H.M. Stationery Office (5s 6d)
² Cmd 5423 H.M. Stationery Office (2s 6d)

Economic conditions, judged by the extent of unemployment, indicated that the observed variations in the puerperal mortality do not show any consistent association with corresponding variations in economic conditions. Many of the districts with high average puerperal death rates have an unfortunate social history, and it appears probable that the living and working conditions had a prejudicial effect on the physique of the people which may not yet have been entirely eradicated. On the other hand, the rural areas in the North which have tended to have higher rates than the average, show no such distinctive features. It appears to be the collective influence of many factors which predisposes towards puerperal mortality, and the effects of individual factors cannot be dissociated and separately assessed.

Nutrition of Pregnant Women

Assessment of the nutritional state of pregnant women was beyond the scope of the investigation, but the views of competent persons acquainted with local conditions were obtained by the investigating officers. In the exacting conditions peculiar to childbearing it is important to maintain the general health and powers of resistance of the mother. As adequate amounts of suitable food are essential for the metabolic functions of the mother and also for proper development of the foetus, the dietary of the pregnant woman is a matter for serious consideration. It appears that malnutrition of pregnant women due to an insufficient quantity of food is rare in the areas visited. Machinery of one kind or another is available throughout the country to supplement the dietary of expectant and nursing mothers medically certified to require it. Failure to obtain the additional nourishment by those who require it may be due either to faulty administration or to hesitation on the part of the women themselves to apply for this form of assistance. There is no doubt however that unbalanced diets are common and that the dietary of many expectant mothers is inconsistent with that now recommended by physiologists as desirable for pregnant women. The influence of the nature of the dietary and of nutrition on maternal mortality cannot, it is observed, be accurately assessed in the present state of knowledge.

Data relating to the age and parity of childbearing women were collected during the course of the investigation and also by Dr Percy Stocks of the General Register Office and from a study of these the risk of death is shown to increase steadily with advancing age. The risk at the first is apparently greater than in succeeding confinements until the eighth and the third confinement appears to carry the least risk.

The national figures show a close correspondence over long periods between puerperal sepsis and other septic infections of similar origin such as scarlet fever and erysipelas but closer study in the areas investigated seemed to indicate that the association has no causal significance.

Possible Climatic Influences

The geographical distribution of the incidence of puerperal mortality in England—namely the tendency for the death rates to be higher in the north and west and lower in the south and east of the country—suggested that climatic conditions might in part exert an influence. There may be an association between climatic factors such as sunshine, temperature, and humidity and the incidence of puerperal mortality. Thus there is some indication that abundant sunshine tends to be associated with a low rate of puerperal mortality but the data required to demonstrate the association are not complete.

Deaths from puerperal sepsis tend to occur most frequently in the coldest quarter of the year that being the quarter which immediately succeeds the wettest and most sunless quarter while deaths from toxæmia tend to occur in the warmest quarter that being the one which immediately succeeds the driest and sunniest quarter and

precedes the quarter in which the rainfall is highest. In the present state of knowledge it is impossible to assess the significance of this association.

Artificial Abortion

In each area visited endeavour was made to obtain information regarding the prevalence of abortion. The circumstances associated with the deaths due to abortion which occurred during 1934 were also investigated, and are clinically analysed. The figures obtained from the Registrar General's Department also formed the subject of statistical studies.

Although it was not found practicable to estimate the effects on health resulting either from abortion or from attempts to induce abortion, frequent assertions were made by persons interviewed that women became debilitated or anaemic or were in general ill-health as a result of the repeated and prolonged use of aperients and other drugs taken with the object of terminating pregnancy. Quotations from recent literature cited in the report indicate that the effects of artificially induced abortion may be far reaching. From the information obtained it seems evident that the practice of artificially induced abortion is frequent appears to be increasing is more prevalent in some districts than in others, and is not restricted to any one social class.

Abortion (whether spontaneous or artificially induced) is an important factor in the puerperal death rate of the country since approximately 14 per cent of all puerperal deaths are due to this cause (excluding deaths from abortion classed as criminal). The puerperal mortality rate includes deaths due to abortion and the puerperal mortality rates of England and Wales, which during the years 1933, 1934, and 1935 were 4.51, 4.6 and 4.1 respectively, would have been reduced to 3.86, 3.94, and 3.51 if the deaths due to abortion had been excluded.

The risk attending artificially induced abortion does not, it is found appear to be sufficiently realized, and there is urgent need for the education of women respecting the damage to health and the danger to life from attempts to terminate pregnancy artificially. The facilities available in some areas for the inpatient treatment of cases of abortion under expert supervision are inadequate.

Local Study of Maternal Deaths

Local investigation of all maternal deaths which occurred during 1934 in the areas visited was undertaken, and these amounted to over one-quarter of the total puerperal deaths in England during that year. An endeavour was made to discover whether any fresh light could be thrown on the problem of maternal mortality by intensive local study of the conditions associated with the deaths and to ascertain if any circumstances peculiar to the district in which the women died might have contributed to the fatal issue. Consideration was given to the possible influence of environment attention was directed to the conduct of each phase of childbearing, the local facilities available for professional assistance and for inpatient treatment were assessed and the conclusions arrived at are based on the evidence so obtained.

The main findings of the present investigators do not differ from those of the Departmental Committee on Maternal Mortality or from those of the officers responsible for the report of the Department of Health for Scotland issued in 1935. They indicate that in many instances ignorance or lack of co-operation on the part of the patient or her relatives prejudiced her chance of recovery and they illustrate afresh it is said that there is need for more systematic and careful medical supervision during the antenatal period more skilful management of some confinements more frequent reference of cases of doubt or difficulty for the advice and treatment of an expert obstetrician, and earlier admission to hospital of many patients.

Local Maternity Services

The report gives an outline of an efficient maternity service of a local authority and includes subjects recommended for consideration, in order to render the services more fully effective. A comprehensive survey of the services was undertaken in every area visited, and attention is drawn to the directions in which they fell short of the standard of efficiency outlined. The maternity services provided by local authorities have, it is stated, been greatly extended and improved during recent years. Immediate results must not be looked for, time is necessary before new or extended provisions can exert their full measure of usefulness. Attention must not be focused only on the women who die, regard must be had to those whose lives are saved. It should be borne in mind that the services provided by a local authority do not operate alone but in conjunction with those of voluntary organizations, independent agencies, and private professional attendants. There are also other factors—such as abortion—which may influence the puerperal death rate. Criticism is sometimes made of the disappointing results achieved by ante-natal supervision, but allowance is not always made, the report points out, for the fact that general recognition of the value of such supervision is of relatively recent date. The underlying principles of ante-natal care are sound, but optimal results cannot be expected until ante-natal supervision attains a high general standard of efficiency and expectant mothers make full and intelligent use of the facilities provided to safeguard their health. The development of consultative ante-natal clinic sessions, under the clinical supervision of an expert obstetrician to serve every area is of importance in order to render ante-natal services more efficient.

Changing Midwifery

The position as regards midwifery has undergone profound changes in recent years. Apart from the diminution in the number of births due to the fall in the birth rate there has been a decrease in the number of domiciliary confinements conducted by general practitioners and an increase in those for which midwives are responsible. There has also been a rapid and increasing development of institutional midwifery in many districts. The foundation of a sound midwives' service has been laid by the Midwives Act 1936 which provides for the establishment of an adequate service of salaried midwives in the area of each local supervising authority for attendance on women in their own homes either as midwives or maternity nurses. This is a legislative measure of great potential value as opportunity now offers to secure well-trained midwives and to maintain their work at a high standard of efficiency. The importance of sympathetic and skilful supervision of midwives is emphasized. Under the new Act the Minister of Health is empowered to make regulations prescribing the qualifications of persons appointed by an authority to exercise supervision over midwives practising within its area and no person is to be appointed in future whose qualifications are not in accordance with the regulations.

The General Practitioner's Task

It was evident during the investigation the report says that many medical practitioners undertake a considerable amount of obstetric work with competence and skill. The midwifery practice of some doctors has, however, decreased, and the position in some towns is that, unless a general practitioner has a special interest in midwifery or is of repute for his obstetric skill his maternity practice may be largely restricted to a few medical aid calls from midwives in the course of a year. The general practitioner is often called to an emergency in the patient's home and may have to cope without adequate assistance and in unfavourable surroundings with critical situations which would challenge the skill of an obstetric specialist. Other calls upon his time may be pressing. Moreover the condition of the patient may be such as to compel

him to take immediate action, however disadvantageous the circumstances may be. The histories of many of the maternal deaths investigated indicated that, notwithstanding these handicaps, careful obstetric procedures were adopted, but others show that the woman's chance of recovery would often have been enhanced had a practitioner experienced in midwifery been in attendance had the doctor been assisted by an obstetric expert, or had the patient been admitted to hospital sufficiently early.

A midwife is required by the rules of the Central Midwives Board to call in a medical practitioner in all cases of illness of the patient or of the child, or of any abnormality occurring during pregnancy, labour or lying in. She is required when possible to call in the doctor desired by the patient or by the responsible representative of the family, and, although under the Midwives Act 1918 local supervising authorities are required to pay the fees of all doctors so called in, they have no voice in the selection. A doctor whose practice of midwifery is restricted to only a few cases each year cannot be expected to assist the midwife in difficulties which may urgently call for judgement and experience which, in the circumstances, he cannot be expected to possess. It is suggested in the report that the local supervising authority, in consultation with the local medical profession, should in future be empowered to take steps to ensure that the best local obstetric skill is made available in all cases in which midwives are required under the rules of the Central Midwives Board to call in a doctor.

Hospital Provision

Although extensions have taken place in the provision of hospital facilities for maternity patients, in some districts the demand for beds has exceeded the number available. Much of the accommodation in the hospitals visited was not designed for the purpose, and in a number of districts complicated maternity cases had to be admitted in emergency to general hospitals, in some of which obstetric practice was not regarded as within the scope of their normal activities and the services of obstetric specialists were not always available. Properly constructed adequately equipped, and suitably staffed maternity accommodation including a sufficient number of beds allocated to and reserved for ante-natal patients, should be provided to meet the needs of every area.

It is recognized that the treatment of puerperal sepsis patients in hospital is almost always desirable, and satisfactory arrangements should be made for their accommodation. The treatment of these patients should be carried out under the direction of an expert obstetrician.

Need for Post-natal Care

A considerable proportion of the gynaecological conditions from which women suffer are attributable to the report states, to the effects of childbearing. Specialist advice and facilities for in-patient treatment should be available and instruction and education of the mothers in the importance of submitting themselves for medical examination after confinement should form part of every post-natal scheme. There is need for the fuller development of post-natal services throughout the country, as it is clear that the value of post-natal care is not yet sufficiently appreciated. The existence of such facilities should be made widely known.

Many authorities have provided a full range of auxiliary services, but that of others was lacking in some particulars. Arrangements for the provision of extra nourishment were in some cases not sufficiently comprehensive. Some dental schemes were incomplete and the value of the services of home helps for women who are incapacitated during childbearing was not always sufficiently realized.

Consultant Facilities

Stress is laid on the importance of the provision of a service of obstetric consultants and attention is drawn to the infrequency with which the consultant facilities were

utilized in some areas in which they had been provided. The duties of a consultant, under the administrative supervision of the medical officer of health should, wherever practicable include the rendering of assistance to general practitioners in domiciliary cases of doubt or difficulty during pregnancy, at the time of confinement, or in the puerperium. The specialist should attend consultative ante-natal clinics not only to advise on appropriate methods of treatment, but to take steps to ensure, as far as circumstances permit, that patients for whom hospital treatment is indicated, whether during pregnancy or at the time of confinement, may be admitted to the maternity unit under his charge. He should be placed in clinical charge of the maternity department for the area and of the puerperal sepsis unit, and should attend post-natal consultative clinic sessions.

The practice of medicine comprises many branches each of which is tending to become more specialized but this development the report states, has been slower in the obstetrical than in the other departments of medicine and surgery. It should be realized, both by the public and by the medical profession that reference of cases in which there is doubt or difficulty for expert advice and treatment is not a sign of failure or incompetence on the part of the medical attendant. Women who develop serious illness during pregnancy or in whom some abnormal condition is detected which is likely to complicate delivery should be referred early for the opinion of an expert and where necessary, be admitted to hospital in time for skilled treatment to be effective.

Emergency Units

Among the deaths investigated attention was directed to the number of instances in which women were admitted to hospital in a moribund or in an exsanguinated condition. In cases of grave emergency, such as haemorrhage, shock or eclampsia, the services of members of the skilled staff of a maternity department should be brought to the patient instead of subjecting her to the risk of transport to hospital. The provision of so-called emergency units of flying squads in connexion with a maternity department under the direction of an expert obstetrician, should effect a reduction in maternal mortality.

Interchange of Information

Attention is directed to the importance of adequate record keeping and to the need for interchange of information between all those concerned. Full and careful records would afford valuable information respecting the local incidence of normal childbearing, slight deviations from the normal and serious abnormalities. If these records were tabulated on a uniform basis it would assist those responsible for a maternity scheme to assess its efficiency and to detect defects of administration, practice or co-ordination and would afford a means of comparison of the different services and of the varying incidence of morbidity throughout the country. Reference is made to the inadequacy of available information regarding maternal morbidity. In any endeavour to ascertain why the puerperal mortality rates in some areas are higher than those in others the incidence of the illnesses of pregnancy and the complications of childbirth would be a more reliable guide than the certified causes of death.

Team Work Essential

It is essential to the success of a maternity scheme the report continues that there should be co-operation between all those concerned and although this was a satisfactory feature in a few of the areas visited in others its importance had not been recognized. The services which were closely co-ordinated with maternity units staffed by resident obstetric officers working under the supervision of consultants and in association with consultative ante-natal and post-natal clinics and where co-operation between the workers had been secured were those in which the best results appeared to have been

attained. The time for independent individual effort is past. All persons engaged in any branch of a maternity service should consider themselves to be members of a team working towards the goal of safer motherhood. In this way and this way alone can effective continuity of supervision and treatment be secured.

The number of maternal deaths is small compared with that from many other causes of death and does not amount to 8 per cent of the total deaths for all causes among women of childbearing age. The puerperal mortality rate is not a true indication of the risk of motherhood, it overstates the hazard to life. It is calculated on the number of births yet it includes deaths due to abortion and those which occur prior to the birth of a child. There are many factors which influence maternal mortality the effects of which cannot be separately assessed. Maternal deaths occur which in the present stage of knowledge cannot be averted. In some cases lack of co-operation on the part of the women themselves influenced the issue.

When due allowance is made for these factors the report regards it as certain that the maternal mortality rate of this country is capable of reduction, and that of the factors known to influence this rate the most important from the point of view of remedial action is the standard of midwifery practice.

Main Recommendations

The recommendations made by the Departmental Committee on Maternal Mortality in respect of the training of medical students have been implemented, the maternity services of local authorities have undergone and are undergoing substantial developments, the provision of a service of salaried midwives throughout the country has become a statutory obligation as a result of the passing of the Midwives Act, 1936, but the role of the general practitioner in midwifery has not yet received the attention it deserves. Hence the outstanding recommendations contained in this report are those designed to improve the standard of obstetrics—namely:

- 1 The establishment in each area under the direction of the medical officer of health of an adequate service of obstetric consultants to undertake the duties to which reference has already been made.
- 2 The provision of emergency units whereby the members of the staffs of the maternity departments will be available for the domiciliary treatment of maternity patients whose condition is too grave to justify removal to hospital.
- 3 Arrangements by which the local supervising authority in consultation with the local medical profession shall in future be empowered to take steps to ensure that the best local obstetric skill is made available in all cases in which midwives are required to call in a doctor under the rules of the Central Midwives Board.
- 4 The provision of properly constructed adequately equipped and suitably staffed maternity accommodation including a sufficient number of beds allocated to and reserved for ante-natal patients to meet the needs of every area.

The other recommendations deal with the provision of ante-natal clinics including consultative sessions, home help schemes and fuller domiciliary visiting of expectant mothers. The development of post-natal services, education of women and of the public in the need for co-operation with those responsible for maternal welfare, and arrangements to ensure that expectant and nursing mothers in need of extra nourishment shall receive it, are also included.

Special subjects requiring further study are suggested such as research with a view to the discovery of a reliable prophylactic treatment for puerperal sepsis, abortion with special reference to the influence it may exert on maternal mortality and morbidity and future childbearing and further research into the possible influence of the dietary upon childbearing.

THE WELSH REPORT

The causes of high maternal mortality in Wales have been the subject of close investigations by medical officers of the Welsh Board of Health. For the purpose of the inquiry every part of Wales was visited, and recognition is made in the Welsh report of the help given by the local authorities, doctors, nursing associations and others. The statistics of maternal mortality for the ten years 1924-33 are examined in detail.

In several ways Wales presents an interesting field for comparative social study. Industrially, in economic circumstances, and in the geographical distribution of population, two extremes in type of area exist. In the South Wales coalfield highly industrialized conditions predominate, and the large seaport towns are also commercial centres, engaged in considerable foreign trade. Most of the rest of Wales is rural in character and sparsely populated and conditions have not greatly changed in the last generation.

Industrial and Rural Areas

While in rural Wales the women marry at later ages, the number of births per married woman is higher in rural than in industrial areas at all childbearing ages. The illegitimate birth rate is roughly twice as high in the rural as in the industrial parts. Both in industrial and in rural Wales the risk of maternal death, stillbirth, and the death of young infants increases with the age of the mother, and is higher for first pregnancies than for succeeding childbirths, but the variations in all cases are shown to be less in rural than in urban areas.

Procured abortion, the report states, is believed to be common in South Wales and to have increased in recent years, but is infrequent in the rural districts. The mortality from puerperal sepsis also is lower in rural Wales. Otherwise no important variations are exhibited in the maternal death rates for the different classes of district. In all parts of Wales, in industrial and rural areas alike, the death rate is comparatively high. It has decreased in the county boroughs but an increase has occurred in almost every other industrial area.

The Problem in Perspective

While, relative to England, the maternal death rate is high in Wales, the report points out that the number of deaths each year due to childbearing is small in comparison with the number of deaths of a more or less preventable nature from other groups of causes. A mortality rate of 5 per 1,000 births has its opposite in the fact that in 995 cases out of every 1,000 the woman survives pregnancy. The causes for concern are that deaths of a preventable nature occur.

General Ill-health

There is reason to believe that ill-health and disability among many women in Wales accounts in some measure for the high death rate among mothers in childbirth. It is of special significance that maternal mortality is highest in those regions of England which show high death rates from all other causes among women of childbearing age and lowest in those regions where the general death rate is lowest. Both the maternal death rate and the death rate from all other causes are higher in Wales than in any English region.

The investigators state that a good deal of the ill health among mothers is due to ignorance, carelessness and neglect, and that the remedy for this state of affairs lies largely in their own hands, helped by the sympathetic work of health authorities. Emphasis is laid upon this point as care and attention by the woman herself during pregnancy is considered possibly as important in reducing the high maternal mortality rate as is the provision of extensive maternity services. Co-operation of the mother with her attendants and advisers at all stages in all measures which will help to a safe delivery is most desirable. Careful attention to personal hygiene and a readiness to put her-

self under medical supervision and treatment will prevent the occurrence of many difficulties which may prejudice the chances of successful childbirth.

Measures to Reduce Maternal Mortality

In measures to reduce the loss of life from childbirth much of which could be prevented if proper measures were taken, all parties concerned—the mother, the doctor, the nurse, the local authorities, and the State—have their respective functions. First there must be a recognition of the importance of sound general health. Childbirth is normally a safe and natural event, and women should be encouraged to look upon childbearing in that light. The right attitude of mind, however, comes more easily when the woman is healthy and realizes her responsibilities and the home surroundings are good. Ante natal attention should be wisely directed and the confinement should be in trained hands. Adequate ante natal care is needed for the more appropriate attention during pregnancy than less likely will there be unfavourable results at childbirth.

Parliament, it is observed, has given to the local authorities wide powers in regard to public health, and there has been growing acceptance of the importance of maternity in the development of the health services. The efficiency of the provision made for maternity must depend largely on local initiative and supervision, and the intelligent use by the woman of the services available. The services should be well thought out and widely utilized, schemes framed and administered at great cost can yet be wasteful in result.

Public opinion is fully alive to the gravity of the problem but there is not always a true appreciation of the real nature and extent of the problem or of the difficulties. Many deaths occur from other causes than pregnancy or childbirth which in the present state of knowledge can be classed as avoidable. It may confidently be hoped the investigators state, that with a wider recognition of the principles of preventive medicine in maternal welfare work there will come a progressive reduction in maternal mortality and morbidity and a greater saving of child life.

Maternity Services of Local Authorities

Recommendations are made for improving the standard of the maternity services. At present the services provided by most of the local authorities are inadequate and outside industrial South Wales and Flintshire very little maternity work is undertaken either during the ante natal period or at the confinement. The report recommends that every local authority should organize and provide an efficient and complete maternity service which should be available to every mother. The essentials of a good service are considered to be:

- (i) A sufficient supply of competent midwives
- (ii) Skilled medical attention which should reach every mother during pregnancy, labour and the puerperium
- (iii) The provision of hospital beds for those women requiring them either on account of abnormality at any stage or because of unsuitable home conditions

Under the scheme as outlined the general health of the mother, her education in motherhood, the problem of help in the home, the provision of extra nourishment and all affairs relating to the pregnancy would be under the supervision of one or other branch of the authority's maternity service. The arrangements in rural areas would necessarily be different from those in populous areas.

The Minister of Health is immediately in conjunction with the Welsh Board of Health, urging upon all authorities in Wales that they should consider the essential requirements of a complete scheme of maternity services including ante natal and post natal supervision and should pay special attention to securing proper team work, the provision of additional maternity accommodation, of obstetric consultants, of emergency units for bringing skilled services to the patient, and the organization of general educational teaching.

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MATERNITY SERVICES

Valuable as it is in many important respects, the report on an investigation into maternal mortality issued last week by the Ministry of Health contains both a disappointment and a danger. We print in this issue (p. 972) a summary of the report and its main recommendations, and, in the *Supplement*, a memorandum which has been approved by the Council of the British Medical Association and is to be submitted to the Representative Body in July.

The valuable features of the report are that it places the problem of maternal mortality in England in its proper perspective, that it discusses the general questions arising out of that problem in a careful fashion without exaggeration, and that it emphasizes the difficulty and many-sidedness of the considerations that have to be taken into account, and deprecates the loose employment of statistics and the rhetorical and misleading use of such words as "preventable" and "avoidable" in this connexion. With regard to some of the statements not infrequently made on public platforms it is well for the public to be told or reminded that though the maternal death rate has remained almost stationary of recent years it has fallen enormously when a longer period of time is considered, that the rate in this country compares favourably with that of most other countries, that maternal deaths are relatively few in number, that if the causes of death in women from 15 to 45 years of age are examined it will be found that only 7.7 per cent were due to pregnancy and labour and 92.3 per cent to other causes and that notwithstanding the hazards of childbearing the risk of death during this period as a whole is less for the married than for the single woman. It is owing to this smallness of the numbers of deaths due to maternity that variations in rates may indicate mere chance conditions and do not necessarily reflect any real variations in the underlying causes.

The disappointment in the report is that it does scarcely anything towards elucidating the problem which was understood to be the main subject of the investigation—namely the persistence of a high maternal mortality rate over a considerable number of years in certain areas, mainly in Wales and in the North West of England. It is the persistence, rather than the actual degree of such a rate, that

needs explanation, and it was hoped that if this could be found it might lead to some further steps towards the betterment of the present almost static figure. So far as the English "black areas" were concerned at any rate, it could scarcely be imagined that in them there was a lower standard of clinical obstetrics than elsewhere, or that administrative arrangements were markedly less satisfactory than in other districts, but it might well have been that, in spheres other than those of clinical practice or of administration, discernible factors were present which would account to some extent for the anomaly. There must be such factors, but they have not been found. It has once more been demonstrated that neither the standards of housing nor the economic circumstances of the household bear any definite relation to the risks of maternity. These risks are often least in unsatisfactory environments and appear to be greater among the well-to-do than among the poor. The investigators did make inquiries into certain social, industrial and climatic conditions, but beyond the suggestions that employment in textile factories and the prevalence of a rainy climate tend to be accompanied by a high maternal death rate and that there should be further inquiry as to the possible influence of dietary on childbearing, nothing very useful emerges. In the corresponding and parallel report made by the Welsh Board of Health it appears to be accepted that a relatively low standard of living, an excessive incidence of intercurrent disease, wrong feeding and poor nutrition, a somewhat high degree of ignorance, carelessness, and neglect by the mother, a high illegitimate birth rate in rural Wales, with an increase of procured abortion in the industrial areas, and inadequate administrative action on the part of a number of local authorities are sufficient to account in large part for the unduly high rate in Wales as a whole. Most of these are, fortunately, remediable defects.

The danger in the report consists in this—that the recommendations made, while some of them are welcome and not one of them is unacceptable in itself as worded, would not only leave the country with a large number of local isolated maternity services working piecemeal and on varying principles instead of a national service in which fundamental features were uniform and universal though locally administered, but would allow of interpretations and methods of implementation which would be detrimental to the medical profession and might be disastrous to the public. Two such points relate to the provision of domiciliary ante-natal supervision in some districts only instead of in all, and to the usage of maternity hospital accommodation and the nature of its

staffing The major point of principle, however, relates to the method by which steps shall be taken "to ensure that the best local obstetric skill is made available in all cases in which midwives are required to call in a doctor" This is the question to which the memorandum approved by the Council of the British Medical Association is mainly directed, and it requires the most serious attention of every member of the Representative Body, and indeed of every registered medical practitioner In the last paragraph of that memorandum the Council makes a proposal which would be effective in improving the standard of obstetrical practice in cases in which it may now be deficient, while at the same time conserving the rights and interests of the profession of the mother, and of the general public, which is largely dependent upon the training and experience of its medical attendants even if they are not included in an established social service These rights and interests are jeopardized by the alternative method which it is understood the Ministry of Health and the Central Midwives Board now have under consideration This is that the midwife should be allowed to call to her assistance such practitioners only as are selected by the local authority for this purpose By the Medical Act, 1886, a registered medical practitioner "shall be entitled to practise medicine, surgery, and midwifery in the United Kingdom", but if by administrative action on the part of the Ministry of Health and by the alteration of a rule by the Central Midwives Board three-fifths (or in some localities more than nine-tenths) of his field of midwifery practice may be forbidden him the question arises whether the doctor's statutory right has not been infringed If it is to be infringed, then this should be done by straightforward legislative action by amending the Medical Act. No doubt the General Medical Council will consider this aspect of the matter, as well as the implied criticism that medical practitioners now being registered after having completed the improved and extended midwifery course prescribed are not competent to deal with the minor emergencies for which the midwife would have to ask their help and to decide that an obstetric specialist should be called in in others

The rights and wishes of the mother are at stake At present she may have the doctor of her choice In the contemplated circumstances she would in a large number of cases, be deprived of this and even forbidden to avail herself of the services of the practitioner whose duty it had been to look after her throughout her pregnancy The interests of all classes of the public, too, would be affected A well trained and experienced medi-

cal profession is essential in these interests The problem of recruiting as well as of establishing the selected lists of permitted doctors would present itself They are to contain the names only of "experienced" doctors, yet newly qualified practitioners are to be denied the major part of the opportunity open to them for acquiring such experience It is open to question whether lists compiled by this method, and entailing such consequences, would contain the names of those likely to bring to the service the "best local obstetrical skill" It is to be hoped that the Ministry and Board may, on consideration, prefer such a plan as that proposed by the Council of the British Medical Association as likely to be more effective in practice and less inequitable

VALVULAR LESIONS IN RHEUMATIC FEVER

In the past there has been no clear-cut agreement on what are the characteristic histological changes in the cardiac valves in rheumatic fever the chief points at issue were the mode of formation of the vegetations and whether the valves were normally vascularized or not A recent paper from the laboratories of the Mount Sinai Hospital¹ deals authoritatively with these problems For many years Louis Gross and his colleagues have been studying the morbid anatomy and histology of the heart in rheumatic fever, and successive papers have appeared on the lesions of the myocardium,² blood vessels³ conduction system,⁴ and pericardium⁵, in each the same techniques have been employed and the pathological changes compared with the normal appearances at varying ages They state that the normal valve consists of a dense collagenous stroma which is covered on each side by a fibro-elastic layer, loose connective tissue, and endothelial cells, the valve leaflets are attached to the myocardium through the valve ring which is made up of a gelatinous tissue and a fibrous annulus The normal valve is markedly acellular, and blood vessels are seldom found save for a few capillaries in the valve ring

This is in direct contrast to the views on valve vascularization recently expressed by Wearn,⁶ but Gross suggests that myocardial vessels were included in the statistics, and that valves with evidence of past inflammation were regarded as normal material With advancing age the normal valve becomes thicker and more fibrotic lipid

¹ *Amer J Path* 1936 12 855

² *Ibid* 1934 10 467 489

³ *Ibid* 1935 11 253 631

⁴ *Ibid* 1936 12 31

⁵ *Ibid* 1936 12 183

⁶ *Amer Heart J* 1936 11 22

and calcium deposition may appear, but there is never any evidence of cellularity or vascularization. In acute rheumatism capillarization with infiltration of inflammatory cells of the valve rings occurs as a contiguity process from the inflamed myocardium, this process spreads along the valve leaflets, producing oedema and eosinophilic swelling of the fibrous tissue. Vegetations are found on all valves, but are most pronounced on the mitral and aortic cusps, the tip is not affected, but vegetations appear at the point of closure or where there is a blood eddy or stasis (the frequency of vegetations within the valve pockets is emphasized). It is suggested that the vegetations are formed by an extrusion from the valve leaflet of the swollen fibrous tissue and fusion of the proliferated cells, and that the deposition of platelets or fibrin plays very little part in their formation. In the subacute and chronic stages the valves are invariably vascularized, and there is an increasing fibrosis and distortion with secondary lipid changes and calcification. New vegetations may be formed, and these occur at the most distal portion of the valve still presenting inflammatory changes accordingly several distinct rows of vegetations arise as the increasing fibrosis and distortion exposes different portions of the valve to the blood stream. Gross and Friedberg uphold the view that the pressure to which the valve is exposed plays an important part in determining the extent of the valvular deformity, and mention the frequency with which fresh vegetations appear on the tricuspid valve in cases of pulmonary hypertension even in the absence of fresh lesions on the mitral valve. In cases of apparently inactive rheumatism large thrombotic vegetations which are not due to a bacterial endocarditis may form on the damaged valves, these are regarded as an epiphenomenon, and are usually associated with cachectic states. Although more liable to occur on damaged valves, they may arise on healthy valves and in some cases have been associated with thrombocytopenic purpura and in others with an unusual form of polyarthritis, prolonged fever and serous effusions.

The value of such careful descriptive morphology cannot be overestimated and the work of Gross and his colleagues is in the Virchow tradition. Tracing the changes throughout the heart in rheumatic fever in all its stages they have shown clearly that the valvular lesions must be regarded as an inflammatory process spreading from the myocardium with secondary vascularization of the valves and that there is no evidence to suggest that the valves are first vascularized and then involved in the rheumatic process by reason of changes around the vessels within them.

THE NUTRITIVE VALUE OF PASTEURIZED MILK

One of the statements most frequently made by opponents of pasteurization is that the nutritive value of milk is deleteriously affected as the result of treatment by heat. No satisfactory evidence in support of this contention has yet been brought forward. It is true that certain workers have carried out experiments the results of which have been regarded as favouring raw as opposed to pasteurized milk but careful examination of their protocols has usually revealed some source of error that has rendered their conclusions untrustworthy. On the other hand there have been a number of workers who have failed to find any significant difference between the nutritive value of raw and that of pasteurized milk. With the rapid increase in the extent of pasteurization that is occurring at present and the growing demand for powers of compulsory pasteurization by towns like Glasgow and Poole whose experience of raw milk has been unfortunate it is important that this question should receive a definite answer. Considerable progress towards this end is being made by a group of workers at the National Institute for Research in Dairying at Reading and the Rowett Research Institute at Aberdeen who are engaged under the auspices of the Milk Nutrition Committee of the Milk Marketing Boards in making careful observations on the comparative nutritive value of raw and pasteurized milk. The first report¹ of this committee, which has just been published mainly concerns experiments on rats. The results of further investigations—on calves and on school children—are promised for publication in the near future. Observations on the individual constituents of milk showed that when subjected to commercial pasteurization by the holder method (145°–150° F for thirty minutes) milk lost about one fifth of its vitamin C content and a certain but unmeasured amount of its vitamin B complex. No change was observed in the vitamin A or carotene content of the milk in the biological value of the proteins or in the availability of the calcium or phosphorus. The change in the vitamin B complex could be detected only when the intake of milk was limited to about 8 ccm daily. With regard to the partial destruction of vitamin C it is pointed out that pasteurization could not be held entirely responsible. The reduced form of ascorbic acid that is secreted by the normal cow is resistant to heat but is capable of reversible oxidation under the action of light. The oxidized form is susceptible to heat and it is this form resulting from exposure of the milk to light after it has left the cow that is destroyed by pasteurization. Experiments on litter mates carried out with whole milk given in a quantity of 70–80 ccm daily failed to show any difference between the nutritional value of raw and pasteurized milk as judged by such criteria as gain in weight, body length or the calcium and phosphorus content of the

¹ *Milk and Nutrition*. Part I. *The Effect of Commercial Pasteurization on the Nutritive Value of Milk as Determined by Laboratory Experiments*. The National Institute for Research in Dairying (University of Reading) and the Rowett Research Institute, Aberdeen. Pp. 309. London and San Francisco 1937 (2/6d).

carcasses Until the results of the investigations on calves and children are published it would be unwise to draw any general conclusions from the observations just reported It is of considerable interest however, that experiments so carefully carried out on rats have failed to afford any support to the contention that pasteurization destroys the nutritive value of cows' milk for these animals

HUMAN TUBERCULOSIS OF BOVINE ORIGIN

At the October meeting of the Office International d'Hygiène Publique representatives of Great Britain Germany and Holland submitted reports¹ on the incidence of human tuberculosis of bovine origin The report from Germany prepared by Professor L Lange, gives a comprehensive survey of the investigations carried out in countries all over the world, and thus contains much information not accessible easily elsewhere He concludes that there is no form of tuberculosis that may not be caused by the bovine bacillus The figures of incidence in various countries differ so greatly that international averages calculated from them would have only a limited value All that can be said is that three groups of countries can be differentiated (1) those in which the bovine bacillus is relatively insignificant—*e.g.* Japan, India, and perhaps Norway, (2) those in which there is an "average" amount of human tuberculosis due to this bacillus—among them Germany and Switzerland and (3) those in which this incidence is very high—England and Scotland There is little doubt that there is a close connexion between the incidence of the bovine type in human tuberculosis and the amount of tuberculosis in cattle in the same country Nevertheless though feeding is the most important factor it does not, according to Professor Lange explain entirely why there is so much human tuberculosis of bovine origin in England and Scotland while other countries are almost free from it Sir Weldon Dalrymple Champney's report, amplified by a note prepared by the Scottish Board of Health, summarizes the now well known investigations by Stanley Griffith W T Munro, W M Cumming and J W S Blacklock and the administrative measures that have so far been taken to reduce the incidence of disease with the bovine bacillus in man Stress is laid on the 1936 Order in regard to the designations of milk and to the importance of pasteurization In the light of Professor Lange's conclusions it appears, however that if England is not to attain an unenviable position in this connexion more energetic or perhaps different kinds of measures will have to be taken It is helpful to note that country districts show a much higher incidence than towns this is particularly striking in Scotland Finally the Dutch report contains results of the investigation of the sputum of adults in Amsterdam and South Holland and of the gastric contents of children under treatment in sanatoria Work was also carried out to compare the results obtained by different preliminary treatments of the gastric fluid and by culture and inoculation It appears that for the bovine type the best results are obtained

when the gastric contents are treated with soda rather than with acid, and when a Loewenstein medium is used which does not contain glycerol guinea pig inoculation, however is still superior to culture

TREATMENT OF PEPTIC ULCER

Some interesting though hardly encouraging results have been collected recently by Dr Sandweiss¹ in an attempt to compare the relative efficacy of diet injections, and surgery in the treatment of peptic ulcer Among 260 patients treated by alkalis and diet according to the Sippy regime immediate improvement was noted in from 72 to 94 per cent, but relapse occurred within five years in 65 to 85 per cent., and three quarters of even the most favourable cases relapsed within a period of ten years Vaccines emetine distilled water or histidine injections gave almost identical immediate results but a review at the end of one year showed that the proportion of relapses was higher than in patients treated by diet and alkalis Rest in bed with alkalis and dietetic therapy gave better five year results than injection treatment gave at the end of one year Surgical intervention in a small series of cases was even less successful Only three patients out of twenty-five operated on for peptic ulcer have remained free from symptoms the results of a total of seventy operations showed that three patients had died (8.8 per cent.) and that over 90 per cent had relapses Taking all methods of treatment together, only five patients out of 155 have remained symptom free for from five and a half to seven years after the first and only attack of symptoms due to peptic ulcer Dr Sandweiss has been unable to corroborate the experimental work of Weiss and Aron which seemed to show that injections of histidine protected dogs from peptic ulcer following the Mann-Williamson operation Twelve dogs were subjected to this operation in which the duodenum is diverted into the terminal ileum and the stomach is anastomosed with the jejunum Six have died five of them with ulcer and the remaining six show clinical signs of ulcer in spite of injections twice daily of 1 ccm of histidine beginning the day before, or within three days of the operation Any benefit that histidine confers is therefore, Dr Sandweiss thinks not a specific one but is largely due to the psychological effect of a new method and practically the same effects follow injections of distilled water Parenteral therapy in any form he regards as of value only as an additional measure, and one which should be used only in those patients not responding to diet and alkalis and then in association with but not in place of a correct diet Such reports as these serve further to confirm the need for caution in assessing immediate results in the treatment of peptic ulcer the importance of continuous attention even in symptom free periods, and the necessity of avoiding premature conclusions as to the value of any remedial measure for a condition in which remissions and relapses are common An ordered diet it is obvious must form the basis of treating peptic ulcer

ROYAL SOCIETY CONVERSAZIONE

The conversazione of the Royal Society at Burlington House on May 4 brought forward the usual assembly of scientific exhibits, with a few historical ones which were of special interest. Among these were the royal charters of the society with the charter-book containing the signatures of the founder patrons, and Fellows from 1662 to the present day. There were also shown original manuscripts and manuscript letters of early Fellows including Boyle, Hooke, Leeuwenhoek, Leibnitz, Malpighi and Newton. Another exhibit consisted of diplomas and other original documents of William Hyde Wollaston, a recent gift to the society from the Wollaston family. Wollaston was a physician of some fame in the provinces and London but, being beaten in competition for a post at St. George's Hospital, became a truant from medicine and devoted himself to some fruitful research in chemistry and optics. One other link with past times was an unrecorded water-colour portrait of John Dalton, this was shown under the zoogroscope, a contemporary optical instrument used for domestic entertainment in the eighteenth century. From these excursions into the science of other days the visitor was sharply recalled by other exhibits to the marvels of present invention. A number of exhibits related to investigations on plants, especially on virus infections. Imperial Chemical Industries has been experimenting on plant hormones. Substances have been isolated from plants and shown to possess growth promoting properties and some of the striking effects of heteroauxin as one of the substances is called on plant tissues were demonstrated. In another field there were cameras for television, microscopes for ultra-violet light and an instrument for the photographic recording of transient phenomena such as lightning surges with which records could be obtained of phenomena lasting only one or two millionths of a second. Professor H. Woollard exhibited x-ray films illustrating the lymphatics of the human body after injection with thorotrast and barium. The films showed the longitudinal pattern of the vessels in the extremities and the circular arrangement around the trunk, how the lymphatics above converged on the axilla and those below on the groin. It was also shown how thorotrast injected into the living body has been used for the investigation of lymphatic oedema and obstruction, the lymphatic flow in skin transplantation and tube pedicle grafting. In cancer research the injection of the lymphatics shows that normal lymphatic vessels traverse the cancer mass, that many lymphatics about the cancer remain patent and contain no cancer cells, and that normal lymphatic vessels pass from the cancer to lymph glands which have been found to contain cancer cells. Some of this work with thorotrast is described in the recent annual report of the British Empire Cancer Campaign. Another demonstration was of a subjective phenomenon by Dr. W. D. Wright. Two patches of light were matched by viewing one in the right eye and the other in the left. The right eye was then light adapted and the two patches again compared to determine the loss of sensitivity produced by the light adaptation. A further series of matches could then be made to

record the course of the recovery of the presumably photochemical reaction in the retina. This instrument has been used to measure the adaptation functions of normal eyes and it is hoped to extend the measurements to test the effect of various pathological conditions on the adaptation process. An unusually large number of exhibits of biological and zoological interest were on view among these two may be mentioned one illustrating the ornateness of Nature and the other her occasional fretfulness. The first was the tails of birds of paradise bringing out their variations and the second was an extraordinary collection of spiny mammals—echidnas of the Australian region and the more familiar hedgehogs and porcupines. Both were from the Natural History Museum. During the evening a short lecture was given by Professor Andrade on events and personalities in the history of the Royal Society and the vicissitudes of its Fellowship in days gone by.

THE CAMPAIGN AGAINST JUVENILE RHEUMATISM

In a recent communication to the Permanent Committee of the Office International d'Hygiène Publique¹ Professor D. Danielopolu with two colleagues provides an interesting survey of the problem of rheumatism and rheumatic heart disease. In any organized campaign against this affliction Danielopolu lays stress upon preventive measures although unfortunately the climate cannot be changed for all potentially rheumatic children, it is important that long periods of convalescence under optimum climatic conditions should be available for those who have had an attack. Improvement of housing conditions is also urged as important. Danielopolu summing up the evidence on the question of removing the tonsils is in favour of leaving them alone and of dealing with tonsillar sepsis by local measures. The authors consider that treatment with salicylates begun early and in big enough doses constitutes an important measure in preventing heart disease. Once the heart is affected the campaign must be organized along these lines. It is important to look for cardiac lesions among children with few or no symptoms in order that the routine of their lives may be adjusted before harm is done. Advice may also be given as regards marriage, pregnancy, surgical operations and other possible situations which the patient with rheumatic heart disease may encounter. Financial aid to cardiac patients and to their families is also mentioned and the authors outline a system of co-operation between the various bodies concerned in the treatment of rheumatism such as hospitals, clinics, convalescent homes and public institutions.

We regret to announce the deaths of two distinguished representatives of medicine in the Services. Major-General John Edge, late R.A.M.C., at the age of 69, and Major-General Sir Patrick H. H. M.S. (ret.) at the age of 77.

ENDOCRINES IN THEORY AND PRACTICE

This article is one of a series on Endocrinology contributed by invitation

HYPERPARATHYROIDISM

BY

DONALD HUNTER, M.D., F.R.C.P.

Until twelve years ago we had no proof of the relationship between parathyroid activity and the metabolism of phosphorus and calcium. The discovery of the parathyroid hormone led at once to studies of its effects in normal individuals. When injections of an active parathyroid extract are given over a long period of time they cause a decrease in the plasma phosphorus, an increase in the serum calcium, and at the same time a mobilization of calcium salts from the skeleton, which are then passed in the urine. This knowledge has led to the discovery of cases of a bone disease associated with hyperfunction of a parathyroid tumour—the generalized osteitis fibrosa of von Recklinghausen.

In 1891, in a Festschrift in honour of Virchow's seventy first birthday, von Recklinghausen gave the first accurate account of the bone disease which now goes by his name. Although his contribution is involved and he described more than one bone disease, there can be no doubt that his Cases 5 and 7 constitute the discovery of generalized osteitis fibrosa. Thirteen years later Askanazy reported a case associated with a parathyroid tumour but no special significance seems to have been attached to the association, despite the fact that Erdheim had already noted enlargement of the parathyroid glands in osteomalacia and had suggested that they were functionally related to calcification. When opinion differed on whether the increase in parathyroid secretion was primary or secondary to the bone disease, Erdheim himself defended the view that the skeletal change was primary and that the parathyroids enlarged merely to meet the greater demand for calcium. Acting on this assumption, Mandl in 1925 transplanted four parathyroid bodies into the abdominal wall of a man with generalized osteitis fibrosa. No improvement followed, however, and he accordingly explored the neck where he found a parathyroid tumour measuring 2.5 by 1.5 by 1.2 cm. This was removed, and the subsequent disappearance of pain in the bones, the reduction of excretion of calcium in the urine, and the general improvement in the patient's health constituted the first clinical evidence that in this disease the parathyroid lesion is primary and the skeletal changes secondary. By this time it was well established that the parathyroid glands are specifically concerned in regulating the metabolism of calcium.

The isolation of an active parathyroid extract which raises the calcium of blood and urine and the recognition that injection of this extract causes loss of calcium from the bones were the next important steps in deciding that in generalized osteitis fibrosa the high calcium content of the serum, the increased calcium excretion in the urine, and the diminished density of x-ray shadows of the bones, point with certainty to a parathyroid lesion.

Morbid Anatomy

Hyperparathyroidism leads to changes which are generalized throughout the skeleton: the bones are soft and cut with a knife like rotten wood. Both cortex and spongiosa are too thin and are largely replaced by tough, grey, fibrous tissue. Multiple grey, spongy osseous swellings

occur, and sometimes expand the cortex. Firm, round, red tumours and single or multilocular cysts may be present. The great resorption of bone may lead to deformity in any part of the skeleton, and also to spontaneous fractures. Histologically the main changes are lacunar resorption, apposition, fibrosis of marrow, and the formation of osteoclastomata (giant celled tumours) and cysts. Lacunar resorption is the predominant change. There is a general osteoporosis which varies in degree in different cases. Apposition, however, does not cease, and where present it is usually abnormally active.

The condition found in the parathyroid glands may be a hyperfunctioning adenoma of a single gland or rarely of part of two glands. The greatest diameter of such tumours may be from 0.7 cm to 7.5 cm. In some cases there is a generalized hyperplasia of all the parathyroid glands, and it is possible that this is a result of an increased secretion of the parathyrotropic hormone of the pituitary gland. Bilateral renal calculi, composed principally of calcium phosphate, are commonly present. In advanced cases areas of metastatic calcification have been found in the lungs, stomach, kidneys, and myocardium.

It is possible by injecting parathyroid extract into puppies in increasing amounts over a long period to produce hyperparathyroidism experimentally. Such injections lead to progressive resorption of bone, fibrous replacement of the marrow, and to the production of other features characteristic of osteitis fibrosa. Prolonged overdosage may give rise to metastatic calcification in the tissues.

Clinical Features

Besides pain and tenderness of the bones, and even spontaneous fractures, hyperparathyroidism gives rise to symptoms and signs outside the skeleton. These include hypotonia and muscular weakness, anorexia, sometimes with nausea vomiting, and abdominal cramps, polydipsia and polyuria, renal calculi sometimes with colic and haematuria, and wasting in advanced cases. There is no one symptom which is diagnostic. Because of the insidious onset and the extremely varied symptomatology the disease is often not suspected. Anorexia, nausea, vomiting, lassitude and hypotonia may all arise early and are sometimes presenting symptoms. Polyuria and polydipsia are the rule and may be so marked as to suggest diabetes insipidus. Increased frequency of micturition during the night may be a distressing feature, and occasionally there is enuresis. The large quantity of water necessary for the increased excretion of calcium salts is of course responsible for this group of symptoms.

Hyperparathyroidism is a progressive disease, and if untreated it is usually fatal. It is more than twice as common in women as in men and it occurs at all ages, but most commonly in middle life. The youngest case known is in a boy of 10 and the oldest in a woman of 69. It is possible to describe several different types of hyperparathyroidism for the clinical features vary according to whether the skeletal, renal, or gastrointestinal symptoms predominate.

CLASSICAL TYPE WITH FIBROCYSTIC SKELETON

In this type the skeletal symptoms and signs predominate. They consist of pain, bone deformities, generalized decalcification and sometimes fractures. Though this type may begin with weakness, thirst, and polyuria most

DOUGLAS S. STEVENSON AND FERGUS L. HENDERSON OSTEOCHONDRITIS DISSECANS



FIG. 1.—Right elbow joint
August, 1935



FIG. 2.—Right elbow joint
November 1935



FIG. 3.—Right elbow joint
April, 1936



FIG. 4.—Left elbow joint
August, 1935



FIG. 5.—Left elbow joint extended
April, 1936



FIG. 6.—Left elbow joint flexed
April, 1936



FIG. 7.—Areas of decalcification in both ischii April, 1936

ALBERT SHARMAN AND H. L. SHEEHAN ENDOMETRIAL BIOPSY

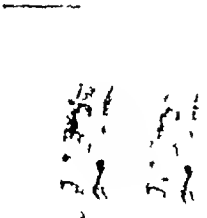


FIG. 4.—4x, with typical
11 day section. Five-thirds
actual size.

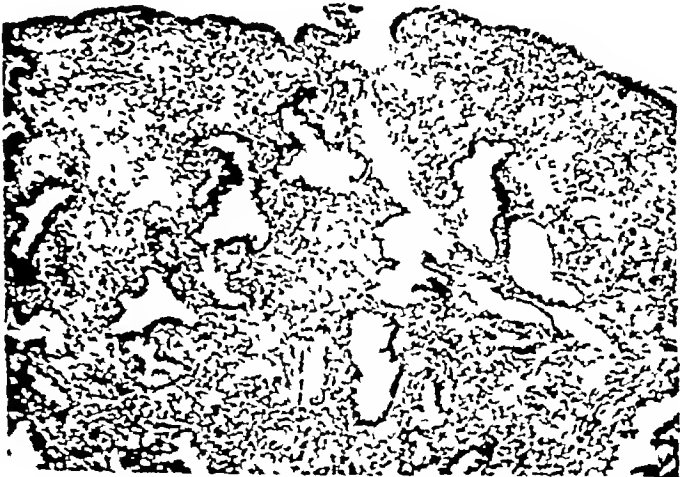


FIG. 5.—Histological appearance of fibrous material. Case of metrorrhagia (x40)

J T INGRAM AND MICHAEL C OLDFIELD HEREDITARY SEBACEOUS CYSTS



FIG 1.—Case I Dorothy T Showing multiple sebaceous cysts on face, those on the forehead being almost hidden by the fringe



FIG 2.—Case I. Legs showing multiple cysts and scars on the right shin, marking the site of previously "inflamed cysts."



FIG 3.—Case I Left forearm, showing multiple cysts



FIG 4.—Case III. George T., showing multiple cysts on the face and scalp.



FIG 5.—Case III. Showing cysts on the forehead and face



FIG 6.—Case III. Showing multiple sebaceous cysts on both legs

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 8 1937

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SPECIAL NOTICE TO MEMBERS

Every Member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he or she belongs

MINISTRY OF HEALTH REPORT ON MATERNAL MORTALITY ADDENDUM TO ANNUAL REPORT OF COUNCIL

The Ministry of Health's report, issued as a White Paper, of a special investigation carried out by certain members of the medical staff of the Ministry into maternal mortality in selected areas in England and of a similar investigation throughout the whole of Wales by medical officers of the Welsh Board of Health is summarized in the *Journal* at page 972 and a leading article appears on page 977.

The recommendations are given below, the most important of which are those designed to improve the standard of obstetrics.

(1) The establishment under the direction of the medical officer of health of an adequate service of obstetric consultants.

(a) to assist medical practitioners who undertake domiciliary midwifery in cases of doubt or difficulty in the antenatal period at the time of confinement and during the puerperium.

(b) to conduct consultative ante-natal and post-natal clinics to which patients may be referred by general practitioners or from the routine ante-natal and post-natal clinics.

(c) to exercise clinical supervision over the in-patient treatment of the maternity patients for whom the local authority assumes responsibility.

(d) to supervise the treatment of patients suffering from puerperal sepsis.

(e) to be responsible for the emergency domiciliary service for cases of grave obstetric abnormality in which removal to hospital is contraindicated (for example certain cases of shock, ectopic or haemorrhage).

(f) to assist the medical officer of health in the confidential investigation of the circumstances associated with each maternal death occurring in the area.

(2) The local sanitary authorities in consultation with the local medical profession should in future be empowered to take steps to ensure that the best local obstetric services are available in all cases in which midwives are required under the rules of the Central Midwives Board to call in a doctor.

(3) For a limited time, a fund should be provided which members of the staff of maternity hospitals will be available to the domiciliary treatment of patients

patients whose condition is too grave to justify their removal to hospital.

(4) Properly constructed adequately equipped and suitably staffed maternity accommodation (including a sufficient number of beds allocated to and reserved for ante-natal patients) should be provided to meet the needs of every area. Wherever practicable the accommodation should be provided in association with general hospitals.

(5) Arrangements should be made for

(a) adequate domiciliary visiting by health visitors of expectant mothers with a view to encouraging them to engage an attendant for the confinement and place themselves under ante-natal supervision at an early stage of pregnancy.

(b) the provision of ante-natal clinics in every district in which the number of expectant mothers justifies it. In sparsely populated areas other arrangements should be made for efficient medical domiciliary ante-natal supervision and

(c) the establishment of consultative ante-natal clinics to serve every area.

(6) Satisfactory arrangements for the accommodation and treatment of patients suffering from puerperal sepsis and from abortion are essential.

(7) The development of post-natal services including the establishment of clinics and arrangements for in-patient treatment is a matter of urgent necessity.

(8) The education of the woman herself and of the general public should constantly be borne in mind by all concerned with maternal welfare as the whole-hearted co-operation of mothers is essential to the success of any measure designed to reduce maternal mortality.

(9) A service of home help should wherever practicable be provided.

(10) Adequate records should be kept in connexion with every branch of a maternity service. Free interchange of such records between all professionally concerned is essential in order to secure continuity of supervision and treatment.

(11) Arrangements should be made in every district to ensure that no expectant or nursing mother requiring extra nourishment on health grounds fails to receive it for a short period as may be necessary.

MEMORANDUM BY THE B.M.A. COUNCIL

The following is a memorandum by the Council of the British Medical Association.

1. The Council is entirely in sympathy with any efforts which can be made towards a reduction of maternal mortality. It realizes that important objectives in a

number of individual cases is an important element in the situation and wishes to contribute to the utmost of its power to the elimination of this and of other factors. In this spirit it makes the following observations and suggestions.

2 The Council of the Association is disappointed to find that in so far as the investigation was directed to the relevant conditions prevailing in some areas with a persistently high maternal mortality rate as compared with those in other areas, it appears to have achieved no definite results. It is not reported that the standard of midwifery practice is lower in the black areas than in the control areas. Moreover, such recommendations as are made appear to be intended for general, not merely for local application. The ground of the inquiry being thus shifted the conditions disclosed by the report and the recommendations made must be considered in the closest relation to the conclusions and recommendations of the recent Departmental Committee concerned with a similar but more general inquiry. The Departmental Committee was composed of obstetricians, medical officers of health, general practitioners, experts in medical research and medical officers of the Ministry of Health. It sat for four years and conducted a most thorough investigation into the circumstances surrounding 5,804 deaths.

3 One of the most important passages in the Final Report of the Departmental Committee reads as follows:

We have found that the causes of death in these cases are of varied nature—clinical and social administrative and economic—and are closely related to each other. Thus clinical errors are contributed to by economic conditions and administrative measures are rendered nugatory by reason of ingrained social customs. A complete knowledge of all the circumstances in any case of maternal death is therefore necessary before apportioning blame to any individual or institution. We are convinced however that the primary essential for the reduction of a high maternal mortality is sound midwifery before, during and after childbirth.

With the views expressed in this paragraph we agree. That there are important factors other than clinical should never be forgotten and it is evident that the remedy is by no means simple.

4 The Departmental Committee put forward a number of recommendations both clinical and administrative in character. Their advice on clinical matters is finding its expression in medical practice while of the recommendations of an administrative character some have found adoption and others have been completely or almost completely disregarded, especially that concerned with the discontinuity of responsibility and attention, which is probably the greatest weakness in existing organization. Until this defect is removed it is unlikely that any permanent solution of the problem will be attained.

5, The Departmental Committee made certain recommendations for improvement in the teaching of obstetrics to medical students. These recommendations with one exception were immediately accepted by the General Medical Council and within the last six months students who have enjoyed this amplified education have begun to enter the ranks of the medical profession. The General Medical Council was unable to implement the suggestion that students should be required personally to conduct as many as thirty confinements (it prescribed twenty) owing to the insufficiency of cases available for medical education. This scarcity was the result of a wasteful distribution of midwifery material a state of affairs which has improved somewhat in the last few years and which may be further improved with the help of the Ministry by re-allocation of the available midwifery material.

6 Any adequate co-ordination of the work of general practitioners and of the other members of the obstetric team so strongly urged by the Departmental Committee is still absent in all but a few areas. An instructive

example of what can be achieved by willing and intelligent co-operation is found in the experience of Rochdale an account of which was published in the *British Medical Journal* of February 16, 1935 (p. 304). Here as a result of the organization of the different units into a team *without change of personnel* by co-operation and consultation, the maternal mortality rate, which was one of the highest in the country, has become one of the lowest. Certain well-known and often fatal errors of judgement, formerly frequent in the town, almost disappeared. The general practitioners of the town are now encouraged to send difficult cases to hospital, and are given permission to continue to treat them. Over thirty avail themselves of the opportunity, and the system involves no difficulty in administration.

7 The Departmental Committee found errors of judgement on the part of general practitioners to be a primary avoidable factor in 11 per cent of the deaths they investigated—that is less than one death in every 2,000 cases attended. The Committee stressed the fact that these errors were largely contributed to by the extremely difficult conditions under which the practitioners have to carry on this branch of their professional work. These difficulties can be greatly ameliorated by administrative and legislative action.

8 Such evidence as we have access to in cases regarded as examples of inexpert midwifery on the part of general medical practitioners appears insufficient to support all the conclusions arrived at in the section of the report dealing with this matter either by reason of its *ex parte* character or incompleteness, or because of the possibility of a permissible alternative judgement as to the propriety of the measures actually adopted in the circumstances of particular cases.

9 To those recommendations of the present report which are designed to improve the standard of obstetrics the Council raises no objection as worded. It seems evident to the Council, however, that it would be preferable that they should be implemented by a national maternity service which embodied and enforced them rather than by urging them piecemeal, or even in their entirety, upon local councils which may or may not adopt them according to different methods and with or without modification. The Council is strongly of opinion that arrangements should be made in all areas, and not only in sparsely populated areas, for efficient medical domiciliary ante-natal supervision.

10 The method of carrying out the following recommendation is of special importance:

'The local supervising authority, in consultation with the local medical profession, should in future be empowered to take steps to ensure that the best local obstetrical skill is made available in all cases in which midwives are required under the Rules of the Central Midwives Board to call in a doctor.'

Under certain conditions the Council is prepared to consider the establishment in areas of lists of practitioners who will be available for midwives emergencies and desires to ensure so far as possible that those practitioners whose names are on such lists shall make the best local skill available for the service.

11 A proposal—by itself—that there should be an amendment of one of the rules of the Central Midwives Board whereby midwives would in case of "emergency" be able to call for the services of certain selected practitioners only and that local authorities should be advised and encouraged to make such selective lists, is not one which can be approved or supported by the British Medical Association. This suggestion is an example of a policy against which the Association has protested from time to time. Suggestions to remedy the imperfections in the conduct of maternity have been adopted piecemeal by legislative or administrative action. They have not all had the effect that they were expected to produce. They

have not been brought into proper relationship with each other they have been variously brought into operation in different local government areas and in some of these areas they have been almost ignored or of little practical use. For a considerable period now the Association has urged the establishment by legislation of a national maternity service which would at the same time make available for every mother all those services which are necessary for safe maternity, and avoid local variations in essential requirements from whatever cause arising. The Association is strongly of opinion that legislation on these lines is urgently necessary, and the recent introduction into Parliament of the Maternity Services (Scotland) Bill seems to indicate that this is accepted.

12 As the Association has previously pointed out this conclusion has been arrived at not merely by reason of the relative failure of the past policy of piecemeal and essentially unco-ordinated action but by consideration of the results of domiciliary midwifery in working-class and populous areas where more careful and co-operative methods have obtained and by the proved need for establishing the principle of continuity in the responsibility for maternity, which the Association believes to be fundamental. The Association has unambiguously stated the twofold sense in which continuity is required. The period of maternity from beginning to end cannot properly or advantageously be segregated from the whole health history of the mother. It has intimate relationships with illnesses previously suffered with other morbid conditions appearing during its course and with disorders thereafter arising. Further the three periods of maternity itself—pre-natal, natal and post-natal—can best be supervised under the responsibility of one practitioner whatever expert or specialist assistance he may require in certain contingencies.

13 The proposal mentioned in paragraph 11 is not only inconsistent with these principles and considerations but would necessarily in many cases directly aggravate the disadvantages of the existing state of things. To state only three inconsistencies which might immediately arise

(i) Many insurance practitioners would be by statute charged with the duty of attending or accepting responsibility for insured women from the time conception took place up to the moment that labour pains began and again from ten or fourteen days after delivery while they would be prohibited if the mother wished to take advantage of State provision from having anything to do with her in the intervening period.

(ii) There would be practitioners in some areas freely available for attendance in the case of midwife emergencies while in a neighbouring area they might be debarred from any such attendance owing to alleged incompetence or inexperience.

(iii) In one area in 3 per cent of all confinements the emergency was such as to require the immediate attendance of a practitioner in order to save the life of mother or child so that in many rural areas the midwife might by rule be prohibited from calling in the most easily available practitioner.

The Association regards these inconsistencies as seriously undermining any such proposal with the result that it is unlikely to be tolerated either by the profession or by the public.

14 There are other objections to the proposal of a different but equally serious character. The rights of registered medical practitioners are governed by the Medical Acts. The conditions of medical education and registration are prescribed by the General Medical Council in the interest of the public. It is of course never claimed that a practitioner immediately upon qualification is fully competent to deal himself with any and every condition that may confront him in every branch of practice. He should however be competent to deal with many things at once and do so safely and be able to profit therefrom by daily accumulating experience. There are

many minor abnormalities of obstetrics included in the "emergencies" of a midwife with which every newly qualified or young practitioner is able to deal safely and successfully. He should not be prohibited from dealing with them if a patient desired that he should do so nor is it just nor in the public interest that from the beginning he should be debarred from at least 60 per cent of the field of midwifery experience open to him.

15 It is not denied that there are in the aggregate a considerable number of practitioners who voluntarily refuse to undertake obstetric practice, or whose practice in this branch of medicine is very limited in extent (though this as in other medical conditions does not mean that they are incompetent to deal with such cases). There are undoubtedly a number of others (even some who have had fairly extensive experience or have taken post-graduate courses) who do not always conduct maternity cases with perfect wisdom, or who fail to avail themselves of specialist or institutional help in such cases as need it as promptly as they should. These things cannot be completely eliminated even with selected lists. It is agreed that they ought to be minimized as far as possible. The Association holds that this can best be brought about in the general interest by encouraging the undertaking of obstetric work by general practitioners, not by their disassociation from such work and that this can be helped

(a) by increasing the interest of this work by bringing the practitioner into early contact with the prospective mother during the ante-natal period and investing him with a definite responsibility throughout and (b) by removing as far as may be some of the disadvantageous and uncomfortable conditions under which this work is often done at present as by the provision of adequate nursing of a second practitioner for administering an anaesthetic of a home help in suitable cases of an accessible and easily available consultant service and of the means of removal to hospital where necessary.

The Association's view is that there should be a national maternity service established on these lines rather than varying and variable local arrangements built up more or less haphazardly at the option of local authorities.

16 The Association willingly offers any and every help that it can give to the Government in the immediate future towards the consideration, discussion, and formulation of legislation for this purpose in general accordance with the proposals of the Association set out in its publications on this matter and broadly with the Maternity Services (Scotland) Bill now before Parliament.

17 With regard to early action the plan which the Council of the Association greatly prefers and would urge upon the Minister is that each local authority should prepare a list of local medical practitioners who are willing to make themselves available to be called in by midwives that such practitioners collectively should at once be brought into close touch with the consultant obstetricians recognized for the service in the area and should be kept in frequent association with those consultants with a view to the appreciation of their several spheres of action to instruction as to the proper course of action and the means of securing appropriate help in cases of difficulty and to the mutual and confidential investigations as to the causes of difficulty or of death. If thought necessary it might be arranged that if a practitioner's name was to continue on the list beyond a certain period of years he should have to undertake a more formal post-graduate course in obstetrics and it might be possible to establish some machinery by which the name of a practitioner whose work proved unsatisfactory might be removed from the list. In some such way as this the Council believes that local lists would be established in a less objectionable and less difficult way than in any other and that the lists so established under these conditions would prove to be more satisfactory and successful in maintaining an adequate service. The Council suggests that such lists should be established at the time or shortly after the time at which the Midwives Act comes into operation.

INSURANCE CAPITATION FEE—COURT OF INQUIRY

After consultation with the British Medical Association the Minister of Health and the Secretary of State for Scotland have appointed the following to be a Court of Inquiry into the amount of the capitation fee to be paid to insurance practitioners: Lord Amulree (Chairman), Mr Thomas Howorth, and Mr D H Robertson.

The agreed terms of reference to the Court of Inquiry are to inquire and report to His Majesty's Government whether any and if so what alteration ought to be made as from January 1 1938, in the amount of the capitation fee (per insured person per annum) on the basis of which the Central Practitioners Fund under Article 19 of the National Health Insurance (Medical Benefit) Regulations, 1936 and the corresponding Scottish Fund under Article 19 of the National Health Insurance (Medical Benefit) Consolidated Regulations (Scotland) 1929 is calculated, having regard to any changes which may have taken place since 1924 in the cost of living, the working expenses of practice, the number and nature of the services rendered by insurance practitioners to their insured patients, and other relevant factors. The inquiry is to proceed on the assumption that as from January 1 1938, employed persons under the age of 16 will have become entitled to medical benefit by virtue of amending legislation, but that the conditions would not impose any obligation upon the practitioner to issue medical certificates to these persons. This capitation fee is not to include any payment in respect of the supply of drugs and appliances or any payment to meet the special conditions of practice in rural and semi-rural areas. Payments to insurance practitioners in respect of these matters are the subject of separate arrangements and are outside the scope of the inquiry.

Mr E H Phillips, Ministry of Health, Whitehall, S W 1, has been appointed Secretary of the Court.

NOTES OF THE WEEK

L.C.C. Fracture Clinic

The report on the hospital services of the London County Council includes an account of the work of the fracture clinic established by the Council at the Fulham Hospital in June, 1935. It has been found that the use of modern ambulatory methods has resulted in a considerable saving in the number of beds previously occupied by fracture cases, and the continuous supervision which can be exercised by the staff of the clinic during the later stages of treatment has proved beneficial in the production of good functional results. The clinic is held in an annexe of the massage department, and the senior personnel of this department are always present in order to ensure close co-operation. An interesting scheme for following up fracture cases has been arranged. Each patient who has attended the clinic will be asked to return for observation purposes twice a year for five years after his discharge, and it is hoped that the staff of the clinic will thus be able to collect much useful and interesting data on the final functional results of fractures treated by different methods.

Free Choice in Gosforth

Subject to the approval of the Ministry of Health the free choice method of providing domiciliary medical service for public assistance patients is to be introduced in Gosforth for an experimental period of one year.

Report on Alcohol and Road Accidents

When Mr Isaac Foot was addressing the British Women's Total Abstinence Union on the dangers of alcohol to motorists he deplored the Government's delay in taking action on the British Medical Association's report on the

relation of alcohol to road accidents. It will be remembered that the committee which considered this question was appointed on the invitation of the Minister of Transport.

State Medical Service in Tasmania

The Premier of Tasmania has outlined a plan for a State medical service, the first appointments under which are to be made next year. Ten practitioners will then be appointed as State doctors for prescribed areas, and State clinics will also be established. It is said that at present private doctors cannot afford to travel twenty or thirty miles to see a patient unless they are assured of payment. The State doctors will not be subject to such economic conditions and patients will not be deprived of treatment owing to their incapacity to pay a private doctor's fee. The State doctors appointed to country districts will be enabled to attend refresher courses periodically in the towns.

OPEN CHOICE SCHEME IN WILTSHIRE

The open choice scheme in Wiltshire, which was introduced in July, 1933, owes its origin to a conversation between Dr G Laurence, now chairman of the Medical Advisory Committee of the Wiltshire Branch of the British Medical Association, and the county medical officer, Dr C E Tangye. Dr Laurence was impressed with the inequalities and absurdities of the old salaried arrangements, and suggested the desirability of working out some such arrangements as have since been provided. To the close co-operation between Dr Laurence and Dr Tangye is largely due the initiation and subsequent successful working of this scheme. The following account of the scheme in operation has been received from the county public health department.

At the time the open choice scheme was started in Wiltshire there was practically no experience in any other area upon which to rely in preparing the arrangements and the records available of work performed in the county by salaried officers were unreliable.

Under the boards of guardians the seventy-three medical relief districts of the county were served by sixty salaried officers in forty-seven districts, the rest of the county being served under the open choice scheme by forty-four doctors in twenty-six districts including Swindon. As salaried posts terminate owing to superannuation or otherwise, the scheme is extended to the districts concerned, and in this way, if continued, the scheme will eventually operate throughout the county. In the remoter areas where there is only one available doctor in practice there can be no choice, but the principle of the scheme is to provide a choice where it is possible.

Finance

For the first six months the scheme was based upon payment for individual items of service rendered but it was found that even on a very low rate of payment the expenditure became so large as compared with the previous total of salaries that a capitation fee was introduced as from January 1 1934. The total population eligible for relief is constantly varying, and it is impossible to arrange a capitation basis otherwise than in respect of persons actually treated. It has been estimated that under the national health insurance scheme the cost per person treated including drugs is 18s. 9d. and it was thought fair that the capitation fee under this open choice scheme should be 25s., mainly because it was anticipated that the patients concerned would be of the chronic type requiring more frequent visits than the ordinary insured person. Consequently the figure of 25s. was fixed as a not unreasonable payment, particularly in country districts where the doctor must spend a certain amount of time in getting to the patient. This fee was, however, fixed at £1 in the Swindon area where a lesser payment was warranted in view of the comparatively close aggregation of patients. There has since been no

variation in the rate of remuneration. The capitation fee naturally represents very small remuneration where the patient receives medical attention throughout the whole of the year—as frequently happens with old or chronic cases—and for a case seen only a few times or where there are several patients in one family the remuneration may appear excessive, but the average is considered fair.

During the year 1936 1,724 patients were treated under the open choice scheme, 922 in the country area and 802 in the Swindon area. The total cost was £2,261 15s 3d., or £470 17s 2d more than the sum previously paid in salaries in the area covered by the scheme. In the area apart from Swindon the actual cost was £102 13s 1d less than under the old salaried appointments, but in the Swindon area it was more by £573 10s 3d. It is obvious that the salary of £250 per annum previously paid to the one medical officer by the Swindon Board of Guardians could not under any arrangement have provided adequate medical attention for an average of 915 sick persons.

Visits, Incidental Expenses, etc.

The average number of visits or consultations per patient during 1936 was 7.8 in the Swindon area and 10.7 in the country districts or 9.3 in the whole area covered by the scheme. The average cost per item of service—that is, consultation whether by visiting or at the surgery—was 2s. 9d.

Provision is made for payment of incidental expenses (special medicines special fees—for example in respect of fractures etc.) but in practice these expenses have been quite inconsiderable mainly owing to the fact that special treatment of such varied kinds is available under other branches of the county health service. Medical extras in the technical sense of the term—for example milk cod liver oil eggs butter etc.—have not been increased as was at one time anticipated as a result of the work being carried on by doctors previously unassociated with Poor Law.

Travelling is remunerated on the basis of 6d per mile each way over two miles from the doctor's surgery to the patient's home. This represents rather better travelling allowance than that provided under the national health insurance scheme.

Clerical Work

The scheme naturally involves a considerable amount of clerical and statistical work at the end of each quarter when the cards come in and are used as the basis of the doctors' payments. In practice this has involved at quarterly intervals some four or five days' work by a senior clerk or with the statistical matter at the end of the year, some three or four weeks' work annually. Clerical work is not necessary to any serious extent during the quarter. It is fortunate that the clerical work has been from the beginning in the hands of one senior clerk, who has been specially interested in the scheme to the extent of doing a great deal as overtime, but even in other circumstances the system adopted in Wiltshire should not involve an undue amount of clerical labour though the work is naturally of a responsible nature which cannot be entrusted to a junior clerk.

Pensionable Medical Officers

The effect of the Local Government and Other Officers Superannuation Act 1922, is to lay a much heavier pensions burden upon the authority in respect of salaried district medical officers, who now draw their pensions at 65 instead of at the variable ages associated with older Acts. Under the Wiltshire open choice scheme pensionable officers are no longer appointed and difficulties and expenditure in connexion with pensions are thus avoided medical officers continuing to serve as long as they are in practice. Where only one doctor is available a most awkward situation would arise under the old scheme of salaried posts should he claim his pension at 65.

General

The scheme is now fairly stabilized and the three years' experience has brought out interesting features. The system of record keeping, though perhaps requiring more attention

from doctors than the old returns furnishes the health department with complete records which are of the greatest value in bringing this work into co-ordination with all the other services. These records are necessarily regularly forthcoming as they form the basis of payment to the doctor and in this respect they contrast favourably with the returns under the old salaried service which were confessedly very incomplete and often wanting altogether. This system has also the great advantage of bringing the practitioner's district work into close touch with the county health department.

From the patient's point of view it has proved a great benefit to be able to choose a doctor and particularly to be able to continue under the care of the same doctor after retiring from work and being no longer under national health insurance. It was originally anticipated that difficulties might arise from the wish of the patient to change his doctor or the wish of the doctor to hand over unwelcome patients to another practitioner and these eventualities are provided for in the scheme. In practice however, a change is of rare occurrence and the actual procedure causes no difficulty.

From the doctor's point of view this scheme secures uniform payment on a basis approved by the British Medical Association. The Medical Advisory Committee representing the medical profession of the county has given every possible help in the development of the scheme since its inception in 1933 and through that committee the good will of the profession has been obtained. The British Medical Association has helped by advice in details and particularly by its approval and support of the terms of remuneration.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

Excessive Prescribing

The number of cases in which disciplinary action has been taken by reason of excessive prescribing, as already noted in this column, has dwindled almost to zero in recent years. A case which has been under consideration by the London Panel Committee has, therefore, unusual interest. The facts forming the basis of the investigation are substantially as follows. During the fourth quarter of 1935 the practitioner issued 5,037 prescriptions at a total cost of £164. The mean number of insured persons on the practitioner's list for the quarter was 2,130. The average cost per person of the prescriptions issued was 18.48 pence, whereas the corresponding average for the whole area for the same period was 10.03 pence. If the practitioner's average cost per person had been the same as that for the area, his prescriptions would have cost only £89. The excess cost on that basis was therefore £75.

The case has been the subject of an appeal, and a lengthy report appears in the minutes of the Insurance Committee. In the course of a letter to the Ministry of Health the practitioner makes a series of statements in support of his appeal, from which the following are extracts.

"Very often a long prescription is due to the fact that when a patient is given a mixture he states that it did him no good, and an additional ingredient is added and so on until he is satisfied that he has the most beneficial mixture. Then one day he comes and states that he has a cold in addition to his bronchitis, and of course the necessary ingredients are embodied in the prescription. Also it is necessary to put in ingredients which counteract the possible harmful effects of other ingredients.

"Usually I give only one mixture for a cold to a person who has not reported sick previously but in the case of the person who has attended for previous colds I am sometimes told when I refuse them for something for the night cough for instance, that they are paying for it and then there is the patient who states he is suffering from some complaint other than the one he has just told one all about he would like something for that also but he says he knows you are not allowed to give too much."

This appears judging from the report of the persons appointed to hear the appeal, as rather unconvincing by way of explanation of an 85 per cent excess in the case of this practitioner over the average of his brother practitioners. They state

The members of the tribunal find themselves in some difficulty about this case. They do not wish to limit in any way the right of a practitioner to give any treatment *he thinks* necessary and proper in any case and the patient has every right to such treatment. But the thinking referred to should be reasoned thinking based on a knowledge of the principles and practice of modern medicine and should not be directed solely or mainly by the opinions of the patient. After anxious consideration of the statements laid before them by the practitioner they cannot convince themselves that the decision of the London Panel Committee was unreasonable or unjust and therefore they have no option but to dismiss the appeal. They do not wish to impugn the bona fides of the practitioner though they find themselves very much at variance with his methods of prescribing.

One aspect of the case is particularly worthy of notice. The excess cost of prescriptions was £75. The Panel Committee found that, after making every allowance in the practitioner's favour, the excess might be estimated at £38, and the Insurance Committee, to whom the matter was referred after the appeal had been heard in order to make a recommendation as to the penalty, has decided that the withholding of the sum of £25 would be sufficient by way of a deterrent on this occasion, having in mind that it would be open to the Committee in the event of any repetition on the part of the practitioner to recommend the withholding of a more substantial amount.

Scottish Drug Testing

The reports on the drug testing activities of Scottish Insurance Committees during the year 1936 have been generally collated and the cumulative results indicate that the quality of drugs served and the efficiency of dispensing services under the National Health Insurance Act are of an eminently satisfactory order. The tests have revealed that neither in quantity nor quality have there been any lapses from the vigilance demanded of chemists, and the few minor examples of doubtful dispensing that were submitted to Pharmaceutical Service Subcommittees throughout the year for consideration and report were not of serious import.

Lectures on Air Raid Precautions

An insurance practitioner in Edinburgh had recently been attending lectures and demonstrations organized by the Home Office on air raid precautions. The suggestion had been made at these lectures that doctors should be given civilian gas masks to show and explain to their patients during consulting hours. In the opinion of the Edinburgh practitioner, however, a more satisfactory method would be for the doctors to give lectures and demonstrations to their patients under arrangements made by the Insurance Committee on the lines of existing health lectures. This doctor has been informed that the Committee would bear his suggestion in mind in making future arrangements for health lectures.

The Medical Service in Glasgow

From the annual report of the Insurance Committee for the Burgh of Glasgow we make the following extracts, which may be of interest to insurance practitioners generally.

The number of insured persons in the area of administration of the Committee represented in the Committee's Index Register as at January 1, 1937 was 443,263—289,269 males and 153,994 females.

The number of practitioners on the medical list of the Committee on January 1, 1937 was 497 (439 males and 58 females) being a decrease during the year of 15 (10 males and 5 females). During the year 28 practitioners retired from the medical list and 6 died. The number of additions to the list

was 19. Of the 497 practitioners on the list of the Committee 414 are resident within and 83 outwith the city. These 497 practitioners have 677 consulting rooms—580 in and 97 out with this area. Eleven practitioners have notified the Committee that they practise homoeopathy.

The number of medical partnerships in the area is 67 affecting 138 practitioners. Sixty-four are partnerships of two practitioners, two of three practitioners and there is one partnership of four practitioners.

There are 16 practitioners required to employ assistants owing to the number of insured persons on their lists exceeding 2,000, the number allowed under the provisions of the allocation scheme to be on the list of a single-handed practitioner. There are also 33 other practitioners who although not required by the allocation scheme employ assistants. The following statement shows the grouping of insured persons on the lists of practitioners.

6 practitioners have no insured persons on their lists
169 have lists of from 1 to 400
155 have lists of from 401 to 1,200
131 have lists of from 1,201 to 2,000
36 have lists of over 2,000

497

Naval, Military, and Air Force Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Commanders A. de B. Joyce and W. G. C. FitzPatrick to the *President* for Medical Department.
Surgeon Lieutenant G. C. Denny to the *Excellent*.

ROYAL ARMY MEDICAL CORPS

The following Lieutenants to be Captains with seniorities from the dates indicated in parentheses: J. A. MacDougall (April 24, 1936), J. C. A. Marchand (April 24, 1936), D. Wright (April 25, 1936).

The appointments of the following Lieutenants have been ante-dated to the dates indicated in parentheses under the provisions of Article 36 Royal Warrant for Pay and Promotion, 1931 but not to carry pay and allowances prior to April 24, 1936: J. A. MacDougall (April 24, 1935), J. C. A. Marchand (April 24, 1935).

Lieutenant (on probation) A. F. H. Keatinge has been confirmed in his rank.

ROYAL AIR FORCE MEDICAL SERVICE

Flight Lieutenants S. B. S. Smith to Central Medical Establishment London, R. C. H. Tripp to No. 1 School of Technical Training (Apprentices) Halton, C. A. Rumball to R.A.F. Institute of Pathology and Tropical Medicine Halton, J. S. Wilson to No. 8 (Bomber) Squadron Aden.

Flight Lieutenant H. J. Melville has been transferred to the Reserve Class D.

Flying Officer H. C. de B. Milne to be Flight Lieutenant.
Flying Officer C. E. G. Wickham to R.A.F. Station Marham.

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Captain W. H. G. Park to be Major.
Captains F. Lawrence and R. G. Karm M.C. have resigned their commissions.

Lieutenant A. Bennett from 7th Battalion Cheshire Regiment to be Captain, with seniority May 1, 1934.

R. J. McGill (New Zealand Forces Reserve of Officers), W. S. Evans, H. B. Collins, H. R. J. Donald (late Cadet Corps of Winchester College Contingent, Junior Division O.T.C.), E. Fulford (late Officer Cadet, University of London Contingent, Medical Unit Senior Division O.T.C.), K. G. Sugden and G. T. Bevir (late Cadet Sergeant, St. Edward's School Oxford Contingent, Junior Division, O.T.C.) to be Lieutenants.

TERRITORIAL ARMY RESERVE OF OFFICERS ROYAL ARMY MEDICAL CORPS

Captain C. A. D. Mitchell from active list to be Captain.

AUXILIARY AIR FORCE RESERVE OF OFFICERS MEDICAL BRANCH
Flying Officer T. E. Cawthorne has relinquished his commission on completion of service.

INDIAN MEDICAL SERVICE

The services of Captain R. De Soldenhoff have been placed temporarily at the disposal of the Government of Bombay from January 28.

Lieutenant (on probation) J. G. Thomson to be Captain (on probation) with seniority May 1, 1936.

To be Lieutenants (temporary commissions): S. A. Mian V.P. Gupta, I. Mallik, M. S. Rao, P. Dass, S. A. Hasan and S. M. Basu.

British Medical Association

OFFICES BRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQUARE, W C 1

Departments

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and
Business Manager Telegrams Articulate Westcent London)
MEDICAL SECRETARY (Telegrams Mediscera Westcent London)
EDITOR BRITISH MEDICAL JOURNAL (Telegrams Autology Westcent
London)

Telephone numbers of British Medical Association and British
Medical Journal Euston 2111 (internal exchange five lines)
B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumsheugh Gardens
Edinburgh (Telegrams Associate Edinburgh Tet 24361
Edinburgh)
Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare
Street, Dublin (Telegrams Bacillus Dublin Tet 62550
Dublin.)

Diary of Central Meetings

MAY

- 7 Fri Journal Board 10.15 a.m.
Building Committee 3 p.m.
14 Fri Journal Committee Epitome Subcommittee, 11.30 a.m.
Journal Committee 2 p.m.
Public Health Committee, 2 p.m.
18 Tues Organization Committee 2 p.m.
19 Wed Finance Committee 2 p.m.
20 Thurs Committee re Organization of the Medical Profession in
India 2.15 p.m.
21 Fri Naval and Military Committee 2.30 p.m.
24 Mon Dominions Committee, 2.15 p.m.
27 Thurs Subcommittee re Case of Marshall versus Lindsey
County Council, 2.30 p.m.

JUNE

- 2 Wed Council, 10 a.m.
11 Fri. Journal Committee, Foods and Drugs (Advertisements)
Subcommittee 11.30 a.m.

Group of Psychological Medicine of the Association

Notice is hereby given of the formation by the Council of a Group of Psychological Medicine, which shall be composed of all those members of the Association who are engaged predominantly in the practice of psychological medicine. Every member of the Association coming within this definition is *ipso facto* a member of the Group. Members of the Association who claim to conform to this definition are requested to notify the Medical Secretary B.M.A. House, Tavistock Square, W.C.1, not later than May 22, 1937. The first general meeting of the Group will be held at a date to be subsequently announced in the *Supplement*.

April 28

G. C. ANDERSON

Medical Secretary

Belfast Meeting Annual Dinner, July 22

Reservations of tables for the Annual Dinner which is being held in the Kings Hall Balmoral, and is this year taking the form of a dinner-dance, are being made daily, and early application is advisable. The numbers of the tables already booked are 1-9 14 16, 21 22, 26, 28 30 31 38 39, 40 41, 42, 43, 44 47, 48 49, 50 51, 52, 53 56 57 59, 60 61, 66 68 69, 72 74, 75, 78 81 83, 86, 87 89 90 92 93 95 98. All applications must be accompanied by the correct subscriptions and an alternative choice of tables should be given (see *Supplement*, April 10 p 179).

Katherine Bishop Harman Prize

The Council of the British Medical Association is prepared to consider an award of the Katherine Bishop Harman Prize of the value of £75 in the year 1938. The purpose of the prize founded in 1926, is the encouragement of study and research directed to the diminution and avoidance of the risks to health and life that are apt to arise in pregnancy and child bearing. It will be awarded for the best essay submitted in open competition competitors being left free to select the work they wish to present, provided this falls within the scope of the prize. Any

medical practitioner registered in the British Empire is eligible to compete.

Should the Council of the Association decide that no essay submitted is of sufficient merit, the prize will not be awarded in 1938 but will be offered again in the year next following this decision, and in this event the money value of the prize on the occasion in question shall be such proportion of the accumulated income as the Council shall determine. The decision of the Council will be final.

Each essay must be typewritten or printed in the English language it must be distinguished by a motto and accompanied by a sealed envelope marked with the same motto and enclosing the candidate's name and address. Essays must be forwarded so as to reach the Medical Secretary (to whom inquiries may be sent) B.M.A. House Tavistock Square London, W.C.1, not later than December 31, 1937.

Election of 22 Members of Council by Grouped Branches in the British Isles

The following is a list of the nominations received for 1937-8

Group	Branches in Group	Candidates Nominated	No of Seats
A	North of England	Dr. J. Hudson (Newcastle-on Tyne)	1
B	East Yorks, Yorkshire	Mr. L. Dougal Callander (Doncaster) Dr. W. N. West Watson (Bradford)	1
C	Isle of Man, Lancashire and Cheshire	Professor A. H. Burgess (Cheadle Cheshire) Dr. J. S. Manson (Warrington)	2
D	Derbyshire Leicester and Rutland, Lincolnshire, Nottingham	No nomination	1
E	Bedfordshire Cambridge and Huntingdon, Essex, Hertfordshire Norfolk, Northamptonshire Suffolk	Dr. J. W. Bone (Luton)	1
F	Berks Bucks, and Oxford, Birmingham Staffordshire	Dr. S. Wand (Birmingham)	1
G	North Wales, Shropshire and Mid Wales	Dr. J. R. Prytherch (Llangefni)	1
H	South Wales and Monmouthshire	Dr. W. E. Thomas (Ystrad Rhondda)	1
I	Metropolitan Counties	Dr. L. G. Glover (Hampstead) Dr. F. Gray (Wandsworth) Dr. H. Robinson (South Kensington) Mr. R. Scott Stevenson (London, W. I.) Mr. H. M. Stratford (Kensington) Dr. G. de Swiet (North Kensington)	4
J	Bath, Bristol and Somerset, Gloucestershire, Worcestershire and Herefordshire	Dr. J. Middleton Martin (Cheltenham)	1
K	Dorset and West Hants South Western Wiltshire	No nomination	1
L	Southern, Surrey	Mr. N. E. Waterfield (Great Bookham, Surrey)	1
M	Kent, Sussex	Dr. E. R. Fothergill (Hove)	1
N	Aberdeen Dundee Northern Counties of Scotland, Perth	No nomination	1
O	Edinburgh, Fife	Dr. John Hunter (Edinburgh)	1
P	Glasgow and West of Scotland Branch (Glasgow Division)	Mr. W. J. Richard (Glasgow)	1
Q	Border Counties, Glasgow and West of Scotland (Five County Divisions) Stirling	Dr. J. B. ... (Glasgow)	1
R	Northern Ireland		

The candidates referred to in Groups A, C, E F, G, H, J, L, M O, P, Q and R, being the only candidates nominated for these Groups, are hereby declared elected Members of Council for 1937-8

Voting papers will be posted to all members of the Association in Groups B and I, where there are contests, from the Head Office on Saturday May 8 1937 they are returnable not later than Saturday, May 15 1937, to the Medical Secretary, British Medical Association House, Tavistock Square, London, W C 1

No nominations having been received for Groups D, K and N it rests, under the by-laws, with the Council either again to invite nominations from members in the Groups or itself to elect members to fill the vacancies

Election of 2 Members of Council by Public Health Service Members

The following being the only candidates nominated for election as Members of Council for 1937-8 by Public Health Service members, are hereby declared elected Members of Council for 1937-8

Professor R M F PICKEN (Cardiff)
Dr F T H WOOD (Bootle)

Election of 4 Representatives and 4 Deputy Representatives by Public Health Service Members

The following, being the only candidates nominated for election as Representatives for 1937-8 by Public Health Service members, are hereby declared elected Representatives in the Representative Body for 1937-8

Dr R J MAULE HORNE (Poole Dorset)
Dr E H T NASH (Hounslow)
Dr C S THOMSON (Belfast)
Dr ERNEST WARD (Paignton Devon)

No nominations having been received for the 4 Deputy Representatives their appointment rests under the by-laws in the hands of the Chairman of the Representative Body

Election of Member of Council by Hong Kong and China and Malaya Branches

Dr G WAUGH SCOTT (Malvern Links, Worcestershire) has been returned unopposed to represent the Hong Kong and China and Malaya Branches on the Council for the final year of the period 1935-8, his term of office commencing July, 1937

G C. ANDERSON
Medical Secretary

Branch and Division Meetings to be Held

LANCASHIRE AND CHESHIRE BRANCH BURY DIVISION—At Jersey Hall Bury Friday May 14 Coronation dinner and dance

LANCASHIRE AND CHESHIRE BRANCH ROCHEDALE DIVISION—A course of eight lectures and demonstrations on air raid precautions will be given on Fridays May 7 14 21 and 28 and Mondays May 10 24, and June 7 at 8.45 p.m., by Dr L T Challenor, Home Office Lecturer for the Liverpool Council. The course is open to all medical practitioners in the Rochdale area and will be held at Bailie Street Council School

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital Kingsland Road E. Friday May 14 4.30 p.m. Dr R. A. Dunlop Clinical cases

METROPOLITAN COUNTIES BRANCH GREENWICH AND DEPTFORD DIVISION—At Miller General Hospital, Monday May 10 3.30 p.m. Election of representative and deputy representative.

METROPOLITAN COUNTIES BRANCH ST PANCRAS DIVISION—At B.M.A. House Tavistock Square W.C., Tuesday, May 11 9 p.m. Annual general meeting

METROPOLITAN COUNTIES BRANCH WOOLWICH DIVISION—At Woolwich War Memorial Hospital Friday May 7 8.45 p.m. Annual general meeting. Election of officers and consideration of Annual Report of Council, etc

NORTHERN IRELAND BRANCH—Thursday May 13, 4.15 p.m. Annual general meeting

SOUTH WESTERN BRANCH BARNSTAPLE DIVISION—At Imperial Hotel, Barnstaple, Friday May 28, 8 p.m. Dr A. C. Roxburgh. Points in the Diagnosis and Treatment of Common Skin Diseases

SOUTH WESTERN BRANCH PLYMOUTH DIVISION—Wednesday May 12 Annual general meeting Election of officers Preceded by supper at 7.30 p.m.

SURREY BRANCH RICHMOND DIVISION—Friday, May 14 Annual meeting

SUSSEX BRANCH BRIGHTON DIVISION—Thursday May 13 2.30 p.m. Visit to R.M.S. Queen Mary At Royal Sussex County Hospital, Thursday May 20 3.45 p.m. Clinical meeting Thursday May 27 Summer outing to Cissbury Ring

TABLE OF OFFICIAL DATES

May 10 Mon	Motions by Divisions and Branches for A.R.M. Agenda on matters of which two months notice must be given must be received at Head Office by this date
May 15 Sat.	Publication in <i>B.M.J. Supplement</i> of Motions and Amendments by Divisions and Branches for A.R.M. on matters of which two months notice must be given Representatives and Deputy Representatives must be elected by this date Last day for receipt at Head Office of Voting Papers for election where there are contests of (i) 22 Members of Council by grouped Branches in Great Britain and Northern Ireland (ii) 2 Public Health Service Members of Council and 4 representatives of Public Health Service in Representative Body
May 29 Sat.	Publication in <i>B.M.J. Supplement</i> of result of election of Members of Council and result of above elections. Nomination Papers available (on application at Head Office) for election of 11 Members of Council by grouped Representatives
June 2 Wed	Council.
June 3 Thurs	Names of Representatives and Deputy Representatives must be received at Head Office by this date
June 19 Sat	Publication of Supplementary Report of Council in <i>B.M.J. Supplement</i>
June 29 Tues	Other items for inclusion in A.R.M. printed Agenda must be received at Head Office by this date
July 16 Fri	Annual Representative Meeting Belfast
July 17, Sat	Annual Representative Meeting Belfast
July 19 Moo	Annual Representative Meeting, Belfast. Council Belfast
July 20 Tues.	Annual Representative Meeting Belfast Annual General Meeting Belfast President's Address
July 21 Wed	Council Belfast Conference of Honorary Secretaries Overseas Conference Belfast. Meetings of Sections etc., Belfast
July 22 Thurs	Meetings of Sections etc., Belfast. Annual Dinner of the Association Belfast.
July 23 Fri.	Meetings of Sections etc Belfast

Town G.P. writes that after reading the letter on "The Country Doctor and the Holiday Season" in the *Supplement* of April 24 (p 233) the following notice was displayed in his waiting room "Please be sure and take your medical card with you when you go on holiday"

Meetings of Branches and Divisions

BIRMINGHAM BRANCH WARWICK AND LEAMINGTON DIVISION

A meeting of the Warwick and Leamington Division was held at Leamington Spa on April 8 when Dr GEORGE BRAY delivered a British Medical Association Lecture on Allergic Diseases. Dr Bray pointed out that the combination of an allergic hereditary disposition and a specific sensitizing substance which might be absorbed by inhalation ingestion injection contact, etc. produced the allergic reactions. He discussed the non specific catalysing factor which might be dietary environmental nasal toxic psychotic etc. Most allergic conditions he said manifested themselves during the first decade of life. Allergic patients had commonly more than one manifestation. The lecturer then discussed treatment. Dr Bray illustrated his remarks by lantern slides which added greatly to the interest of the lecture and at the close he showed a film dealing with the cutaneous manifestations of allergy. The lecture was greatly appreciated by an enthusiastic audience and after a short discussion in which Drs E. L. EDMONDSON J. A. KNOTT and J. G. WARDROP took part Dr Bray was very warmly thanked for his lecture and demonstration to which non members of the Association resident in the area of the Division had been invited.

After the lecture members of the Division attended an informal dinner. This proved to be a most enjoyable and successful function and it is hoped to make it an annual event.

EAST YORKSHIRE BRANCH

At a meeting of the East Yorkshire Branch held at Hull on April 14 with Dr S. F. FOURACRE in the chair Dr F. C. EVE opened a discussion on Allergic Diseases. He said that allergy manifested itself in several groups of diseases (1) spasm of plain muscle—asthma colics migraine (2) increased permeability of tissues—hay fever angioneurotic oedema and (3) anaphylaxis. Allergic asthma occurred between the ages of 6 months and 50 years. It was necessary to detect the allergen and to eliminate it from the patient's surroundings or food, or to educate the body to it gradually. Allergy gradually increased the body resistance from a low to a high tolerance of bacteria. The various theories of the nature and meaning of allergy were not satisfactory. Dr EVE continued and he suggested that it was a product of civilization. Nowadays human beings required a widely responsive nervous system. Disease germs were internationalized became more virulent and varied. Allergic diseases were rare in Chinese and several less civilized parts of the world. In Switzerland hay fever was five times as prevalent in the towns as in the country. He recommended a return to the habits of our forefathers—less clothing, raw fruit, and the active life of the husbandman but he questioned its feasibility.

Dr H. M. LEETE read a short paper on serum sickness and anaphylaxis. Serum sickness was much less prevalent now than it was a few years ago. It was more common after injections given in cases of scarlet fever than after injections given in cases of diphtheria. Diphtheria was not treated with A.P.T. or toxoid antitoxin and accounted for the fewer cases. Intramuscular injections were safe but one dose was given intravenously and caused fatal anaphylaxis. The usual safe period of ten days between injections was too long, only four days being really safe. Dr Leete did not recommend horse serum in non-specific cases. Anaphylactic experiments on animals were described—guinea pigs dying of respiratory failure and rabbits with right-sided heart failure—thus suggesting that histamine-sensitive cells had different situations in different species.

Dr E. M. DEARN followed with a short paper on hay fever vasomotor rhinitis, and the nasal factor in asthma. He briefly described the history of hay fever and stressed the importance of the work of C. H. Blackley in the nineteenth century. The aetiology was considered and also the factors influencing the severity of the hay fever season. The pre seasonal treatment of cases with pollen extracts was recommended as being more efficacious than similar treatment during the season. Among palliative measures Dr Dearn had found zinc ionization very useful. In considering the nasal factor in asthma Dr Dearn described the normal physiology and functions of the nose. The trigger or asthmogenic area of the nose was described and also the effect of septal deviations nasal polypi or the discharge from infected sinuses in causing reflex action. Statistics showed that nasal abnormalities could rarely be a cause of asthma although allergy was a frequent cause of nasal pathology.

A discussion followed in which other members took part.

EDINBURGH BRANCH SOUTH EASTERN COUNTIES DIVISION

At a meeting of the South Eastern Counties Division held at Galashiels on April 14 with Dr J. J. McMILLAN in the chair there was discussion on the remuneration of insurance practitioners and the extension of medical benefit to adolescents. The secretary was instructed to arrange a golf meeting within the Division in connexion with the Treasurers Cup competition the winner, under handicap to qualify for the final at Belfast.

KENT BRANCH EAST KENT DIVISION

At a meeting of the East Kent Division held at Cliftonville on April 22 with Mr W. E. C. WYNNE in the chair Mr JOHN HOSFORD gave an address on 'The Modern Treatment of Fractures'. The lecture was illustrated by the B.M.A. film on fractures. There was a good attendance, and members showed their appreciation of the lecture and the film in the long and stimulating discussion which followed. The meeting closed with a hearty vote of thanks to Mr Hosford for his address.

METROPOLITAN COUNTIES BRANCH CHELSEA DIVISION

A general meeting of the Chelsea Division to which all medical practitioners in Chelsea and Fulham had been invited was held in the Town Hall, Fulham on April 22 with the chairman, Dr FAIRFIELD THOMAS presiding. Dr N. W. HAMMER, one of the medical experts of the Air Raid Precautions Department of the Home Office, opened a discussion on the medical practitioners duties in air raids. Dr SCOTT, medical officer of health for Fulham described the steps which were being taken by the borough and the work yet to be done in establishing first aid parties and posts and instituting gas proofing of houses also courses of instruction through the B.M.A. for private practitioners. The CHAIRMAN raised the questions of the book issued by a group of Cambridge scientists contamination of water supplies and the risk of contaminating public vehicles. In reply, Dr HAMMER stated that the book was scientifically open to objection the conditions under which the experiments had been performed not being comparable to the contingencies which were under consideration by the Government. Medical practitioners were strongly urged to obtain the necessary instruction since there would be a heavy call on their services. The improvised precautionary measures adopted in Madrid had proved very effective in reducing the number of casualties. Dr GIBSON added that courses of instruction of medical practitioners had been much appreciated in Kensington. Dr HANNAH ANDERSON expressed the gratitude of the meeting to the speakers for a most comprehensive and enlightening survey of the position and votes of thanks were adopted unanimously on the proposition of Dr FAIRFIELD THOMAS seconded by Dr SCOTT.

SOUTHERN BRANCH GUERNSEY AND ALDERNEY DIVISION

At a meeting of the Guernsey and Alderney Division held at Grange on April 16 with Dr B. S. COLLINGS in the chair Professor A. FLEMING delivered a British Medical Association Lecture on 'Biological Conditions which Interest Private Practice'. There was a good attendance and the lecture proved most interesting and instructive. A discussion followed in which most members took part and the wish was expressed that the Division could have the pleasure and advantage of more such meetings. The thanks of the Division were conveyed to Professor Fleming for his address and to Headquarters for arranging the lecture. At the close of the meeting the chairman entertained the members to refreshments at his house which was much appreciated.

SOUTHERN BRANCH ISLE OF WIGHT DIVISION

At the annual meeting of the Isle of Wight Division held at the Royal Isle of Wight County Hospital Ryde on March 19 the following officers were elected.

Chairman Dr Ivor Tuckett. *Vice Chairman* Mr T. A. Mayo. *Honorary Secretary and Treasurer and Representative in Representative Body* Dr H. S. Howe. *Wood Deputy Representative in Representative Body* Mr J. J. O'Donoghue.

A cordial invitation was issued to the Southern Branch to hold the annual meeting on the island on Saturday, June 12. An attractive week-end programme is being arranged and an invitation to the Medical Secretary, Dr G. C. Anderson to be the guest of the Division for the week-end was renewed.

The honorary secretary's annual report was approved.

A clinical meeting followed at which the following cases were shown Mr J A GAVNOR elephantiasis Mr F WILSON Harlow chronic appendicitis acute retention of urine and hypernephroma Dr HOWIE Wood, erythrocytosis crurum puellaris and a skin case for diagnosis Mr A C LIESCHING, conservative treatment of acute osteomyelitis

SOUTHERN BRANCH PORTSMOUTH DIVISION

A meeting of the Portsmouth Division was held at Southsea on March 11 when Dr B W M ASTON KEY was in the chair and fifty nine members were present of whom forty four sat down to the preceding supper

A resolution of the Executive Committee "that the Portsmouth Division of the British Medical Association can see no advantage in adopting a scheme for the treatment of cancer patients which would include the formation of a Tumour Clinic which had been circulated to all members of the Division was put to the meeting for consideration Dr H W JANS and Mr C A SCOTT RIDOUT spoke in favour of the resolution, which was carried without dissent

Dr F W PRICE read a paper entitled A General Talk on Heart Disease including a Reference to Child bearing as a Complication Dr PRICE gave as the main causes of heart disease rheumatism syphilis masked hyperthyroidism hypertension chronic valvular disease chronic myocardial disease, angina, and atheroma and dealt at some length with each of those conditions He then discussed general treatment and touched upon some operative procedures, including total thyroidectomy sympathectomy and injection of the dorsal nerve roots Dr J R B HERN Mr SCOTT RIDOUT Dr H. FARNCOMBE and Dr R J LYTLE took part in the subsequent discussion, and Dr PRICE replied to each speaker individually On the motion of Dr LYTLE seconded by Dr D G COOPER a hearty vote of thanks was accorded Dr PRICE for his address

SURREY BRANCH KINGSTON-ON THAMES DIVISION

At a meeting of the Kingston on Thames Division held at Mitcham on April 13, with Dr A. S. HOLLINS in the chair, Wing Commander H. M. STANLEY TURNER read a paper on Some Dangers of Pleasure Cruising in which he reminded his hearers of the risks run by large parties of tourists entirely ignorant of the first rules of tropical hygiene, when they descended lightly heartedly on regions where malaria, sprue, sandfly fever, kala azar and filariasis were endemic and sanitation was practically nil After a short epitome of the symptoms and signs of the various diseases the meeting closed with a film on malaria presented by the courtesy of Bayer Products Ltd.

SURREY BRANCH RICHMOND DIVISION

At a clinical meeting of the Richmond Division held at Richmond Royal Hospital on April 9 with Lieut-Colonel E. L. GOWLAND in the chair, Mr J W HEEKES showed specimens and read notes on a number of cases of carcinoma of the uterus and breast Dr JENKINS demonstrated a number of radiographs of cases where the diagnosis was obscure, and Mr HAROLD DODD took members round the wards to show them a number of cases of interest Tea was provided by the Hospital Committee and the meeting ended with a vote of thanks to all those who had shown cases

UNITED PROVINCES BRANCH

At a meeting of the United Provinces Branch held at King George's Medical College Lucknow on February 20 with Lieut-Col R S TOWNSEND IMS in the chair the following clinical cases were demonstrated or described

1 Dr E A. DOUGLAS vagitus uterinus in a primipara aged 32 transverse presentation foetus delivered by forceps The baby was born asphyxiated but soon recovered the pre birth cry was distinctly heard twice A discussion followed in which Dr G MARCHANT and Dr B G S ACHARYA took part

2 Captain K. S. NIGAM (a) stabbed wound of the chest resulting in diaphragmatic hernia of spleen and (b) artificial tooth plate accidentally swallowed impacted at the lower end of the oesophagus half being removed with the oesophagoscope and the other half being pushed into the stomach, whence it was passed with the forceps

3 Captain R D ALEXANDER coronary thrombosis.
4 Dr H K RUSTOGI angioneurotic oedema with well marked swelling of the prepuce also a skigram of a suspected case of pituitary tumour

The PRESIDENT then introduced the Medical Secretary Dr G C. ANDERSON, who in a short speech described the aims and objects of the British Medical Association Dr Anderson emphasized the necessity of joining a well-organized medical association and of taking an active interest in the social, ethical, and medico-political problems of the day The address was much appreciated and Captain NIGAM Dr VIAS Colonel H. STOTT and Dr S S BOSE took part in the discussion which followed Colonel TOWNSEND thanked Dr Anderson on behalf of every one present for the great trouble that he had taken in touring India to study the professional difficulties of the medical practitioners of that country and for the interesting address that he had delivered

YORKSHIRE BRANCH GOOLE AND SELBY DIVISION

Meetings of the Goole and Selby Division were held on March 2, 10, and 23 when consideration was given to the scale of fees payable to medical practitioners for attendance on members of juvenile clubs, and at the last meeting a resolution was unanimously adopted concerning the matter It was arranged to supply every doctor in the area with a copy of a circular letter for transmission to any club for which he acts as medical officer

YORKSHIRE BRANCH SHEFFIELD DIVISION

The annual luncheon to newly qualified practitioners in Sheffield was held at the Royal Victoria Hotel on March 24 the hosts being the executive committee of the Sheffield Division. Among the twelve guests was Dr Margaret Bell who had achieved the unusual distinction of gaining first-class honours in the Final M.B. Ch.B. examination at Sheffield University The chairman of the Division, Mr PERCIVAL HAY was in the chair, and Dr R. E. PLEASANCE proposing the toast of "Our New Colleagues" said it was always a pleasure to welcome new blood into the profession especially when it was of such good quality Dr Bell and Dr I. B. SNEDDON had gained gold medals in clinical medicine and anaesthetics respectively Passing the final examination brought with it the realization of how little one knew, and that, although legally qualified to practise one had no experience The question arose of what to do next? Some might choose to become ship surgeons as affording an opportunity of seeing the world pleasantly and cheaply Others might wish to enter general practice so as to earn a little money as soon as possible A third and preferable alternative was to secure a hospital appointment in order to gain experience In any case there were certain things that all the newly qualified practitioners ought to do First they should join a medical defence organization without delay Secondly they should join the British Medical Association Graduates admitted to membership before the expiration of two years from the date of registration under the Medical Acts were entitled to receive all the privileges of membership for £1 11s 6d. per annum which was half the usual subscription This reduced rate applied until December 31 next occurring after the expiration of four years from the date of such registration The privileges included the receipt of the *British Medical Journal* weekly Lastly they should keep in touch with their old University and if remaining in Sheffield should join the Sheffield Medico-Chirurgical Society, of which the local practitioners were justly proud

Dr IAN B. SNEDDON replying to the toast said that he was pleased to have the opportunity of thanking the teaching staff for all they had done. He had found in the Sheffield Medical School an atmosphere of kindness that was very encouraging and which he hoped would not be lost as the school increased in size and in fame Dr BELL proposed the toast of "The Teaching Staff of the Medical School" and Mr VINCENT TOWNROW replied The toast of The Chairman was proposed by Mr ERNEST FINCH and Mr HAY in replying wished all his new colleagues a very successful career and a happy future

YORKSHIRE BRANCH YORK DIVISION

At the annual meeting of the York Division, held on April 10 the following officers were elected

Chairman Dr S G PLATT Vice-Chairman Dr W McKIM
Honorary Secretary Dr L A. JOHNSON Charities Secretary Mr G S Hughes Representative in Representative Body Dr Peter MacDonald

The CHAIRMAN welcomed the president of the Yorkshire Branch Mr L. DOUGAL CALLANDER, who addressed the meeting on matters of interest to the Division

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses thoracic surgery at Brompton Hospital May 24 to 29 urology at St Peter's Hospital May 31 to June 12 gynaecology at Chelsea Hospital for Women June 14 to 26 physical medicine at St John Clinic and Institute of Physical Medicine May 22 and 23 children's diseases at Princess Elizabeth of York Hospital, May 29 and 30 general medicine at Prince of Wales's General Hospital June 5 and 6 and general surgery at the same hospital June 19 and 20, obstetrics at City of London Maternity Hospital June 12 and 13. The following M.R.C.P. courses will be held in preparation for the July examination: clinical and pathological at National Temperance Hospital, Tuesdays and Thursdays at 8 p.m., June 1 to 17 chest diseases at Brompton Hospital, twice weekly at 5 p.m., June 7 to July 13, heart and lung diseases at Victoria Park Hospital Wednesdays and Fridays at 6 p.m. June 9 to July 3 neurology at West End Hospital for Nervous Diseases, June 21 to July 3. Detailed syllabuses of all courses can be obtained from the Fellowship of Medicine, 1, Wimpole Street W. The annual dinner-dance of the Fellowship will take place at Claridge's Hotel on Friday, May 28. Tickets can be obtained from the secretary at 1 Wimpole Street or from any member of the ladies committee. All members of the medical profession and their friends will be welcome.

WEEKLY POST-GRADUATE DIARY

BRITISH POST GRADUATE MEDICAL SCHOOL, Ducane Road, W.—Daily 10 a.m. to 4 p.m. Medical Clinics, Surgical Clinics and Operations. Obstetrical and Gynaecological Clinics and Operations. Mon. 2.30 p.m. Dr C. W. Buckley Arthritis 4.30 p.m., Dr W. E. Gye Experimental Cancer Research Thurs. 2.15 p.m. Dr Duncan White Radiological Demonstration 3.30 p.m., Mr A. K. Henry Demonstrations on the Cadaver of Surgical Exposures 3.30 p.m. Dr Helena Wright Birth Control Fri. 2 p.m. Operative Obstetrics 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology).

TAIVISTOCK CLINIC, Malet Place, W.C.—Mon. 5.45 p.m. Dr E. A. Hamilton Pearson Physiological Conditions and Temperament Thurs. 3 p.m. Dr H. Crichton Miller Anxiety 4.30 p.m. Dr Cedric Shaw Hypertension, 5.45 p.m. Dr Laura Hutton Adolescence.

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE, Hammersmith, W.—Daily 2 p.m. Operations Medical and Surgical Clinics Mon. 10 a.m. Dr Post, 2 Ray Film Demonstration Skin Clinic 11 a.m. Surgical Wards 2 p.m., Surgical and Gynaecological Wards Eye and Gynaecological Clinics Tues. 10 a.m. Medical Wards 11 a.m. Surgical Wards 2 p.m. Throat Clinic Thurs. 10 a.m. Neurological and Gynaecological Clinics 12 noon, Fracture Clinic 2 p.m., Eye and Genito-Urinary Clinics Fri. 10 a.m., Medical Wards, Skin Clinic 12 noon Lecture on Treatment 2 p.m. Throat Clinic Sat. 10 a.m., Children's and Surgical Clinics, 11 a.m., Medical Wards.

BIRMINGHAM UNIVERSITY.—At Medical Faculty Buildings, Edmund Street Tues. and Thurs. 4 p.m. William Withering Lectures by Prof. Leonard G. Parsons (1) General Nutrition Nutrition and Nutritional Diseases of the Erythron the Interrelation of Iron and Calcium in Nutrition and (2) The Role of Vitamin C in Disease Multiple Deficiency States the Effect of Certain Alimentary Disorders on the Absorption of Carbohydrates.

GLASGOW UNIVERSITY.—At Tennent Memorial Buildings Church Street Tues. 5 p.m. Dr John Marshall Double Vision.

MANCHESTER ROYAL INFIRMARY.—Thurs. 4.15 p.m. Mr W. R. Douglas Lesions of the Common Bile Duct Fri. 4.15 p.m., Mr D. M. Sutherland Demonstration of Surgical Cases.

DIARY OF SOCIETIES AND LECTURES

MEDICAL SOCIETY OF INDIVIDUAL PSYCHOLOGY.—At 11 Chandos Street W. Thurs. 8.30 p.m. Dr T. A. Ross The Psychological Approach.

MEDICAL SOCIETY OF LONDON 11 Chandos Street W.—Mon. 8 p.m. Annual General Meeting 8.30 p.m. Annual Oration by Dr R. A. Young C.B.E. Perspective and Poise in Practice To be followed by a *conversazione*.

NORTH LONDON MEDICAL AND SURGICAL SOCIETY.—At Royal Northern Hospital Holloway Road N. Thurs. Dr S. A. Kinnier Wilson will give an address.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—At Miller General Hospital Greenwich S.E., Fri. 8.45 p.m. Presidential Address.

VACANCIES

All advertisements should be addressed to the Financial Secretary and Business Manager and NOT to the Editor

ABERDEEN ROYAL INFIRMARY.—Second Hon Ophthalmic S
ALTRINCHAM GENERAL HOSPITAL.—(1) Senior H.S. (2) J.H.S.
Salaries £150 p.a. and £120 p.a. respectively
ASHFORD GROSVENOR SANATORIUM.—R.H.P. (male) Salary £100 p.a.
BARNSELEY BECKETT HOSPITAL AND DISPENSARY.—C.O. (male) Salary £250 p.a.
BATTERSEA GENERAL HOSPITAL S.W.—(1) H.S. (2) H.P. and C.O. Females Salaries £130 p.a. and £120 p.a.
BEDFORD COUNTY HOSPITAL.—Second H.S. (male, unmarried) Salary £150 p.a.
BENEDEN NATIONAL SANATORIUM.—Medical Superintendent Salary £600-£50-£750 p.a.
BIRMINGHAM EAR AND THROAT HOSPITAL.—Second R.H.S. Salary £150 p.a.
BIRMINGHAM QUEEN'S HOSPITAL.—R.S.O. Salary £150 p.a.
BOLINGBROKE HOSPITAL Wandsworth Common S.W.—(1) C.O. (2) H.S. Males unmarried Salaries £120 p.a. each
BRIDGWATER GENERAL HOSPITAL.—H.S. Salary £130 p.a.
BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN.—H.S. (male) Salary £120 p.a.
BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL.—H.S. (male) Salary £150 p.a.
BRISTOL ROYAL INFIRMARY AND BRISTOL GENERAL HOSPITAL.—(1) Whole time Radio-Diagnostician Salary £500 p.a. (2) Two Hon Radiologists
BRITISH POST-GRADUATE MEDICAL SCHOOL, Ducane Road W.—Assistant in Bacteriology for the Department of Pathology Salary £300-£50-£500 p.a.
BURY INFIRMARY.—(1) Third H.S. (2) C.O. Males Salaries £150 p.a. each
BURY ST. EDMUNDS WEST SUFFOLK GENERAL HOSPITAL.—H.S. Salary £180 p.a.
CARDIFF KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—Three Area Assistant Tuberculosis P.s. Salaries £503-£25 £700 p.a. each
CHILDREN'S HOSPITAL Hampstead N.W.—R.M.O. Salary £150 p.a.
CONNAUGHT HOSPITAL Walthamstow, E.—C.O. (male) Salary £100 p.a.
COVENTRY AND WARWICKSHIRE HOSPITAL.—(1) R.H.S. (2) C.O. (3) R.H.S. for the Aural and Ophthalmic Departments Salaries £125 p.a. each (4) Hon Assistant S.
CROYDON COUNTY BOROUGH.—Deputy M.O.H. and Deputy School M.O. (male) Salary £720 p.a.
DEWSBURY AND DISTRICT GENERAL INFIRMARY.—Second H.S. (male) Salary £150 p.a.
DOWNPATRICK DOWN COUNTY MENTAL HOSPITAL.—J.A.M.O. (male, unmarried) Salary £350 £25-£450 p.a.
DUDLEY GUEST HOSPITAL.—Second H.S. (male) Salary £120 p.a.
EAST HAM MEMORIAL HOSPITAL Shrewsbury Road E.—H.S. to the Special Departments and C.O. (male) Salary £120 p.a.
EAST HAM AND SOUTHEAST-ON-SEA COUNTY BOROUGH.—Assistant Resident P. to Runwell Hospital, near Wickford Salary £350-£25 £450 p.a.
EVELINA HOSPITAL FOR SICK CHILDREN Southwark S.E.—H.P. (male) Salary £120 p.a.
EXETER ROYAL DEVON AND EXETER HOSPITAL.—H.S. (male) to the Ear Nose and Throat Department
GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—H.P. (male) Salary £150 p.a.
GORDON HOSPITAL FOR RECTAL DISEASES Vauxhall Bridge Road S.W.—R.H.S. Salary £150 p.a.
GREAT BARR PARK COLONY near Birmingham.—J.A.R.M.O. (male) Salary £275 p.a.
HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.—(1) Casualty M.O. and (2) Casualty S.O. for the Outpatient Department Bayham Street Females unmarried Salaries £100 p.a. each
HASTINGS ROYAL EAST SUSSEX HOSPITAL.—J.H.S. (female) Salary £150 p.a.
HÔPITAL ET DISPENSIRE FRANÇAIS Shaftesbury Avenue W.C.—Hon Radiologist
HOSPITAL FOR TROPICAL DISEASES Gordon Street W.C.—(1) Pathologist Salary £750 p.a. (2) Hon Assistant P. (3) H.P. (male) Salary £120 p.a.
HOUSLOW HOSPITAL.—Hon Dermatologist
HUDDERSFIELD COUNTY BOROUGH.—Assistant School M.O. Salary £500-£700 p.a.
HULL ROYAL INFIRMARY.—(1) First H.S. (2) H.S. to the Ophthalmic and Ear Nose and Throat Departments (3) Second C.O. Males unmarried Salaries £150 p.a. each
HULL VICTORIA HOSPITAL FOR SICK CHILDREN.—R.H.P. (female) Salary £120 p.a.
ILFORD KING GEORGE HOSPITAL.—H.S. (male) Salary £100 p.a.
KENSINGTON ROYAL BOROUGH.—Deputy M.O.H. Salary £900 £50-£100 p.a.
KENT COUNTY COUNCIL.—R.A.M.O. for the Farnborough Public Assistance Hospital Salary £250 p.a.
LANCASHIRE COUNTY COUNCIL.—Second R.M.O. (male unmarried) for Park Hospital Darhulme Salary £225 p.a.

LEEDS GENERAL INFIRMARY—(1) Hon P (2) Resident Anaesthetic Officer Salary £149 p.a. (3) Junior Resident Anaesthetic Officer Salary £100 p.a. (4) Radio-Surgical H.S. Salary £100 p.a.

LEICESTER CITY MENTAL HOSPITAL Humberstone—Locumtenents A.M.O. (male) Salary £10 10s per week.

LIVERPOOL BOOTLE GENERAL HOSPITAL—Hon Orthopaedic S

LIVERPOOL CITY—(1) Full time Pathologist (male) (2) Full time R.A.M.O. for Cleaver Sanatorium for Children Heswall Salaries £750-£937 10s p.a. and £300 p.a. respectively

LIVERPOOL HEART HOSPITAL—Hon Assistant P

LONDON COUNTY—Coroner Salary £1 700 p.a.

LONDON COUNTY COUNCIL—(1) Temporary District M.O. for Area X District H. (Woolwich) Provisional Salary £250 (2) M.O. for Wanstead House Residential Open Air School for Girls, Margate Salary £100 p.a. (3) M.O. (female) for Stamford House Remand Home, Goldhawk Road W Salary 10s 6d per case

LONDON HOMOEOPATHIC HOSPITAL Great Ormond Street W.C.—Gynaecological H.S. Salary £100 p.a.

LONDON JEWISH HOSPITAL Stepney Green E—(1) R.M.O. and H.P. (2) H.S. (3) C.O. Males. Salaries £150 p.a., £100 p.a. and £100 p.a. respectively

MAIDSTONE PRESTON HALL SANATORIUM—A.M.O. (male) Salary £200 p.a.

MAIDSTONE WEST KENT GENERAL HOSPITAL—H.S. (male) Salary £175 p.a.

MANCHESTER ANCOATS HOSPITAL—(1) Orthopaedic Registrar Honorarium £50 p.a. (2) Hon Registrar

MANCHESTER CITY EDUCATION COMMITTEE.—Part-time Psychiatrist for Child Guidance Work Salary £500 p.a.

MANCHESTER ROYAL EYE HOSPITAL—J.H.S. Salary £120 p.a.

MANCHESTER ROYAL INFIRMARY—Assistant Surgical Dental Officer (non resident) Salary £35 p.a.

MANCHESTER AND SALFORD HOSPITAL FOR DISEASES OF THE SKIN—Two A.M.O.s Salaries £100 p.a. each

MIDDLESEX COUNTY COUNCIL—J.R.A.M.O. for Hillingdon County Hospital Uxbridge Salary £250 p.a.

MIDDLESEX HOSPITAL W.—(1) J.M.O. (male) for the Radiotherapy Department Salary £300 p.a. (2) Whole-time Assistant (male) for the Physical Medicine Department Salary £300

MORPETH STANNINGTON CHILDREN'S SANATORIUM—Locumtenent (female) Salary £7 7s per week.

NEWPORT ROYAL GWENT HOSPITAL—H.S. (male) Salary £135 p.a.

NORTHWOOD MOUNT VERNON HOSPITAL—Clinical Pathologist Salary £500 p.a.

NORWICH CITY—Assistant M.O.H. and Assistant School M.O. Salary £600-£25 £700 p.a.

NOTTINGHAM GENERAL HOSPITAL—(1) H.S. for Ear Nose and Throat Department (2) Two R.C.O.s (males) Salaries £150 p.a. each

NOTTINGHAMSHIRE COUNTY COUNCIL—Assistant School M.O. (male) Salary £500-£25 £700 p.a.

OLDHAM COUNTY BOROUGH—(1) Whole time Assistant School M.O. (male) Salary £500-£25 £700 p.a. (2) R.A.M.O. (unmarried) for the Municipal Hospital Salary £200 p.a.

OLDHAM ROYAL INFIRMARY—H.S. Salary £175 p.a.

OXFORD EYE HOSPITAL—H.S. to the Ophthalmic Department. Salary £150 p.a.

PLAISTOW MATERNITY HOSPITAL—(1) R.H.S. Salary £75 p.a. (2) Consulting Paediatrician Honorarium £20 and a fee of £2 2s per lecture

PLYMOUTH PRINCE OF WALES'S HOSPITAL—(1) Hon P (2) Hon P with charge of Out patients (3) Hon Ophthalmic S

PLYMOUTH PRINCE OF WALES'S HOSPITAL Devonport—J.H.S. Salary £120 p.a.

PLYMOUTH PRINCE OF WALES'S HOSPITAL Greenbank Road—(1) R.S.O. (male) (2) H.S. Salaries £225 p.a. and £120 p.a. respectively

QUEEN CHARLOTTE'S MATERNITY HOSPITAL Marylebone Road N.W.—(1) A.R.M.O. (male) (2) Resident Anaesthetist and District R.M.O. (3) Resident Anaesthetist Salaries £80 p.a., £90 p.a. and £100 p.a. respectively

QUEEN'S HOSPITAL FOR CHILDREN Hackney Road E—H.S. Salary £100 p.a.

READING ROYAL BERKSHIRE HOSPITAL—(1) C.O. (2) H.S. to the Special Departments Males Salaries £150 p.a. each

ROTHERHAM HOSPITAL—Casualty H.S. (male) Salary £150 p.a.

ROYAL CHIST HOSPITAL City Road E.C.—Clinical Assistant

ROYAL FREE HOSPITAL Gray's Inn Road W.C.—(1) Senior R.M.O. (male) Salary £150 p.a. (2) Assistant P

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S.E.—(1) R.C.O. (2) H.S. Males Salaries £150 p.a. and £100 p.a. respectively

RUNWELL HOSPITAL FOR NERVOUS AND MENTAL DISORDERS—H.P. Salary £150 p.a.

S.LISSURY GENERAL INFIRMARY—R.M.O. (male) Salary £250 p.a.

SHEFFIELD CITY—A.M.O. (female) for Nether Edge Hospital Salary £350-£25-£450 p.a.

SHREWSBURY ROYAL SALOP INFIRMARY—R.H.S. (male un married) Salary £160 p.a.

SOUTHALL—NORWOOD HOSPITAL—R.M.O. (male unmarried) - Salary £125 p.a.

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL. (1) Senior H.S. Salary £200 p.a. (2) H.P. (3) I.S. (4) Resident Anaesthetist and H.S. to the Ear Nose and Throat Department. (5) C.O. Salaries £150 p.a. each Males unmarried

STOKE-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.

STOKE-ON-TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY—H.S. for Aural and Ophthalmic Department Salary £150 p.a.

STOURBRIDGE CORBETT HOSPITAL—H.S. Salary £100 p.a.

STROUD GENERAL HOSPITAL—R.M.O. Salary £160 p.a.

SUNDERLAND ROYAL INFIRMARY—(1) Two H.S. (2) H.P. Males Salaries £120 p.a. each

SURREY COUNTY COUNCIL—(1) Whole time Resident Medical Superintendent (male) for Botleys Park Colony near Chertsey Salary £1 000-£50-£1 375 p.a. (2) A.M.O. (male) (3) J.A.R.M.O. for the County Sanatorium Milford Salaries £600-£20-£700 p.a. and £350 p.a. respectively

TAUNTON AND SOMERSET HOSPITAL—H.P. Salary £100 p.a.

UNIVERSITY COLLEGE HOSPITAL Gower Street W.C.—Hon P in Charge of the Department for Physiotherapy

VICTORIA HOSPITAL FOR CHILDREN Tite Street S.W.—Physiotherapist Honorarium £50 p.a.

WEIR HOSPITAL Grove Road Balham S.W.—J.R.M.O. (male un married, Salary £150 p.a.

WEST HAM COUNTY BOROUGH—(1) M.O.H. and School M.O. (male) Salary £1,500-£50-£1 750 p.a. (2) Second A.M.O. (male) for Central Home Leytonstone E Salary £350-£25 £450 p.a.

WEST SUFFOLK COUNTY COUNCIL—Assistant County M.O. and Assistant School M.O. Salary £500-£25 £700 p.a.

WOLVERHAMPTON COUNTY BOROUGH—R.A.M.O. (male, unmarried) for New Cross Hospital Salary £200 p.a.

WOLVERHAMPTON ROYAL HOSPITAL—H.S.s (unmarried) Salaries £100 p.a. each

WOOLVICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill Hill S.E.—(1) Surgical Registrar Honorarium £100 p.a. (2) Three Hon Anaesthetists

CERTIFYING FACTORY SURGEON—The appointment at Longridge (Lancashire) is vacant Applications to the Chief Inspector of Factories Home Office Whitehall S.W.1 by May 18

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 44 45 46 47 48 49 50 51 54 and 55 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 52 and 53

APPOINTMENTS

LONDON COUNTY COUNCIL.—The following appointments are announced at the hospitals indicated in parentheses *Second Assistant Medical Officers* Eric D. Sands, M.R.C.S. M.R.C.P., D.P.M. (Claybury) James S. Allen M.B. B.Ch., B.A.O., D.P.M. (The Manor Epson)

UNIVERSITY COLLEGE HOSPITAL Gower Street, W.C.—*Assistant Surgeon to the Royal Ear Hospital* Stephen C. Suggett M.B., B.S. F.R.C.S.

CERTIFYING FACTORY SURGEONS—C. F. Fairlie M.D., for the Blyth District (Northumberland) A. K. James M.B., Ch.B., for the Calne District (Wiltshire) C. S. Lewis M.R.C.S. L.R.C.P. for the Staveley District (Derbyshire) G. W. Scott M.D. for the Malvern District (Worcestershire) J. D. B. Vaile M.R.C.S. L.R.C.P., for the Chertsey District (Surrey)

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

MARRIAGE

MADDOX—GILLESPIE.—On April 10 1937 at Upton Parish Church Chester Denis Simpson Maddox to Isabella Anne Gillespie M.B. Ch.B., D.P.M.

DEATH

CRUICKSHANK.—On April 14 at 9 Soho Road Handsworth, Birmingham (suddenly) George Birrell Cruickshank, husband of Margaret Wilkie M.B. Ch.B.

J T INGRAM AND MICHAEL C OLDFIELD HEREDITARY SEBACEOUS CYSTS



FIG 7.—Case II. Walter T. Head and front of chest, showing cysts in region of right eyebrow and scar over front of sternum

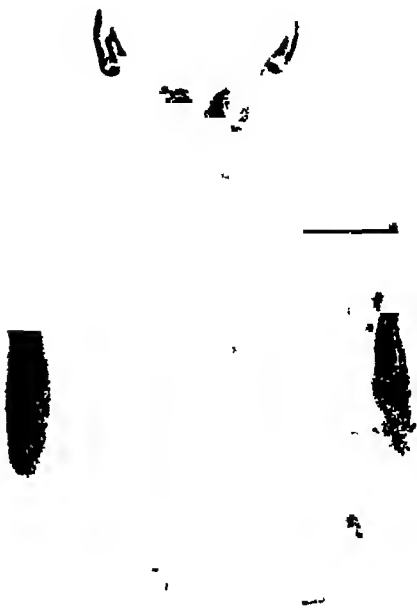


FIG 8.—Case II. Back of chest, showing two cysts to the left of the mid line.



FIG. 9.—Case IV. William T., Dorothy's father. Showing multiple sebaceous cysts on forehead and scalp



FIG 10.—Case IV. Showing cysts on the face and scalp

ROBIN PILCHER "MIXED TUMOUR" OF THE LIP



FIG. 1.—Appearance of the tumour on everted lip

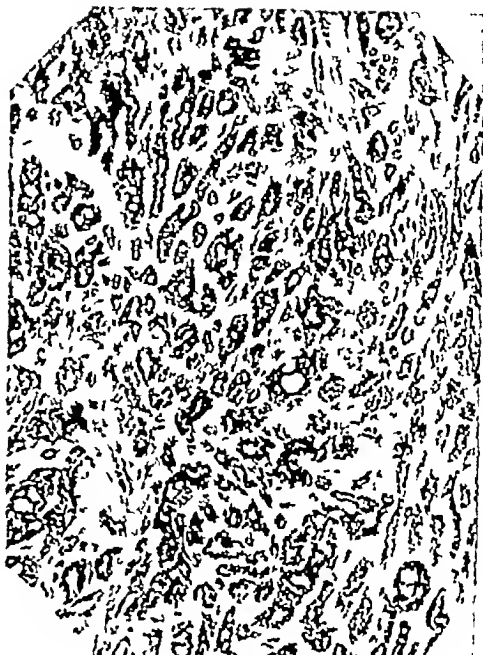


FIG. 2.—General structure of tumour Haematoxylin Eosine
($\times 80$)

A J P ALEXANDER EPILEPSY AND CYSTICERCOSIS



FIG. 3.—Group of acini at periphery of tumour Mucicarmine
($\times 80$)



Radiograph of pelvis and thighs

patients complain early of pains in the bones, particularly in the back, pelvis, and legs. Deformities of the skeleton appear and slowly progress. They are of the type commonly seen in conditions associated with softening of the skeleton. The thoracic cage and pelvis are often grossly deformed, and the spine is shortened owing to narrowing of the vertebral bodies. Kyphosis occurs, with loss of several inches in height. The chest has a deep antero-posterior diameter and distorted ribs, and the abdomen is shortened. The limbs may be irregularly curved and deformed, so that walking becomes at first difficult and then impossible. Occasionally bone tumours or cysts are visible or palpable, especially when they appear in the limbs or jaws. The fingers may show a characteristic deformity, in which the terminal phalanges become shorter and broader than the normal. The appetite fails, there are nausea and vomiting, and the patient becomes extremely weak and may go on to a cachectic state with extreme deformity and helplessness. Treatment at this stage of the disease will not restore the normal function of the skeleton, and it should be our aim to make the diagnosis of hyperparathyroidism before such complications have arisen.

TYPE WITH OSTEOPOROTIC SKELETON

The skeletal changes in this type may be indistinguishable from those of osteomalacia, hyperthyroidism or senile osteoporosis. In all such cases studies of the blood chemistry and the calcium balance are essential.

TYPE WITH RENAL CALCULI

The presenting symptom in this type may be renal colic or haematuria. Skeletal changes may be absent, minimal, or severe. In all patients with renal calculi, especially where they are bilateral, the serum calcium and plasma phosphorus should be estimated in order to rule out hyperparathyroidism.

TYPE WITH METASTATIC CALCIFICATION OF THE KIDNEYS

In this type calcium phosphate is deposited in the substance of the kidney and can be demonstrated in radiographs. Chronic nephritis occurs and as it progresses the plasma phosphorus may rise and the increased excretion of calcium salts may be diverted from the urine to the faeces. Patients with this type of renal lesion may be wrongly diagnosed as cases of chronic nephritis.

Radiological Features

Radiologically the most striking feature is the great lack of calcium salts throughout the skeleton. The cortex of the bone loses its ivory character and may be reduced to a thin uneven linear shadow. The medulla becomes less dense with receding recalcification of the bone pattern at first but later cancellous bone tends to fade entirely. In the skull there is a uniform milky granular mottling with small translucent cyst-like areas. The vertebrae may become biconcave like fish vertebrae and they are then reduced in height. There may be evidence of cysts but these only rarely expand the cortices. At times the cysts are difficult to see so great is the lack of calcium in the surrounding bone. The cystic changes come on late in the disease and their presence is not essential to diagnosis. All the bones of the body may be affected even the phalanges of the hands and feet. Areas of subperiosteal resorption in the long bones and phalanges are common. The pelvis undergoes pressure deformities due to the thrust of the femoral heads; cyst-like areas are common in the pelvic bones. The femora and ribs may bend and collapse.

In estimating the density of the radiographic shadows of bones it is found necessary to use a controlled method. A control subject is chosen of the same sex, age, weight, height and build as the patient. The corresponding limbs of patient and control are placed side by side and exposed simultaneously on the same negative. Where a series of radiographs is taken in one patient the same control subject is used each time. The urinary tract should always be examined for calculi. Where metastatic calcification has occurred in the kidneys it will show in radiographs. On examination of the chest and neck it must be borne in mind that a parathyroid tumour may vary greatly in size and position, and that its shadow may be found in the mediastinum.

Calcium and Phosphorus Metabolism

Increased production of the parathyroid hormone leads to characteristic changes in the calcium and phosphorus metabolism. The serum calcium is raised, and the figures vary between 12.6 and 23.6 mg per 100 ccm. Values as high as 14 mg per 100 ccm are not uncommon. Any serum calcium figure of 11 mg per 100 ccm should be regarded as suspicious, and therefore be repeated. The plasma phosphorus figure is low and may vary between 1 and 2.7 mg per 100 ccm. The combination of this high calcium and low phosphorus figure almost always indicates hyperparathyroidism but in cases in which there is renal impairment the plasma phosphorus figure may become elevated. The plasma phosphatase figure is raised in all cases of hyperparathyroidism in which bone disease can be detected. There are cases without detectable bone disease in which the plasma phosphatase is normal.

An increased calcium excretion in the urine is always present and varies from slightly above the normal to eight times the normal figure. In an uncomplicated case the increased calcium excretion is entirely urinary, the faecal excretion being unaffected. In individuals with renal impairment, however, part of the increased excretion is faecal. There is also an increased urinary phosphorus excretion.

Differential Diagnosis

If the history and physical signs are suggestive of hyperparathyroidism complete confirmation of the diagnosis may usually be obtained in the chemical findings—namely, a high serum calcium, low plasma phosphorus and increased calcium excretion in the urine. In more difficult cases removal of a portion of bone for histological section may be necessary. Without such chemical or histological confirmatory evidence it is not justifiable to explore the parathyroid glands.

The following skeletal diseases are sometimes confused with hyperparathyroidism: osteomalacia, senile osteoporosis, thyrotoxic osteoporosis, osteitis deformans, osteoporosis with renal glycosuria, secondary carcinomatosis of the skeleton, multiple myelomatosis, osteogenesis imperfecta, renal rickets, focal osteitis fibrosa, dyschondroplasia with multiple enchondromata (Ollier's disease), xanthomatosis of bones (Schüller-Christian's disease) and Gaucher's disease.

Treatment

By means of a high calcium and high phosphorus diet it is possible to demonstrate improvement in skeletal calcification but such treatment is contraindicated because it increases the danger of renal complications. No beneficial clinical or metabolic results have been observed in the treatment of hyperparathyroidism by x-irradiation. The treatment is surgical. The parathyroid tumour itself has been palpable in less than 20 per cent of cases.

Even the largest tumour removed, which measured 7.5 by 5 by 1.8 cm and weighed 26.2 grammes, could not be felt in the neck as it was behind the trachea. The patient should be prepared for operation by giving for some weeks a high calcium diet and vitamin D. The neck should be explored through a collar incision and the four sites of the parathyroids examined. The chief operative difficulty is that of finding the tumour. Search must be made from the bifurcation of the carotids to the arch of the aorta. If a single parathyroid tumour is discovered it should be excised but if two tumours are found there is some risk in removing both. In at least six cases the tumour has been removed from the mediastinum. In eight cases two parathyroid tumours were removed, five of the patients survived this drastic treatment and the other three died in tetany. In three cases subtotal parathyroidectomy was performed for the good reason that in each of them two normal parathyroid bodies had already been excised.

When no tumour at all has been discovered removal of one or two normal parathyroid glands has had no permanent good effect. Such an operation does not in fact seem to be permissible for in every case of hyperparathyroidism yet recorded there has been a tumour measuring at least 0.7 cm in its greatest diameter. Moreover, 30 per cent of the deaths recorded after operation have been due directly or indirectly to interference with one or more normal parathyroid bodies. In less than 4 per cent of recorded cases has death immediately followed operation but in 10 per cent tetany or a renal complication killed the patient at periods varying from nineteen days to fourteen months later. Even if we allow that unsuccessful ventures do not always find their way into print the operative mortality is not high, and this in spite of the fact that the technical problems confronting the surgeon may be complicated. Thus in 1931 Walton reported a case in which search in the usual sites of parathyroid glands did not reveal a tumour and a small mass in the lower part of the thyroid gland was removed in the belief that it might be a parathyroid tumour. However on section this proved to be thyroid tissue, and since its removal was not attended by any material chemical changes in the blood Walton opened the wound five days later. He then incised a deep layer of the cervical fascia which forms the bed of the thyroid gland and two parathyroid tumours were found and removed. One tumour was lying behind the oesophagus and the second—and larger—retrosternal tumour was lying in front of the second and third thoracic vertebrae. Since learning of this experience others have realized that previous unsuccessful explorations have been incomplete. In one such case seven exploratory operations were performed in the course of six years the tumour being found ultimately only by dividing the sternum (Churchill and Cope 1934). The ordinary post operative treatment should include a high calcium diet, vitamin D, and ultra-violet irradiation. Rarely in cases in which giant-celled tumours have destroyed a bone amputation is necessary. Operation upon the kidneys may be required for renal calculi.

EFFECTS OF TREATMENT

Removal of a parathyroid tumour brings about dramatic changes. Many crippled patients have been able to dispense with sticks and crutches. Usually for some reason not yet clear, pain in the bones goes away immediately. Spontaneous fractures often heal as readily as cases of fractures in healthy bones. Decrease in size of osteoclastic tumours of bone within a few weeks of operation on the neck has now been many times recorded. The

effect of treatment in increasing the density of bone is really remarkable, and controlled radiographs have demonstrated this point now many times. There is marked gain in weight. It is interesting to note that the symptomatic changes bear no relation to the size of the tumour. Thus a woman of 37 after four years of total crippledness including great bone deformities and destruction of hip-joints and shoulder-joints, had a tumour weighing only 1.3 grammes removed, and is now able to walk with sticks and to sew and knit.

As a rule the level of the serum calcium and plasma phosphorus and the excretion of calcium and phosphorus in the urine are restored to normal. Sometimes, indeed, there is temporary hypocalcaemia and even oliguria. Latent tetany after operation has been common, and manifest tetany has often occurred—followed by death in four cases. In one published case tremor and acute mania came on three weeks after operation, at a time when the serum calcium had dropped to 6.6 mg per 100 c.c., but the condition was completely relieved in three days by giving injections of the parathyroid hormone in conjunction with a preparation of calcium administered intravenously. This must undoubtedly be regarded as the essential treatment of severe post operative tetany after removal of a parathyroid tumour.

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VOLUNTARY HOSPITALS. A FEDERATION SCHEME

RECOMMENDATIONS OF SANKEY COMMISSION*

Nearly two years ago at its annual conference the British Hospitals Association resolved to appoint a Commission to consider the present position of voluntary hospitals and how far, in view of legislative and social developments, steps should be taken to promote their interests and safeguard their future. A commission of ten members was set up under the chairmanship of Viscount Sankey. The members of the medical profession on the Commission were Sir Henry Brackenbury, Professor L S Dudgeon, Colonel D J Mackintosh and Provost A W Sheen, and the others were Miss Bartleet, an alderman of the Birmingham City Council, Mr Alan Davies a former mayor of Wolverhampton, Mr H L H Hill a past-president of the Institute of Chartered Accountants, Miss E M Musson, chairman of the General Nursing Council, and Sir Reginald Poole a past president of the Law Society. Mr R H P Orde, secretary of the British Hospitals Association, acted as honorary secretary.

The Commission began its work in January, 1936 and it was intimated that a report might be expected by the following June. The fact that the Commission has taken fifteen months over its report indicates the complexity of its task. The hearing of evidence occupied twenty-one sittings. The Royal Colleges, the British Medical Association (through Dr Peter Macdonald, chairman of the Hospitals Committee, and Dr Charles Hill, Deputy Medical Secretary), the Medical Superintendents Society, the

* Report of the Voluntary Hospitals Commission. British Hospitals Association, 12, Grosvenor Crescent, London SW1 (its net is 2d post free).

Socialist Medical Association, and the College of Nursing were among the bodies which tendered evidence

General Survey

The report begins with a tribute to the voluntary system. The strength of that system resides in the spirit of co-operative endeavour which inspires it and in the freedom of administration which it permits. It is in such an atmosphere that medical education, for which the voluntary hospital system has long been responsible, best flourishes. But the system has its weaknesses, chiefly the difficulty and uncertainty of finance. Its position is affected by the rise of the public authority system of hospital and health services, but there seems to be no reason why for many years to come the two systems should not advantageously exist side by side, learning from and co-operating with each other. Some form of co-operation was projected under the Local Government Act 1929, but the obstacle to bringing such co-operation about is the looseness of the organization on the voluntary side. The thousand voluntary hospitals in this country, unlike the council hospitals, have no adequate authority to bring them together for corporate discussion in their respective regions with official bodies.

In a leading article in the *British Medical Journal** at the time the Commission was set up it was suggested that its most important task would be to recommend a suitable form of organization and machinery of both a regional and national character for bringing about some kind of federation among voluntary hospitals. The difficulties, however, were not disregarded. Areas differ in character. Local pride and enthusiasm are important elements in hospital support. In certain towns there is rivalry, with its good and harmful aspects, between the hospitals. Methods of management and monetary collection are varied. Elasticity in detail must be maintained, regimentation and bureaucratic control avoided. It would not be possible to reduce all hospitals to a common denominator and exceedingly unwise if it were. Moreover some hospitals are redundant and yet must be preserved. Donors and testators cause buildings to be erected and endowed in places already amply served, or build hospitals without providing for their equipment still less for their maintenance so that the neighbourhood is saddled with the necessity for charitable appeals. One of the principal things that a body which could speak for all hospitals in a locality might do would be to educate hospital benefactors.

Co-operation Among Hospitals

The outstanding recommendation of the Commission is that the country should be divided into regions corresponding presumably to the present regions of the British Hospitals Association (of which there are twenty-three, one of them covering the whole of Scotland) and that in each region there should be a council to correlate hospital work and needs. These bodies would have no coercive powers but they would of course exercise a good deal of authority. To avoid inconsistency and diversity of decisions as between regional councils it is also proposed that a central council be established consisting of delegates from the regions with other persons of national standing which would advise the regional bodies. The British Hospitals Association is the only organization representative of voluntary hospitals as a whole. Admittedly it has its defects and shortcomings. It was likened by one witness to a schoolmaster without a cane endeavouring to keep order among a thousand

mischievous boys. But the Commission feels that it is the obvious body to take the initiative.

Those who recall recent hospital history will be reminded of Lord Chancellor Cave's Committee in 1921 which resulted in the setting up of a voluntary hospitals commission with local committees. It is rather an unhappy precedent for the organization failed to bring about the necessary reforms, it never secured the hearty support of the hospitals themselves, and gradually ceased to function. But much has happened during sixteen years. In 1921 the council hospital had not appeared above the horizon and there was no external menace to induce the hospitals to give up their cherished autonomy. To-day the hospitals themselves are demanding the very reforms which the Cave Committee urged upon them and which they neglected to carry out.

Already in some areas action has been taken to prevent uncontrolled hospital building and to bring about co-ordination. In Manchester an advisory board has been set up to guide public opinion and philanthropic effort *in the right direction*. In Oxford an attempt is being made to bring about a reasonable degree of co-ordination of hospital services in the Radcliffe Infirmary area and there are similar efforts in Liverpool and Sheffield.

Central and Regional Organization

What would the proposed central and regional councils do? The central council would be able to indicate the extent of each region and would put neighbouring regions in contact so that there would be no overlapping and no gaps. Eventually a complete mapping of the country into regions would be obtained, and in each region the location and character of the hospitals, their accommodation and their relationship to the distribution of the population and to the council hospitals would be clearly established. The important duties of the regional headquarters would be to receive such daily information from the hospitals as would enable them to maintain a list of empty beds, to know where patients could best be sent according to their disabilities to arrange transfers, and to avoid waiting lists. They would keep records of patients and with the patients' consent would furnish to hospitals and medical attendants relevant information therefrom. They would control an ambulance service, keep a list of blood donors, form a centre for social service co-operating with the almoner service of the hospitals and collect and supply morbidity statistics. Among their other duties would be to bring about the adoption by hospitals of joint purchasing schemes to advise on hospital building enlargement and development to analyse the finance of individual hospitals so that comparisons of expenditure could be made, and to co-operate in publicity.

The grading of all the hospitals in the region would be carried out by the regional council. Hospitals would be divided into central district, and cottage hospitals. A central hospital would make a maximum provision for investigation and treatment of patients, be staffed by consultants, have a large number of beds and be in or adjacent to a large town. A district hospital would have complete provision for dealing with ordinary maladies, its staff would consist wholly or partly of general practitioners chosen for their abilities in particular directions, it would have not less than 100 beds and be situated in or near a medium sized town. The cottage hospital would make only partial provision for patients, be staffed by all the local practitioners, have a small number of beds but not less than twenty, and be situated in a small town or country district.

Hospital Finance

The voluntary hospitals are, taken as a whole, financially solvent, with an annual maximum surplus of over one million. But, as we have pointed out more than once in discussing the hospital statistics for the year, this is the result of pooling on paper a thousand separate exchequers, some with surpluses but others with deficits, which actually are never pooled and have no more in common than banking accounts of competing firms. The Commission believes that if the thousand hospitals were able to distribute their total annual income in accordance with their individual needs their financial position would not be unsatisfactory. It recommends as a first step the creation of regional funds on a basis similar to that of King Edward's Hospital Fund for London. Such funds would have the double advantage of creating new sources of support and of educating donors to help the hospitals as a whole with the knowledge that their contributions would be directed into deserving channels.

On the subject of State subsidies the Commission pleads for a realistic view of the situation, without too much regard to precedent. The work undertaken by voluntary hospitals is of national importance, and if voluntary effort cannot find the money for it any traditional disinclination to accept money from the State should disappear. The State does in fact already contribute towards the cost of treatment of certain classes of patients, and it recognizes the responsibility of the hospitals for the education of the doctor and the nurse. All that remains to be considered is the adequacy and the method of payment.

Each of the proposed regions would be self limited as regards collection of funds. All hospitals should endeavour to arrange their collections so as not to "poach" but it would be equitable for the central hospitals to seek financial support over the large areas which they serve, although such areas include those of the smaller hospitals, while the teaching hospitals might justifiably seek benefactions even more widely.

The Commission welcomes the establishment and growth of contributory schemes and approves the income limits laid down in the Hospital Policy of the British Medical Association.

Accommodation

The Commission then goes on to consider a number of questions which might not be regarded as strictly within its terms of reference, but rather to be referred to the central council when appointed. It is generally accepted that bed accommodation should be equivalent to two beds per 1,000 of population, but there must be variations according to district. The provision of auxiliary hospitals—a better name than convalescent homes—would be an enormous relief to the general hospital, assisting a much more rapid turnover of patients. The further establishment of special hospitals devoted to particular classes of disability or special sections of the population is, generally speaking, to be deprecated as making for rigidity of accommodation. Efficient and speedy co-operation between hospital and outside nursing services is to be encouraged. Every hospital should seek the greatest possible elasticity in the allotment of its beds to various classes of patients. It would assist the problem of accommodation if specialist members of the staff of the central hospital would act as visiting consultants to smaller hospitals in the region.

The Commission regards it as the duty of voluntary hospitals to provide beds for paying patients, and, as

far as administrative arrangements permit, the patients should have free choice of medical attendant. The establishment of provident schemes for paying patients of moderate means is to be welcomed.

With regard to out patients the Commission has taken cognizance of the view expressed by the British Medical Association that attendance should be restricted to casualty cases, cases bringing a recommendation or letter from a practitioner for a consultative opinion cases which, following upon such consultation, are found to require special treatment not conveniently obtainable elsewhere, and cases of discharged in patients requiring special treatment for a further period. It agrees that ultimately it may be found possible to restrict the department in this manner, but it holds that there are persons of small financial means—dependants of lower wage earners insured under the national health insurance scheme, and some others of like status—who should be kept in view, and it might not be advisable to insist on such a restriction at present.

The Visiting Medical Staff

On the question of appointment of the visiting medical staff the Commission considers that the appointing body constituted by the board of management should be small. It is unwise to make appointments by mass meetings. Appointments should be for a term of years, but renewable, it is not to be anticipated that the appointment would normally terminate before the age limit was reached (60 is suggested), but such a provision would be a safeguard. The Commission has taken note of the report of the Linlithgow Committee on payment of medical staffs, and states that all the evidence it has heard goes to establish the principle of such payment. The principle does not apply with quite the same force to members of staffs of teaching hospitals, who have in their position a professional asset of considerable value, or to staffs of hospitals with a large number of pay beds, though the advantages of such positions are subject to some qualifications. While the general principle of payment is approved no universal application of the principle can be expected immediately, local opinion must be allowed to grow. A part-time honorarium or salary will probably be found the best method, but it must entail a statement of duties undertaken and an obligation to fulfil them more exactly than has sometimes been regarded as necessary.

On the special position of the teaching hospital the Commission considers that financial support for medical education should include adequate attention to the part which the teaching hospital plays. Such a hospital must include in its work the care of all classes of disabilities in sufficient numbers to meet students' needs. It should receive patients in the early stages of disease who might otherwise receive preliminary treatment elsewhere. Its out-patient department must cover as wide a range of maladies as possible, and retain patients in a way not necessary in other hospitals in order that they may be observed to a conclusion.

Finally the relationship between voluntary and council hospitals is glanced at. The growing realization of interdependence is welcomed, and representation of local authorities on regional councils and of the Ministry of Health on the central council is suggested. The Commission realizes that many of its recommendations are already fulfilled in greater or less degree but it desires to bring about a complete system of hospital co-operation.

CARE AND AFTER-CARE OF THE TUBERCULOUS

EMPIRE CONFERENCE IN LONDON

Under the auspices of the Overseas League and the Papworth Village Settlement an Empire Conference on the Care and After-care of the Tuberculous was held in London at Overseas House St James's during the past week. It was attended by delegates from India, Canada, South Africa and the Colonial Empire, members of the tuberculosis services in the United Kingdom, and representatives of the medical services of the Royal Navy, Army and Air Force. The first three days were devoted to discussions and later in the week Papworth and other centres of interest were visited. The Marquess of Willingdon presided over the opening session and read a message from the patron of the Conference the Duke of Kent, who referred to the movement as a "splendid gesture of co-operation between the medical services of the British Commonwealth of Nations".

Inaugural Address

SIR KINGSLEY WOOD the Minister of Health delivered an inaugural address. Until some ten or eleven years ago he said tuberculosis stood first amongst the principal epidemic or general diseases as a cause of mortality. To go further back during the period 1851-5 it was responsible for a death rate of 3,638 per million of population. Since then however the statistics had shown a continual decline, and in 1935 the standard death rate was 687 per million. At the same time he deprecated any spirit of complacency. Tuberculosis still stood next to cancer in the list of killing diseases. After discussing briefly the public measures against tuberculosis including those taken under national health insurance Sir Kingsley Wood said:

I think we can point with a measure of satisfaction to the position to-day. The material growth of schemes in England and Wales can be judged from the fact that as against 5,200 beds in 1911 there were at the end of 1935 some 29,000 in approved institutions of which approximately two-thirds were institutions belonging to local authorities who also contribute largely to the maintenance of voluntary institutions. I do not think I exaggerate the position when I say that the country is covered by a network of tuberculosis dispensaries with an attendant staff of officers and visitors working in touch with general practitioners and the medical officers of health of the local sanitary authorities.

But much ground remained yet to be covered, and the winning of it was a worthy task.

Modern Outlook on Tuberculosis

SIR ARTHUR MACNALLY Chief Medical Officer to the Ministry, who followed contrasted the pessimistic outlook of earlier times with the reasoned optimism of to-day, though there were in the dark ages of tuberculosis treatment some progressive physicians who anticipated the modern view. Robert Graves (1796-1853) familiar for his work on exophthalmic goitre was one who realized that the cure of tuberculosis was possible not only in the early stages but in stages of moderate advance with cavities. Koch's discovery of the tubercle bacillus enabled a more scientific approach to be made. Opinion gradually grew in favour of the open air method for consumptives and systematic sanatorium treatment was stimulated by the work of Brehmer at Gorbardsdorf of Walther at Nordrach of Robert Philip and Marcus Paterson in this country and by the establishment of the sanatorium at Midhurst.

The medical practitioner now treated tuberculosis with greater hope and more success. He had found in artificial pneumothorax a valuable aid in the treatment of cases in early and moderately advanced stages. More work was being done to-day in thoracic surgery. Lives were prolonged by thoracoplasty and other forms of

collapse therapy. Here a judicious selection of cases was all important. It must be remembered that pulmonary tuberculosis still revealed itself by physical signs and symptoms and that palpation percussion and auscultation were not displaced but reinforced by radiography. After glancing at the work done on surgical tuberculosis Sir Arthur MacNally concluded with the remark that tuberculosis was no longer to be relegated entirely to the physician or surgeon. Its social implications were far-reaching. It was for this reason that sanatorium benefit was embodied in national health insurance in the early days and this had led to the tuberculosis schemes of local authorities. The public had co-operated splendidly in taking advantage of the facilities provided. Voluntary and lay workers had laboured side by side with professional workers, and had seen their reward in a steady decline of the tuberculosis death rate year by year. It was said of a French marshal that he knew how to win victories but not how to make use of them. It was not enough to lessen the death rate the sociological side of the matter must receive attention, and here he extolled Papworth as an example.

The Problem in India

The first speaker from overseas was Major-General Sir CUTHBERT SPRAWSON director general of the Indian Medical Service. The steady decline in mortality from tuberculosis in Great Britain, he said, was not matched in some overseas countries of the Empire, certainly not in India. The incidence of mortality from tuberculosis in India was really not known except so far as the Army and the prison population were concerned. The Public Health Commissioner of the Government of India in his latest report estimated that there were about two million cases of tuberculosis in the country and this figure was probably below the mark. Many cases went undiagnosed and unreported. Even as it was, in the cities of Poona and Ahmedabad one out of every twelve deaths and in Cawnpore one out of every eleven, was due to tuberculosis. While the English city of Ipswich had a death rate from pulmonary tuberculosis of only 52 per 100,000 population that for Calcutta in 1934—and it was probably an under estimate—was 240. There was a general feeling, moreover, that the incidence was increasing. Twenty years ago the Government of India appointed an expert Dr Lankester, to examine the question, and he reported then that tuberculosis was on the increase and since then much industrialization had taken place. It was the general experience that industrialization especially if not well controlled and the migration of the rural population into cities, was accompanied by a higher disease rate.

Canada and South Africa

Dr R. E. WODEHOUSE Deputy Minister, Department of Pensions and National Health, Ottawa gave a brief account of the Canadian position. The death rate for tuberculosis (all forms) was 60 per 100,000 population in 1900 it was 180. This figure included the deaths among North American Indians, in whom the disease had a high prevalence. In its care schemes Canada was following American rather than British practice.

A report was to have been given by Dr B. A. DORMER representing the medical services of the Union of South Africa but in his absence through illness it was made by Dr A. D. PRINGLE the representative of the Transvaal Chamber of Mines. The tuberculosis death rate among the two million Europeans in South Africa was on the whole more favourable than in European countries but among the seven million coloured persons it was certainly alarming. The notifications of tuberculosis in 1936 were Europeans 792 non-Europeans 8,755.

Dr Pringle made his own report later on the conditions on the Rand and in the Transvaal and Natal generally among the European population. He described as connected with the mining industry four institutions for the care of the tuberculous. The first was the Springbok

Sanatorium, Johannesburg which was divided into three sections—for silicotics, for early cases of tuberculosis, and for advanced cases. The others were the South African Institute for Medical Research, the Medical Bureau of Examiners (who examined all applicants for underground work) and the Miner's Phthisis Compensation Board. A miner who had silicosis in any of its stages and developed tuberculosis as a complication was immediately put off work and received a pension, varying with his family circumstances of from £12 to £22 a month. The underground worker who suffered from pure tuberculosis received a lump sum payment of some £600 or £700, but had no legal pension. Dr Pringle gave an account of the help apart from monetary compensation, which the gold mining industry gave to tuberculous employees especially in finding them suitable employment if they could undertake it, and in looking after their children. Among miners engaged since the establishment of the Bureau of Examiners in 1916 the tuberculosis prevalence was about the same as among members of the Royal Air Force. Speaking generally, there had been a fall of some 66 per cent. in the prevalence of tuberculosis among European miners.

African Native Races

Professor S LYLE CUMMINS said that there was a more hopeful aspect of the tuberculosis problem as relative to communities of a primitive cultural type. The admittedly high susceptibility to the disease among African natives was far more marked when they were exposed not only to infection but to severe industrial stress or unfavourable environmental conditions. Under their own natural or tribal conditions of occupation, diet, housing and social life, tuberculous infection was on the whole fairly well tolerated and might even assume a more or less "European" clinical type permitting a long survival and being amenable to treatment. Thus there was scope for well-organized and scientifically planned tuberculosis schemes adapted to native custom and tradition and within the economic power of the Governments concerned. He paid a warm tribute to the voluntary efforts of Christian missions. Only those who had visited the Franschoek and the Ciskoi could appreciate sufficiently the unstinted devotion and admirable scientific accomplishment of such men as McVicar of Lovedale, Drew of the Holy Cross Mission and the missionaries and nurses at St Cuthbert's. It was to be hoped that the Government would follow the medical missionaries in adapting its developments to native customs and preferences, stressing the medical as opposed to the administrative side of the work, and saving the public purse from the unnecessary drain of marble halls for the patients, expensive accommodation for staffs and 'the beautiful perfections of sanatorium construction so dear to inspecting officers and so dreaded by the simple and illiterate natives.

He also mentioned the great sanatoriums of Nelspoort and Springkell, the former designed very much on the architectural lines of Midhurst. For these up-to-date and efficient institutions South Africa was indebted to the late John Garlick of Capetown—a man who expressed quite definitely the Papworth idea adapted to South African, and especially to native conditions—the Chamber of Mines at Johannesburg and the Union Government.

Sociological Implications

In presiding over the second session of the Conference VISCOUNT DAWSON OF PENN referred to the movement in this country towards an improved standard of physical fitness. But physical fitness was not going to be produced only by change of environment. Heredity had its application in this particular problem. If there was to be a fit race care must be taken for all people suffering from communicable disease. Care and after-care for example of an open case of tuberculosis was not only an act of mercy—or of justice—for the unfortunate individual but an act of necessity for the health of the community. The growth of knowledge on the one hand

and of social conscience on the other had led to the saving of many who in previous generations would have been removed by death. But herein lay a danger. People who were patched up were not good begetters of the next generation and the more patched up lives that were saved the greater the danger. This was an argument not for relaxing in the least the care of those who could only be patched up and not be cured but for separating the two classes. Unless that were done, the bestowal of kindness and care to-day might result in the infliction of injustice on the next generation. Papworth did recognize that demarcation between the two groups of cases and while recognizing it, cared efficiently, mercifully, and kindly for both.

Tuberculosis and City Environment

Dr S VERE PEARSON the new chairman of the Joint Tuberculosis Council, spoke on factors in city life which favoured tuberculosis. Was it realized that London was thirty miles across? Capital cities were sucking up the people from the rest of the country. The conditions of such concentration which seemed to have a bearing on the prevalence of tuberculosis were (1) the time and energy wasted in travelling to and from work, (2) the growing difficulty of obtaining open air recreation within reasonable distance (3) the anxiety associated with city environment. Yet a town healthily planned might have a low death rate. The tuberculosis death rate for Letchworth was only 38 per 100,000 as compared with 46 for Hertfordshire and 60 for Norfolk.

The same subject was dealt with by Dr F R G HEAF of the Public Health Department, London County Council. He said that the average rate of incidence of pulmonary tuberculosis for outdoor manual workers was greater than for indoor non manual workers, and quoted figures which he said, were a severe criticism of the old idea that an open air occupation was essential for the tuberculous patient. The figures also showed that the class which endured the hardest physical strain, received the lowest wages, and spent the smallest amount on food was the one most prone to tuberculosis. The vast majority of adults (assuming they did not receive a very massive dose of tubercle bacilli) would remain free from active tuberculosis even if they came into contact with infection quite often provided they were well nourished and not subject to excessive physical and mental strain.

Environmental Factors

Finally, Sir PENDRILL VARRIER JONES medical director of Papworth declared that tuberculosis must be regarded as a disease which had its roots in the social structure. To regard it from a purely medical point of view was as wrong as it would be to ignore the bacillus itself. What was it that governed susceptibility and resistance? Not merely material conditions, but a mental state. The mental state which predisposed to tuberculosis was brought about by an imbalance of the endocrine system, which somehow upset and undermined resistance to disease. The means by which this mechanism operated needed to be carefully studied and research of an intensive kind along these lines ought to be undertaken. From twenty-one years' observation at Papworth he was confident that much more than material conditions were responsible both for their well being and for their success in keeping disease in check.

The speaker complained of the persistence of a mediaeval outlook whereby diseased or disabled persons were regarded as inferior creatures. The man who had contracted tuberculosis had done nothing wrong, often he was a victim of civilization and should be compensated for the wrong done to him.

It may be asked why the medical profession should concern itself with these matters. Is the physician to be a jack of all trades with a little knowledge of medicine, a little of sociology and a little of economics? My answer must be prefaced by another question. Is it not true that unless socio-

logical and economic factors are correlated with medical treatment the tuberculosis problem is in the present state of knowledge insoluble? If the answer is in the affirmative then surely the medical profession must so concern itself. It is beyond question desirable that the physician should know something of humanity and human aspirations something of wages and hours and problems of management. If he will co-operate with his patients using and supplementing their knowledge and letting them use and supplement his he will succeed in assisting them rapidly and surely towards recovery.

Tuberculosis in Countries of the Empire

The third session of the Conference was presided over by Lord HORDER who said that the tendency to speak of tuberculosis as being under control in this country struck him as an over statement. It was true that the morbidity and mortality rates during the last two generations in Great Britain showed considerable improvement yet John Bunyan's striking description of tuberculosis as one of the

Captains of the men of death remained true. Tuberculosis still accounted for six times as many deaths as happened on the road. It was a lugubrious thought that during the twenty four hours since the Conference had opened ninety deaths had occurred in Great Britain from this disease in one form or another. In some parts of the Empire the mere diagnosis of tuberculosis struck a death knell, as it did in this country a few generations ago. In many countries the equipment necessary for carrying out treatment during the active stage of the disease and the provision for the very necessary after treatment was lacking. The virulence of the disease elsewhere was also much greater than in this country. The process of racial immunization was only beginning in some of those parts of the Empire for which they were responsible.

Dr R. J. COLLINS representing the Canadian Tuberculosis Association gave some account of Canadian conditions especially in his own province of New Brunswick. Each Canadian province had developed its tuberculosis work on its own lines. Something was done in the way of vocational training supplemented by the placing of men in sheltered employment.

The Government of Australia was represented by Dr A. J. COLLINS who detailed the public health measures put into force against tuberculosis more particularly in New South Wales. A village settlement on the principle of Papworth was in embryo. Pulmonary tuberculosis was not as serious in Australia as in many parts of Europe. The climate did not favour the disease and the cities were not congested. The death rate from pulmonary tuberculosis in New South Wales was only 35 per 100,000 of population ten years ago it was 44 and in 1875 it was 114. A good deal had been done in the way of public education. Something remained to be done in propaganda among the medical profession. It was only a small proportion that was at fault in lax notification with delay in treatment but the effectiveness of the public health measures were thereby to some extent stultified.

Fight Against Tuberculosis in Wales

Dr D. A. POWELL, principal medical officer of the Welsh National Memorial Association said that the disease continued to exact a heavy toll from the Welsh people particularly in the western and north western seaboard counties. The death rate in 1936 was 85 per 100,000. It had fallen since 1911 by 43.5 per cent. What was the cause of the high incidence? It could not be the germ. Even the most ardent nationalist had not yet isolated a Welsh strain of the bacillus. It must be the intense conservatism of social habits and the closeness and density of the family relationship. Kinship was recognized to the eighth remove in Wales. Three occupations of the country added to the liability: coal mining, quarrying and seafaring.

The later proceedings of the Conference including Sir HENRY GALVIN'S address on some problems of surgical tuberculosis will be referred to in the next issue.

DOMICILIARY MIDWIFERY SCHEME FOR LONDON

At its meeting on May 4 the London County Council was informed of the progress made with the preparation of proposals for giving effect in London to the requirements of the recent Midwives Act for the provision of a domiciliary service of midwives adequate to the needs of the county.

It is proposed to organize the services under the Act in five areas: the first comprising the eastern and north-eastern boroughs, the second the City and certain adjacent boroughs, the third the western and north western boroughs, the fourth the south-western and some of the south-eastern boroughs, and the fifth the remainder of the south-eastern area. Each area will have a complete and as far as possible self-contained domiciliary service. Hospital accommodation when required will be provided by the Council, the voluntary hospitals and the borough maternity hospitals. Domiciliary confinements and maternity nursing will be undertaken by midwives employed either directly by the Council or indirectly through voluntary hospitals and other voluntary agencies. At the same time, says the report of the Hospitals and Medical Services Committee, there will be ample scope for general practitioners and private practising midwives.

Medical aid for domiciliary cases will be provided either by the voluntary hospital concerned or by a panel of medical practitioners approved by the Council after consultation with the Metropolitan Counties Branch of the British Medical Association and large enough to give the patient a free choice of doctor. It is hoped that where voluntary hospital medical schools are concerned the opportunities for training in the neighbourhood of each hospital will as far as possible be at the disposal of medical students in preference to pupil midwives. Every care will be taken to safeguard the right of the mother to free choice of midwife.

For the purpose of calculating the amount of grant to voluntary hospitals and maternity homes the arrangement for the first year (subject to revision afterwards in the light of experience) will be on the assumption that a midwife can undertake eighty cases a year either acting alone or accompanied by a medical student or 100 if pupil midwives are associated with her and the cost of a whole-time midwife's service including cost of relief and allowance for equipment and travelling will be computed at £250 a year. The grant will be 75 per cent of the cost calculated on this basis—that is £187 10s., being equivalent to a payment of £2 6s. 10d. per case attended by a midwife either acting alone or accompanied by a medical student and £1 17s. 6d. a case if a pupil midwife is associated with the midwife. Contributions received from patients will be deducted from the Council's grant. A different procedure is followed in calculating the grant to district nursing associations (which will be concerned mainly with maternity nursing and with the provision of relief for the Council's midwives).

Number of Midwives to be Appointed

At present there are 253 independent midwives engaged in domiciliary midwifery in London. Of these fifty-one are employed by private nursing homes. Of the 63,684 births occurring in London in 1935 22,698 took place in the home and of these 8,303 or 36.6 per cent were attended by independent practising midwives 5,720 or 25.2 per cent by general practitioners and the remaining 38.2 per cent by voluntary organizations (8,303) or by borough midwives (366).

On these figures and having regard to the demand which the Council is likely to have to meet when the new service is in operation and to the tendency to resort to hospitals for confinement the Council makes the conservative estimate that after allowing for the services of

the voluntary agencies and of the midwives employed by some of the metropolitan borough councils, forty two salaried midwives will be required to be appointed by the Council for midwifery and maternity nursing. For purposes of relief the equivalent of a further six salaried midwives will be required. The salary proposed for the midwives to be employed directly by the Council is £200 a year, rising by annual increments of £12 10s to £250, and after a further period of four years, by the same annual increments to £300. Allowances of £38 will be made for uniform, laundry, telephone, and travelling expenses. The midwives equipment and sterile outfits will be provided by the Council. In making appointments preference will be given to thoroughly competent independent midwives practising in London. It is not proposed at the outset to differentiate between fully trained nurses and midwives holding only the C.M.B. certificate, or to exclude married women provided they are able to undertake full time employment.

A uniform maximum fee is to be charged for attendance by any midwife under the Council's proposals of £2 for a first confinement by a midwife and £1 10s for subsequent confinements and £1 10s for attendance of a maternity nurse. For the purposes of deciding whether any part of this fee shall in any case be remitted having regard to the circumstances of the patient or liable relatives, a uniform method of assessment has been worked out and was placed before the Council. In these rules special consideration has been given to the manner of dealing with maternity benefit, and certain concessions are made which it is thought will be reasonable and fair in the interests both of the mother and the Council. The Council has endeavoured in computing the assessable income, to ensure that family circumstances are not straitened at this period, and that good and ample nourishment is afforded during confinement.

THE NATIONAL BIRTH CONTROL ASSOCIATION MEDICAL CONFERENCE, EDINBURGH

A well attended conference on the medical aspects of contraception, organized by the National Birth Control Association, was held on April 30 in the Hall of the British Medical Association, 7, Drumsheugh Gardens, Edinburgh.

In a speech of welcome Mr DOUGLAS MILLER, chairman at the opening session, defined the aims of the association as the promotion of the physical fitness of the mother and her children by such advice and help as would result in a rational spacing of birth or in the prevention of conception in cases in which pregnancy would be detrimental to health. To this end it was necessary to collect and co ordinate the observations and experiences of research workers and clinicians so that the best possible advice might be placed at the disposal of those whom it would help. It was also essential to organize and equip voluntary clinics, of which there were now between fifty and sixty throughout the country. Mr Miller stressed the fact that clinics under the auspices of the association gave advice not only on the prevention of pregnancy but also on problems of sterility and marital maladjustments. The chief purpose of the afternoon discussion was to assess the relative value of the various methods of contraception, and in particular to distinguish those which were harmless and effective from those which were not.

Contraceptive Technique

Dr HELENA WRIGHT said that the contraceptive technique taught at birth control clinics aimed at the provision of a mechanical barrier against direct insemination and of a harmless chemical spermicide, which might be supplemented by a douche. It was necessary that the

methods adopted should be effective harmless easy to learn cheap, and acceptable to both parties. These were the standards in terms of which practitioners at the clinics and in private practice should examine the methods offered for their consideration. That the technique adopted at English and Scottish clinics was effective was shown by a statistical analysis of their results carried out in 1934. In a very large series there were 5 per cent. of "accountable" failures—namely, failures explicable by an omission to carry out the whole or part of the instruction given at the clinic—and from 1 per cent to 2 per cent unaccountable failures—namely those for which no such cause could be found. The main difficulty in making statistical studies was that a large proportion of patients did not return to the clinics for re-examination after being taught the methods. In this respect, however, matters were improving. For instance, several years ago at the North Kensington clinic 60 per cent of the patients failed to return after their first visit, two to three years ago the proportion had fallen to 40 per cent, and recently to only 10 per cent. In Dr Wright's view the most important lines of investigation were concerned with the vulnerability and resistance of spermatozoa and the discovery of highly effective, clinically acceptable spermicidal substances. On the psychological aspect it was more difficult to generalize, but it could be stated that no method would be used continuously which was a source of annoyance to either partner.

In the discussion that followed questions were asked on whether methods of contraception were modified in cases of cervical erosion and leucorrhoea, the teaching of patients before marriage, the safe period as a method of contraception, the possible damage to the foetus from a chemical should conception occur, the possible clinical application of the Ogino Knaus method, sterilization as a means of contraception, including x ray sterilization, and whether a speculum examination was necessary before giving advice.

Chemical Contraception

At the second session Professor F A E CREW, director of the Institute of Animal Genetics, Edinburgh introduced Dr JOHN R BAKER, lecturer in cytology, and referred to the interesting scientific work he was doing at Oxford.

Dr Baker describing the work on chemical contraception which had been carried out under a grant from the Birth Control Investigation Committee by himself and his co-workers in the Sir William Dunn School of Pathology, Oxford opened with a plea for a more logical terminology in chemical contraception proposing that solid products should be called gel (jelly), fatty, or tablet suppositories, while the terms paste, 'mucilage, and 'ointment' should be used for semi fluid products. The name jelly had been applied loosely to thick, aqueous products properly designated as pastes. In view of the great complication of modern contraceptive methods there were he held considerable advantages in the simplicity of gel suppositories containing strong spermicides already in solution and ready for immediate action. The idea that contraceptives must be acid was rejected. Dr Baker described his laboratory tests of chemical contraceptives, which were concerned with rate of disintegration acidity or alkalinity, total spermicidal power in alkaline solution, total spermicidal power in acid solution, rate of diffusion of the spermicide from the vehicle, and harmless ness. In the tests of total spermicidal power proprietary products were tried at the standard concentration (S) of one product to 6 c cm of sperm suspension, it being postulated that about 6 c cm of fluid were usually present in the vagina after coitus. The spermatozoa were examined at five and thirty minutes and again after dilution with an alkaline fluid favourable to their activity. The dilution revealed whether the sperms had been killed or only immobilized.

A product which killed at S was tried at S/2 S/4 etc. It was thought that a factor of safety of at least four

was necessary—that is, a product must kill all sperms at S/4. In the diffusion test an attempt was made to represent natural conditions as closely as possible. Observations of the activity of the sperms were made at 2, 5, 15, 30, 60, 120, and 180 minutes. In the case of many products on the market the sperms were still active even after 180 minutes. The pathological test was performed on bitches because of the resemblance of the vaginal epithelium to that of the human female. The bitch's vagina was larger than the human in proportion to body size and therefore half a suppository was the dose. This was inserted daily for a fortnight when the bitch was killed and the vagina was sectioned for critical examination by Dr Carleton. Gross damage by certain products in use by women was demonstrated. It was recommended that clinical workers should use the following formula for estimating pregnancy rates when comparing one contraceptive with another $\frac{100P}{M-A-P}$, where P was the number of pregnancies, M the number of menstruations, and A the number of whole menstrual cycles during which the husband was absent from his wife. The formula was similar to Raymond Pearl's. Dr Baker ended by saying that he was hopeful that his researches would soon disclose a valuable new spermicide, but that he had often been disappointed when he had seemed on the verge of success. He also paid a special tribute to the medical subcommittee of the National Birth Control Association whose co-operation had resulted in improvements in the methods used in his laboratory.

In the discussion which followed great stress was laid on the importance of collecting a group of persons ready to collaborate in the first application to human conditions of any new chemical method. Such persons being so few at present progress would be necessarily slow. One result of the conference might be to increase the number of volunteers. During the conference the Edinburgh Mothers Welfare Clinic at 90 East Crosscauseway and the Museum of Contraception under the direction of Professor Lelean in the Usher Institute of Public Health were open for inspection and many members of the conference availed themselves of the opportunities thus offered.

Reports of Societies

ACCLIMATIZATION TO HIGH ALTITUDES

At a meeting of the Royal Society on April 29 a paper by Messrs A. Keys, B. H. C. Matthews, W. H. Forbes, R. A. McFarland, and D. B. Dill on individual variations in ability to acclimatize to high altitudes was communicated by Sir Joseph BARCROFT.

The International High Altitude Expedition made observations at sea level, 9000, 12000, 16000, and 20000 feet of the physiological constitution of ten normal subjects, and the authors had now attempted to correlate these observations with acclimatization. The capability of acclimatization of the members of the party was graded by a questionnaire to which all gave answers as to the deviation in physical and mental performance from their sea level values of all members of the party. By this classification the members of the party were arranged in order at each altitude. A number of physiological properties were observed at sea level and at each station. No one of these yielded a good correlation with the classification referred to above, but the whole series taken together with suitable empirical coefficients yielded a good correlation with the acclimatization classification—so much so as to encourage the belief that it would thus be possible to predict from sea level measurements whether an individual would acclimatize well or badly.

THE BLOOD GROUPS AND NON-PATERNITY

At a meeting of the Medico Legal Society on April 22 with Mr C. ANSWORTH MITCHELL, the president in the chair, Dr G. ROCHE LYNCH read a paper on the medico-legal importance of the blood groups, with special reference to non paternity.

Dr Lynch was, he said, reporting on the progress made since he had last spoken on this subject in 1924. The existence of M and N agglutinogens in corpuscles was now established, making three more blood groups in addition to the older A, B, AB, and O groups. These groups were M, N, and MN, there was no group corresponding with O. A combination of the two sets gave twelve possible types of human blood. The agglutinogens were found in other body fluids—such as sweat, saliva, semen, and milk—in certain individuals. Their presence in these fluids apart from the blood was an hereditary factor. The agglutinin factors (a and b) were not found in these fluids. The uses of these blood groups were in transfusion work, in the identification of blood stains and of seminal stains, and in attribution of paternity and determination, very rarely, of non maternity and child substitution. The factors followed strict Mendelian laws of heredity and to be present in a child must be present in a parent. Apparent exceptions had now all been explained. The test to day was as sure as the fingerprint test if not surer.

Dr D. HARLEY summarized the rules of inheritance governing the blood groups. A group O parent could not have a group AB child, and vice versa, and no factor could appear unless it was present in the blood of one or other parent. A type M parent could not have a type N child and vice versa. These rules had been amply confirmed by study of very large groups of families over several generations. They were therefore applicable to false accusations of paternity. If, for instance, a group O woman had a group B child and accused a group A man of paternity, his innocence could be absolutely established. Any man of group B or group AB, however, might have been the father. The groups could never prove that a certain man was the father unless there were a choice between two possible fathers. A BM woman had an AM child, her husband was AM and her lover AN, it was thus shown that the husband was the father. The chance of proving non paternity varied with the group of the accused man and its frequency in the population from 65 per cent to 8 per cent. On an average one falsely accused man in three could be cleared. The use of these tests had gone far beyond the experimental stage.

Mr D. HARCOURT KITCHIN, barrister at law, dealing with the legal and practical application of the test said that he saw no reason why a petition for divorce should not succeed purely on the ground that the blood group test showed that a given child born in wedlock could not be the child of the husband. It was unlawful for a husband to give evidence that he had not had access to his wife and therefore could not have begotten the child, but evidence based on the blood group test would not infringe this rule. Turning to the more important subject of affiliation suits Mr Kitchin said that a single woman who had a child could apply to the court to make an order against the putative father and that if she proved her case and produced satisfactory corroboration and the man could not refute her evidence a bench of magistrates might order him to pay up to a pound a week until the child was 16. The present difficulties in the way of using blood group evidence were great. First its possibilities were unknown and the bench might be so suspicious as practically to decline to accept it. An appeal from their refusal would lie to quarter sessions and thence to the Divisional Court, but would be expensive. If they were open minded the next difficulty would be to induce the mother to co-operate for she could gain nothing at all by the test and the bench could not order her to undergo it or refuse her application for an order merely because she would

not undergo it. If she consented, the third difficulty would be to find some pathologist capable of carrying out the test. Most general hospitals could manage the AB test but the MN test required special knowledge and facilities. At present the expense was beyond the means of the kind of man who was usually defendant to a bastardy application. The fourth difficulty was that, if the test acquitted the man he would have to pay the pathologist to come and give evidence, for the written report alone was not enough. The fifth difficulty was that if the report did not exonerate the man the bench might run away with the idea that the result showed that he was the father. This danger had probably done more than anything to deter counsel and solicitors from trying to use the test. If the test was to come into general use, as it had in Germany and other countries, it must first become known to solicitors and the public. This might happen if some interesting acquittal attracted the attention of the lay Press. So far the test had never been conclusive against paternity. When the stage of legislation was reached the Bill ought to provide that (1) the magistrate should have discretion to make the co-operation of the mother a condition of her application being heard (2) the result of the test should only be evidence if it were conclusive against paternity, (3) the certificate should of itself be evidence without the necessity of calling the pathologist as a witness, (4) the test should be done at the public charge.

The PRESIDENT said that the papers had done much to make counsel for the defendant realize that he ran no risk in accepting the test if offered. Sir ALEXANDER MAXWELL did not think there was much miscarriage of justice though magistrates had an extremely difficult task. If magistrates could be induced to respect the test something might be done. The subject required investigation and attention.

Sir TRAVERS HUMPHREYS thought the subject important, but from the practical point of view the difficulty about scientific evidence was that it was not conclusive. He protested against the suggestion that the courts set their faces against scientific evidence. If it were once established that this test would further the cause of justice it would be welcomed by the whole profession of the law. Mr KITCHIN had put his finger on the point in saying that to establish the test there must be legislation to compel the co-operation of the mother. There should, however, be no real difficulty about this when its importance was established. Expense was a difficulty in getting any evidence. Assuming the test to be infallible, and no conflict of expert evidence possible the difficulty arose that the evidence could only be called on behalf of the defendant. The test might be extremely useful in divorce cases very commonly a working-class man petitioner based his case on the birth of a child which could not be his, but he was not allowed to give evidence to this effect. Nothing could be more useful to such a man than a High Court order for a blood test of all three. Sir Travers hoped that in time the courts would be given power to compel this evidence.

Sir ERNEST GRAHAM LITTLE thought the reluctance of the legal profession to accept scientific evidence was a real difficulty. The demand for legislation must come from the medical profession. Rather more respect was paid to private Bills nowadays than in the past. Sir WILLIAM WILCOX thought there was little difficulty in getting new scientific evidence before the courts. In a recent food poisoning case a plaintiff had succeeded on the strength of a positive agglutination of 1 in 60 which had been recorded on one occasion. The judge had taken the greatest interest in the evidence, no legislation had been needed. Many pathologists would be pleased to do the blood tests for moderate fees.

Judge EARENGEY K.C., said that the legal profession welcomed medical evidence when that evidence was substantiated. The medical profession must come to agree about these tests, and the technique must be

standardized beyond question before a certificate was accepted as evidence. Discovery was never extended to any personal operation, legislation, however, might be secured to say that if a woman refused the test there should be a stay of proceedings.

In reply Dr ROCHE LYNCH said that mistakes had in the past been due to a weak A factor in some subjects but never to the interference of the M and N with the A and B factors. He would never object to a provision obliging the pathologist to give evidence if either of the parties wanted it. Dr HARLEY stressed the invariability of the rules of heredity and the fact that the tests were used in many foreign countries to check the evidence of applicants. Mr KITCHIN hoped that the Home Office, if it were good enough to circulate magistrates would ask them to encourage defendants to use the test and applicants to submit to it. He had never suggested that judges of the High Court were not receptive of scientific evidence, merely that as a class magistrates and solicitors disliked it.

HYPNOSIS, SUGGESTIBILITY, AND PROGRESSIVE RELAXATION

At a meeting of the British Psychological Society on April 29, Dr WILLIAM BROWN, Wilde Reader in Mental Philosophy, University of Oxford, gave an address on hypnosis, suggestibility, and progressive relaxation.

After tracing the history of the subject since the days of Mesmer and describing some experimental work, Dr Brown said that it might be supposed that it included a good deal of questionable matter but he wished to emphasize the clinical and therapeutic side, where it had large constructive possibilities. Hypnosis with suggestion could bring about a state of progressive relaxation more rapidly than the same state could be achieved in any other way. The patient, too, could in time produce relaxation by autosuggestion. Relaxation began with the muscles of the extremities, included the muscles of the back of the neck, and affected eventually the involuntary musculature. The autonomic nervous system was influenced and deep relaxation produced. This relaxation, although it started with the motor muscles, was not confined to them. The state might be used to give suggestions of greater ability in various directions. Customarily the will was regarded as controlling only the voluntary muscles, but by the stimulus of processes which obviously were under the control of the will other processes not so obviously under control were affected.

Dr Brown referred to some recent work in which an experimenter, after calling out to the subject "Contract," had flashed a bright light into the subject's eye, and, of course, as a result of the light stimulus, the pupil contracted. This was repeated a number of times and a conditioned reflex was built up, so that when later he said "Contract" but did not flash the light, the pupil never theless contracted. Finally instead of himself saying "Contract" he got the subject to say it and the pupil still contracted, a conditioned reflex having been built up through the motor mechanism of speech. On the basis of clinical evidence of cases he had treated for many years Dr Brown believed that under suggestion treatment with the patient relaxed and passive, it was possible to build up a conditioned reflex. Some scepticism had been expressed as to whether a conditioned reflex could be built up in a hypnotized person but work in America had shown that it could be built up more quickly and thoroughly under hypnosis than in a normal state. Every person normal or abnormal was probably hypnotizable to a certain extent but those who were most easily hypnotized and to the most profound degree even that of artificial somnambulism, had a tendency towards the development of psychoneurosis of a hysterical nature. Dr Brown strongly emphasized that in therapeutic hypnosis only positive

suggestions should be given, not suggestions of inability to perform certain acts but the contrary. He had found the method useful in raising normal powers to a higher level—for example, increasing the power of memory not momentarily but permanently no doubt as the result of removing fears and conflicts which acted as inhibitions and reinforcing the imagination of success which was of so great importance in psychotherapy. He mentioned a composer who, fearing that he had lost his powers experienced definite benefit—of which the composer himself, who could be the only judge, had no doubt at all—after four occasions on which suggestion treatment with progressive relaxation was tried.

In reply to a question at the close of his lecture Dr Brown said that suggestion might help to restore proper function of the digestive processes if at first it were combined with some medicinal remedy. The patient might be encouraged to imagine an increasingly vigorous peristaltic movement of the intestines and the suggestion might be continued and be effective while the medicinal agent was reduced in amount and presently withheld.

DISTENSION OF THE FOETAL BLADDER

At a meeting of the North of England Obstetrical and Gynaecological Society in Sheffield on April 2 Dr F J BURKE (Liverpool) opened a discussion on dystocia due to over-distension of the foetal bladder by reporting a case.

A multipara aged 29 was admitted to hospital with dystocia. Labour began at 9 p.m. on January 27 the patient being then about thirty-five weeks pregnant. At midnight the head and hands of the foetus were born but there was no further progress. When she entered hospital she was having strong pains and was acutely distressed. The fundus reached midway to the umbilicus and the ensiform cartilage and no foetal heart could be heard. A foetal head and two hands were protruding through the vulva. The foetal neck was long and the cervical spine was fractured due possibly to previous vigorous traction. The thorax was tightly plugged in the maternal pelvis. On incising the foetal chest wall a large quantity of fluid escaped and delivery was soon completed. The foetus weighed 6 lb. It was considerably elongated with the abdominal wall in large folds and there was bilateral talipes equinovarus. At necropsy the bladder in its collapsed condition measured 6 by 4 inches and had hypertrophied walls. Both ureters were dilated and the kidneys enlarged. The urethra was patent a small catheter passing without difficulty.

Dr Burke said that several similar cases of over-distension of the foetal bladder with patency of the urethra had been described and he quoted cases reported by Savage and by Crawford and Jellcoat. He discussed the part played by the foetal kidneys in the production of liquor amnii. Gaylor Bates had pointed out the frequent association of oligohydramnios and foetal renal anomalies. The biochemical studies of Makepeace, Smith and Carroll strongly suggested that the amniotic fluid was a transudate which in early pregnancy was in isometric equilibrium with maternal and foetal blood in late pregnancy it became hypotonic owing to the addition of foetal urine. On the other hand there was evidence to suggest that the foetal kidneys did not contribute to the liquor amnii. Philoridin injected into the mother could be readily detected in the foetal tissues but it was rare to find even a trace of sugar in the liquor amnii.

The President said that the condition seemed always to be associated with obstruction to the urethra. He supposed it was more common in the male foetus. Mr J I STACY (Sheffield) thought that a striking point was the elongation of the cervical vertebrae and talipes equinovarus. He raised the question whether the condition was associated with any spinal lesion. Dr Burke replied that he had no doubt that the elongation of the cervical vertebrae was produced by trauma.

Intestinal Obstruction Caused by Adenomyoma

Mr A GOUGH (Leeds) opened a discussion on adenomyoma as a cause of acute intestinal obstruction, and reported a case.

A woman aged 42 had never been pregnant. She had had gradually increasing constipation for six months culminating in complete obstruction. The day before Mr Gough saw her she had absolute constipation as regards both faeces and flatus and had vomited once. Her general condition was quite good. There was a tense rounded swelling in the hypogastrium the size of a four months pregnancy. Vaginal and rectal examination disclosed the presence of a hard fixed mass behind the uterus and involving the upper part of the rectum. On opening the abdomen the rounded swelling was found to be a chocolate cyst of the left ovary. There was much indurated tissue involving the cervix and the upper part of the rectum. A diagnosis of adenomyoma was made and was later confirmed by histological examination. A colostomy was performed after the bulk of the morbid tissue had been removed including both ovaries and the uterus. A fortnight later Mr Gough was able to start canalization of the obstructed bowel by passing gum-elastic bougies up the rectum. These were followed later by rectal tubes passed from the colostomy opening downwards. In a fortnight the passage had been dilated to three quarters of an inch. The colostomy orifice was closed in stages by the use of an enterotome. Six days later the bowel was dissected from the abdominal wall and the wound was closed. Some leakage occurred but within three weeks the faecal fistula had disappeared. Mr Gough said that an acute obstruction due to an adenomyoma must be very rare indeed.

The President said that it was quite clear that the adenomyoma was in the bowel wall and not merely in the recto-vaginal space. Professor LEYLAND ROBINSON (Liverpool) thought that the case showed how important it was that a gynaecologist should have a knowledge of general surgery.

VARICOSE VEINS IN PREGNANCY

A meeting of the Section of Obstetrics of the Royal Academy of Medicine in Ireland was held in the Royal College of Physicians on April 9 with Dr T M HEALY in the absence of the President, in the chair. Dr EDWARD SOLOMONS read a paper on the treatment of varicose veins in pregnancy.

Dr Solomons said that sixty patients were selected from the ante-natal department of the Rotunda Hospital for treatment of varicose veins by injection. The condition was found to be bilateral in thirty-eight and unilateral in twenty-two while of the total number four cases had associated vulval varicosities. A careful history was first taken, particular attention being paid to the nature of the previous confinements. A history of phlegmasia was a definite contraindication to treatment, and in all cases of suspected impairment of the deep circulation investigation was made. The Trendelenburg test was not carried out but the simpler Perthes test was used in cases of suspected deep thrombosis. The veins were examined in a good light with the patient standing. The patient was then made to lie down with the leg slightly elevated, thus the empty vein technique was employed in all cases but without a tourniquet as only clearly visible veins were injected. The skin was painted with 2 per cent tincture of iodine and a sterile solution of quinine hydrochloride 0.266 gramme, and urethane 0.133 gramme to each 2 c.cm. of distilled water was then injected from a 2-c.cm. Record syringe with a fine needle (No. 17) the maximum amount each time being 2 c.cm., usually given in four divided doses at different sites. On withdrawal of the needle pressure was applied to the point of injection for a few minutes and then a small collodion dressing was put on before the patient walked home. Fifteen patients whose veins were very large had an elastoplast bandage applied to the whole leg below the knee immediately after injection. The bandage was removed in three weeks.

time and in seven patients no further treatment was required. In the other eight further injections were given and the elastoplast bandage reapplied for the same length of time. All injections were given at weekly intervals and were never given near the sites of the previous injections for at least two weeks. The usual technique advocated is to begin the injections near the foot and gradually work upwards, in these cases, however, the most enlarged veins were injected first.

Results of Injection Treatment

The results were very satisfactory, but not all patients were entirely free from some subsequent discomfort, though the relief obtained from their previous symptoms more than compensated them in all but two cases. Examination of the legs after injection showed that in seven there was a slight inflammatory reaction at the site of injection but no treatment was required and the ordinary daily life of the patient was in no way interfered with. In six patients the reaction was so marked as to necessitate treatment, and it was in this group of six that two patients would have preferred to remain untreated. Three of the six were told to rest in bed, and glycerin and ichthammol was applied. The other three had elastoplast bandages and were told to lead their ordinary daily life.

Four cases of varicose veins of the vulva were treated by injection with very satisfactory results, and in two dramatic relief was obtained from a nearly intolerable pruritus. It was only possible to follow up forty-five out of the sixty patients. No complications occurred in the puerperium, and three had subsequent confinements without recurrence of the condition.

General Discussion

Dr T M HEALY asked why the treatment was stopped in the seventh month and if there was any reason, obstetrical or surgical, why the treatment should not be adopted in the last two months of pregnancy. Dr A H DAVIDSON, the Master of the Rotunda Hospital, said that the method of treatment described by Dr Solomons for the treatment of varicose veins in pregnancy seemed to be a great advance. He asked if only quinine and urethane had been used and said he understood that if the vein was missed when urethane was injected that it gave rise to a lot of pain. He asked if Dr Solomons had had any experience of sodium morrhuate, and if it was better than, or as good as quinine and urethane. Dr O DONEL BROWNE, Dr F DOYLE, Dr G TIERNEY, Dr J S QUIN and Dr R M CORBET also took part in the discussion.

Dr SOLOMONS in replying said that if he saw a case in the eighth month which he thought could be cured by injections in a fortnight's time then he gave a course but otherwise he only treated patients up to the sixth or seventh month. One of the most severe reactions he had seen was in a case in which he had used sodium morrhuate. Varicose veins of the vulva seemed to respond extraordinarily well to the injection treatment. In patients who had very large veins especially near term, it was foolish to carry out injection treatment, the treatment then was by an elastoplast bandage. When in any doubt as to whether one was in the vein or not, it was much better to withdraw the needle and to try somewhere else. He only treated patients who were pregnant; patients who had varicose veins and were not pregnant should be sent to a surgeon for treatment.

Pregnancy in Diabetics

Dr H. V. TIGHE read notes on three pregnancies in a diabetic. The patient came under his care in January 1935. She was then aged 27, had been married for fifteen months and was pregnant for the first time. She had been under treatment for diabetes mellitus during the previous four years. Two months before becoming preg-

nant she had been admitted to hospital in diabetic coma. She was receiving 75 units of insulin daily and despite this her urine was rarely sugar free, while her blood sugar remained high. In April 1935, when thirty-two weeks pregnant, she went into labour. The baby weighing 4 lb, lived for thirty minutes. Five months later she became pregnant again and at thirty-two weeks gave birth to a baby weighing 5 lb which died shortly after delivery. The third pregnancy began two months later, and with a more stringent diet and larger doses of insulin proceeded to thirty-seven weeks, when labour was induced. This last baby when born weighed 8½ lb and appeared healthy, but died forty-eight hours after birth. At necropsy the cause of death was found to be supra-renal apoplexy.

Dr Tighe pointed out that insulin has affected the fertility of diabetic patients, and suggested that a definite balance between the pancreatic and other endocrine secretions was necessary to maintain the normal menstrual cycle. There was nothing observed in his case to support the view that the diabetic mother benefits from an additional supply of insulin from the foetus or that pregnancy produces a lasting exacerbation of the diabetes. While insulin has greatly lowered the maternal mortality, it has not proved so effective in reducing the foetal mortality. The causes of foetal death are poor control of the maternal disease during the later months, hydramnios, congenital abnormalities and over-development of the foetus. Neo-natal hypoglycaemia following hypertrophy of the islands of Langerhans has also been suggested as a cause of foetal death, but there was no enlargement of the islands found in the third baby at necropsy. Dr Tighe considered induction of labour a better method than Caesarean section for dealing with dystocia due to the size of the babies. In conclusion he stressed the need of keeping the pregnant diabetic under constant supervision and the necessity of close co-operation between the obstetrician and the physician.

Discussion

Dr O DONEL BROWNE said that Dr Tighe's case illustrated several points common to pregnancy complicated by true diabetes. First the labours were premature and in each of the three pregnancies some degree of hydramnios had been present. Secondly, all three children had died. Thirdly, the children (as is usual) had been overweight and it was therefore fortunate that the labours had been premature. Dr J S QUIN did not agree that there was no objection to a diabetic patient becoming pregnant. Dr R H MICKS referred to two diabetic cases which had been under his care and in which labour had been induced. Both babies had been strong and over the usual weight at birth, and the mothers had done very well.

Dr TIGHE in reply said that diabetes should be treated as a thing quite apart from an associated pregnancy and the pregnancy should be allowed to proceed normally. Satisfactory results would only be achieved if there was close co-operation between physician, biochemist and obstetrician. As the children of diabetic women were not likely to be diabetic, there could be no question of sterilization of diabetics on eugenic grounds.

The fifth International Congress of Radiology will take place in Chicago from September 13 to 17 under the presidency of Dr Arthur C Christie of Washington. Mr C Thurstan Holland of Liverpool is a member of the executive committee and among the chairmen of delegates for national groups are Dr Russell Reynolds of London and Dr R M Beath of Belfast. The unity of medicine is the main congress theme and the integral place of radiology in diagnosis and treatment will be emphasized. More than 250 scientific papers will be relating to the medical and scientific development of x rays and radium.

Local News

ENGLAND AND WALES

Treloar Cripples' Hospital, Alton

On April 29 the trustees of the Lord Mayor Treloar Cripples Hospital and College entertained members of the honorary medical board at dinner in Barbers Hall, Monkwell Street. Colonel the Hon. Frederick Lawson was in the chair, he had beside him Alderman Sir Charles Batho, Mr. O. L. Addison (chairman of the medical board), Mr. Maurice Hovenden (Master of the Barbers Company), Sir Frederick Menzies, Mr. T. J. Harrowing and Miss Florence Treloar. Colonel Lawson expressed his pleasure and that of his co-trustees in entertaining the medical board, after an interval of eight years, in this City hall with its ancient associations with surgery. He recalled that a great Lord Mayor of London, Sir William Treloar, was the founder and inspiration of the hospital at Alton, and that other civic dignitaries took part at its birth and had given help since. Under the enthusiastic guidance of the medical superintendent, Sir Henry Gauvain, the trustees had now adopted the widest definition of the word 'cripple'. Mr. Addison, in his reply to the toast, spoke of the growth of the orthopaedic department during the past ten years and the change in the type of cases now treated. Surgical tuberculosis had become a disappearing disease, he said largely due to the pioneer work at Alton, hence the enlargement of the scope of the hospital and college. Treloar, with Coram and Barnardo, would go down to posterity as three great benefactors of children. The toast of 'The Corporation and the City of London' was submitted in happy terms by Sir Henry Gauvain who paid warm tributes to his colleagues and Sir Charles Batho in reply spoke of the pleasure it had given him when Lord Mayor to help forward the work begun by William Treloar. Sir Charles Gordon Watson, proposing the health of the Worshipful Company of Barbers, said that it was a privilege to do so in that beautiful and ancient hall, whose possessions made him almost regret the severance of the surgeons and the barbers in 1745, for 400 years the barber surgeons were the foster mother of our craft. The Master in his acknowledgment showed the cup given to the Company by Henry VIII and other pieces of priceless plate.

The Tuberculosis Association in Manchester

The annual provincial meeting of the Tuberculosis Association will be held in the Central Library, Manchester, on Thursday, Friday and Saturday June 10, 11, and 12, under the presidency of Dr. S. Roodhouse Glove. The provisional programme is as follows: June 10 (joint meeting with the North Western Tuberculosis Society) 2.15 p.m., papers on 'How Long Should Collapse Therapy be Delayed?' by Dr. Geoffrey Marshall and Mr. H. Morrison Davies. 5 p.m. paper on 'Bronchiectasis in Pulmonary Tuberculosis' by Mr. J. E. H. Roberts on 'Pleural Effusions after Thoracoplasty' by Dr. O. M. Alistair. 6.20 p.m., annual meeting. June 11 9.45 a.m. papers on 'Reflections on the Treatment of Unilateral Pulmonary Tuberculosis' by Dr. P. J. L. De Bloeme and on 'My Chief Difficulties in Dealing with the Tuberculosis Problem' by Professor A. Ramsbottom (consulting physician). Dr. W. F. Jackson (general practitioner). Dr. A. Dove Cernae (medical superintendent of a mental hospital). Dr. R. E. Lane (medical officer to a large factory) and Dr. D. P. Sutherland (tuberculosis officer). 2.15 p.m. visit to Manchester Sanatorium Baguley. 7 p.m., President's reception and annual dinner at Midland Hotel. June 12 10 a.m., papers by Dr. J. B. McDougall on 'The Use of the Tomograph', by Dr. C. D. S.

Agassiz on 'Artificial Pneumothorax in Children' 12 noon problem cases presented by Dr. E. H. A. Pask and Dr. G. Jessel. In the afternoon members will be welcome at the Liverpool Sanatorium Crossley Sanatorium Barrowmore Hall Colony Abergele Sanatorium and the Manchester Tuberculosis Office and Clinic 352 Oxford Road, which will be open to members throughout the conference from 10 a.m. to 4 p.m. daily. Members of the North Western Tuberculosis Society and their friends will be welcome at all the meetings, the annual dinner and the excursions. Full information may be obtained from the honorary secretary, Tuberculosis Association, 26, Portland Place, London, W.1.

Coroners' Inquests in London

During 1936 the number of deaths reported to London coroners was 8,748 as compared with 8,209 in 1935. Of these deaths 3,343 occurred in mental hospitals and other institutions. Inquests were held in 3,180 cases as against 3,239 in the previous year. The total number of suicides was 583. Three suicides were under 17 years of age and 171 were over 60. Deaths from want of attention at birth decreased from forty-two to twenty-five. The number of people who met their deaths by accident was 1,622 as against 1,766 the previous year. Thirty-six deaths resulted from injuries and forty-eight from drowning. A verdict of Death from natural causes was returned in 568 cases and there were eight verdicts of Cause of death unknown. In nine cases a verdict of murder was returned and in one case a verdict of manslaughter. Three inquests were held in connexion with executions. Inquests on newly born children decreased from fifty-five to forty-seven. Three verdicts of murder of newly born children were recorded. Sixty-six deaths were attributed to excessive drinking. The coroner directed post mortem examinations to be made in 2,578 cases or 81 per cent. of the inquest cases and in 3,413 or 61.3 per cent. of the remaining cases in which it was decided that no public inquiry was necessary.

SCOTLAND

Hospital Treatment of Infectious Disease

In his annual report for the year 1936 Dr. C. Barelay Reekie, medical officer of health for the burgh of Dunfermline, urges the importance of wide floor space in hospitals for the treatment of infectious disease. With regard to scarlet fever he says that apart from the natural decline in the severity of this disease which some authorities had attributed to the segregation in hospitals over a number of years of the more severe cases and the introduction of scarlet fever antitoxin the diminution of complications had been largely due to improved ward environment. Overcrowding of wards instead of being economical resulted in an increased number of septic infections with protracted stay in hospital. The number of scarlet fever cases treated in the West Fife Infectious Diseases Hospital at Dunfermline had been 202 during the past year, a decrease of 360 cases on those of the previous year. Discussing diphtheria the report states that there is a tendency to send cases earlier to hospital. In the analysis of fatal cases of diphtheria it had been found that the shortest period any patient had been ill before coming into hospital was three days and this illustrated the serious effect of delaying the giving of antitoxin and the provision of skilled nursing. The number of cases of diphtheria admitted to this hospital had been 182, a decrease of 83 on those of the previous year. There was an increasing demand for the admission of cases of measles. It was not generally recognized that measles had a high mortality between the ages of 6 months and 1 year, so that the

problem of measles was not so much prevention of the occurrence of the disease as its postponement to the later years of childhood

Simpson Memorial Maternity Hospital

At the annual meeting of the Edinburgh Royal Maternity and Simpson Memorial Hospital the hope was expressed that the Royal Infirmary of Edinburgh would be able to take over the hospital, which is now approaching completion in the Infirmary grounds by November, 1938. It had been necessary to transfer £3,520 from the reserve fund to meet working expenses but receipts from legacies had showed a satisfactory improvement from £3,400 to £8,276. A subscription income of at least £4,500 was required for the hospital until the time when it could be taken over by the Infirmary. Reference was made to the fact that the municipal authorities had insisted that the new building should be constructed of natural instead of synthetic stone as had been intended, and this had involved an added expenditure of £7,000 which, it was suggested, the Corporation should provide. The number of cases treated last year had been 3,393 and there had been 10,883 attendances at the ante natal clinics of which 2,358 were of new cases.

Correspondence

High Hyoscine Dosage in Chronic Encephalitis

SIR,—Sir Arthur Hall's paper in the *British Medical Journal* of April 17, on 'The Results of High Atropine Dosage in Chronic Epidemic Encephalitis,' records that the highest dose of atropine given was 54 mg daily. The following describes briefly a case in which we have used nearly four times this dose (up to 195 mg daily) to secure symptomatic relief from oculogyric crises.

Miss X, aged 28, had an acute attack of encephalitis regarded as "influenza" in 1924. In October 1928 advanced Parkinsonism was present with the tremor and rigidity more marked on the right side. She could not walk without help and had to be assisted with changing her clothes and in eating there was no gross mental change. Oculogyric crises were however her most distressing complaint. She was given a course of tryparsamide injections and genoscolamine pills. Considerable improvement followed. In August 1933 she was taking, in addition to six genoscolamine pills daily, a mixture containing tinctura belladonnae 15 minims and tinctura stramonii 15 minims twice daily; the latter was gradually increased until 1 drachm was given in each dose of her mixture and this was continued until September 1936 when oculogyric crises were so severe and distressing that hypodermic injections of hyoscine were commenced at first in small doses (3 to 5 mg.). The dose was gradually increased until in December 1936 she had 1 grain (65 mg.) and occasionally 1½ grains (97 mg.) morning and night (that is a total of 130 to 195 mg. daily). Any reduction of the dose below half a grain morning and night caused a return of intensely distressing oculogyric crises and even with the larger doses mild attacks still occur morning and evening. Dryness of the mouth has never been a troublesome feature during the administration of these large doses, nor have any gastro intestinal urinary or mental symptoms appeared. Mydriasis is controlled by instilling two drops of a 1 per cent. solution of eserine into the eyes morning and night.

We have been unable to find any recorded case in which comparable doses of hyoscine have been given therapeutically over prolonged periods.—We are, etc.,

HENRY COHEN
Liverpool
JOHN W. CRAW
Northwich

April 28

Blood Transfusion in Obstetrics

SIR—May I make brief comment upon two or three points arising out of Dr Malcolm D Black's paper in the *Journal* of May 1 (p 903). Dr Black states that if blood will be available within half an hour to one hour, or if the patient be at the point of death [as a result of haemorrhage] it is better to start giving an intravenous saline injection and to continue it until blood has been secured. Patients have died within half an hour of admission. An intravenous saline injection can be started within ten minutes of admission and blood transfusion could be started in the same time if blood were kept in storage.

I maintain that an immediate intravenous infusion is essential without waiting for the patient to be 'at the point of death' whenever the systolic blood pressure falls to 80 mm Hg or fails to rise above 90 mm Hg after routine nursing measures have been taken. Crystalloidal saline solution is not very satisfactory for this purpose, and when whole blood is not immediately obtainable I have found an ephedrine glucose gum preparation to be the most satisfactory substitute at present available (*J Obstet Gynaec Brit Emp* 1935 42 852 *British Medical Journal* 1936 2, 537). The ephedrine is omitted in cases of shock. Sometimes blood transfusion is required later but in many cases especially those of accidental haemorrhage, the simple infusion will suffice—I am, etc.,

Newcastle upon Tyne May 1

WM HUNTER.

SIR—Dr Malcolm D Black (*Journal* May 1, p 903) seems to strain at a gnat and swallow a camel when he states, cutting down on to a donor's vein should never be permitted and goes on to say, cutting down on to the recipient's vein is always advisable. One can quite well understand acute dilatation of the heart being included under the heading of 'dangers' when it is stated that twenty minutes at least should be taken in introducing 600 ccm.

I venture to suggest that the gravity method of blood transfusion is obsolete, and when used is sheer cruelty to the nurse who stands with arms aloft, perhaps the twenty minutes is the time limit of her endurance!

It is a simple matter in the most collapsed of patients to introduce a 17 gauge hypodermic needle even in the dorsum of the hand for argument's sake and to deliver the citrated blood at one's ease by means of a two-way syringe, personally I use a "Rotanda" (the small bore of the needle forces one to give a slow transfusion—one hour and twenty minutes will not be ill spent in giving 600 ccm of citrated blood). With regard to the mixing of the blood with the citrate solution I have found a sterilized Horlick's malted milk glass and mixer of great value—I am, etc.

Longtown Cumberland May 2.

R RUTHERFORD

Bran in the Prevention of Constipation

SIR—Having advocated the use of a "processed" preparation of bran as the best remedy for nearly all ordinary cases of habitual constipation (*Practitioner* 1935, 135, 229 *Med Press and Circ* 1935 191, p 336) and also to some extent as a preventive of chronic catarrhal colitis, I was most interested on reading confirmatory evidence in Dr E M Dimock's paper (*Journal* May 1 p 906). By retaining moisture the bran tends on the whole to make the contents of the rectum somewhat softer in constipated subjects and does not 'scrape' any

portion of the alimentary canal if taken with milk, soup, or fruit juice

Recently, however I read an article on colitis by a well-known medical authority on diet, in which he stated that if persons insisted on taking bran for spastic constipation it was no wonder that they should suffer from colitis. It seems to me that this question regarding the action of bran in spastic constipation depends on the amount of bran taken and whether it is taken during an attack or exacerbation or at other times.

All useful agents can in excess—or in relative excess as a result of temporary or permanent over sensitiveness or idiosyncrasy—also become harmful—I am etc.,

London W1 May 1

F PARKES WEBER

Angina Innocens

SIR—After reading the paper on angina innocens by Dr Geoffrey Bourne (*Journal* April 3, p 695) a recent case of mine appears to be an instance of this condition

An American lady, aged 37 was awakened from her sleep by a severe pain in the left precordial area which quickly radiated into the left shoulder and down the left arm into the fingers. She felt that she was being suffocated. The attack lasted for about fifteen minutes and passed off. This was followed by a series of similar attacks each lasting between ten and fifteen minutes with an interval of about half an hour between the attacks. Throughout this time she remained in bed.

I first saw her about three hours after the first attack. When I entered the room she happened to be in an attack. She appeared very shocked and seemed to be suffering great pain. No cyanosis was present. The heart was not enlarged. It was regular in action and the sounds were normal. The pulse rate was 58 a minute, blood pressure was 100/60 mm Hg. Nothing abnormal was found in the lungs or abdomen. She gave no history of any previous attacks but she had influenza a short time previously.

Inhalations of amyl nitrite failed to relieve the condition but after two injections of morphine she became free from pain and fell asleep. After some hours she wakened and apart from a feeling of soreness in the left arm she had no pain. After two days in bed without any recurrence of pain she refused to remain in bed any further. Her blood pressure remained at 100/60 mm Hg and the pulse rate was 62. The soreness in the left arm however was still present. That evening she got up and went ashore in Havana visiting Sloppy Joe's (internationally famous bar) where she consumed numerous rum drinks. She then visited several cabarets finally returning to the ship at five in the morning. I saw her later in the day and apart from the soreness in the left arm she was free from any discomfort. The heart and blood pressure were unaltered. She carried on in her usual manner including drinking and dancing, for another week when she left the ship. No signs of any pain had been felt and the soreness of the left arm had passed away.

I feel that this case is an example of angina innocens, as described by Dr Bourne—I am etc.,

R M S. *In press of Australia* April 30. ERIC F D OWEN

Prontosil in Septic Parotitis

SIR—A further important use for prontosil appears to be in the treatment of septic parotitis a condition notoriously difficult to treat in mental hospital patients. I saw a case of this kind with Mr Terry, senior surgeon of the Royal United Hospital Bath. The patient appeared to be in an ominously poor state. The external and internal swelling was very considerable, fever was marked and a minimal elevation of temperature seemed to indicate the poor reactive potentialities of the in-

dividual concerned, 5 c.cm of prontosil with two oral tablets daily were administered. Well within twenty four hours of the injection the patient's condition was considerably better. Recovery was uneventful. The tablets were discontinued on the tenth day, but before that day amelioration of the condition was very obvious. This minimal dosage by the intramuscular route was to some degree determined by difficulty in estimating the kidney tolerance of prontosil owing to inability to obtain specimens because of the patient's condition in relation to such matters.

In view of the depressing results of treatment of septic parotitis in mental cases this further extension of the usefulness of the new drug seems of undoubted importance—I am, etc.,

A GUIRDHAM, M.A., D.M.

Bath April 28

Inhalational Therapy

SIR—So many points are raised in my mind by the letter of Sir H B Fawcett (April 17, p 837) that I will deal with the chief of them as I read his letter.

In his opening he claims to be a trustee for the Duke-Fingard inhalational treatment. It would be of interest if he would inform us of what his trusteeship consists, and when and where the exact formula of this inhalation has been published since so far as I know it is not generally known (see leading article, *British Medical Journal* January 23 p 175).

Putting aside his statement that he has been conversant with this particular form of therapy for so short a time as two years he states that he is quite convinced of its undoubted value in selected cases. I would point out that my patient was accepted as a suitable case apparently by one of their own selected list of doctors. Further ament the question of selection I quote the concluding paragraph of the article in the *Practitioner* of November, 1936:

"All the cases have been taken indiscriminately as they have applied for treatment. No case has been rejected on any medical grounds no matter how hopeless it appeared to be. Practically all have been chronic cases which have refused to respond to any other kind of treatment previously tried."

Sir H B Fawcett next remarks that he is well aware of the ethical policy which has been adopted in every instance. May I remind him that an ethical policy which permits the appropriation of another practitioner's patients is not one acceptable to the majority of his profession. It is true to say the patient is handed back after being drilled in the merits and applicability of this form of treatment to his own case.

We next pass on to a larger paragraph from which we may readily be led to a quibble over words. Surely Sir H B Fawcett will agree that for the purpose of advertisement it is not essential that the matter shall appear in the strict advertisement columns and be so labelled. The science of advertisement is far too subtle for such restriction and I can only tell him that my patient took his first step in the direction of treatment by reason of what he read in a lay Sunday paper. Evidently particular objection to the statement that my patient was referred to a medical man is taken by Sir H B Fawcett who so far as I can interpret his words, immediately proceeds to tell us how patients are referred under his ethical policy. I will be glad to withdraw my form of expression if a satisfactory explanation of any error is forthcoming.

In his concluding paragraph Sir H B Fawcus has read much more into my words than can be reasonably implied. Nowhere do I refer to the abrupt change in temperature, for I am assuming that my patient, being an intelligent person and having received such specific directions about the danger of 'abrupt change, would have carried out those directions. My assumption here may be unwarranted, for neither in the article in the *Practitioner* of November 1936, nor in the letter I received from the doctor who saw my patient in London, is mention made of the need for such precaution. On the contrary, I quote the following abstract from the doctor's letter to me:

I have found it advisable to commence treatment with three hours of the inhalation on the first day and if this is tolerated well by the patient to increase by three hours a day to a maximum of sixteen hours. As you will see this is an ambulatory treatment and the patient is able to carry on his or her normal occupation during the day. Any local or general treatment you think fit should of course be used in conjunction with the inhalation.

Proceeding further, I fail to find any suggestion in my letter that the adverse result was due partly to the inhaled vapour. Had Sir H. B. Fawcus read my letter carefully he would have noted that I described the early improvement in my patient's condition, and later the onset of an 'acute' bronchitis. He can take it from me that the ill effects were quickly apparent even to an untrained person, and that I took good care to modify the patient's treatment on well-established principles to the exclusion of any further exposure in the medicated room. The final sentence of this paragraph I would amend by the addition of two words so that it reads "Obviously one cannot merely switch on the specialist and leave the rest to the machine."

Finally, I would like to express my thanks to Dr A. C. Greenc for his helpful suggestions in the management of these cases. I would only suggest to him that there may be a danger to the chilly race of bronchitics in providing too thorough aeration, and that Nature may have some measure of wisdom in her method of restricting access to the lungs—I am, etc.,

Runcorn April 21

N A BOSWELL.

Hermaphroditism

SIR—Mr Harold Chapple's case of hermaphroditism (*Journal* April 17 p 802) can hardly be used to justify the conclusions of his article. What competent endocrinologist believes that the gonads *per se* determine the sex of an individual? In the case of a woman the ovaries are known to play a determining part in the sexual cycle, but for the sexual type as a whole the general glandular structure and function are responsible. While it is true that the hereditary formula of the ovum is the origin of the sexual type and of the glandular function, the latter's development becomes dependent on environmental conditions of many kinds, and most certainly does become responsible to a great extent for the sexual characteristics. Before Mr Chapple ventures to criticize emphasis laid on the significance of the gonads, he should surely pay due recognition to the all-important part played by the whole adrenal-pituitary-gonad complex in the sexual behaviour of an individual—I am, etc.,

London April 28

R. L. WORRALL.

SIR—I was interested in Dr Harold Chapple's report of an unusual case of hermaphroditism in the *Journal* of April 17 (p 802). I do not agree with his statement that this case proves that the sexual characteristics of the individual are independent of the gonads. Although the organ which was removed from his case presented the typical appearance of an atrophied testicle, yet microscopical examination showed that interstitial cells of the intratubular stroma were greatly developed. Is it not highly possible then, considering the general features of the case and the bisexual organs, that these interstitial cells, although situated in an apparent testicle, were secreting ovarian hormone. The overgrowth of these cells would probably account for the patient's sexual desire and intense feelings.

Previous experiments point very strongly to the fact that, had the adenomatous interstitial cells been secreting the male hormone, then she would have exhibited definite masculine characteristics. The removal of one of these organs lessened the patient's sexual ardour, which indicates that some endocrine activity in the glands directly affected her sexual life.

I have in my possession the gonads of a frog. One of these organs is a typical testis, while the other is composed partly of testicular substance and partly of the mottled ovarian tissue—I am, etc.,

London W.2 April 19

C HOWICK-SMITH

Birching of Children

SIR—It is important for those who advocate whipping as a justifiable corrective for the behaviour of children to realize that a very large element of sadism is responsible for this advocacy. Psychologists are universally agreed that no child should be whipped. When this latent sadism is realized people no longer desire to whip children and no longer think that it is good for them. It may not, in some cases, do much harm—there are so many ways, means, and circumstances—but it can never do them any good and often does much damage. Dr J. S. Clarke (*Journal* May 1, p 941) is mistaken, although I am sure quite sincerely, in his belief that children are improved by whipping and unfortunately many medical men appear to think likewise and will do so until a knowledge of psychology and of themselves is acquired. It has surprised me how few psychologists have contributed to the discussions on whipping in this *Journal*—I am, etc.,

London W.9 April 30

G W GARDE.

SIR—Surely the results of birching children are of far greater importance in helping a decision! Dr W. N. Maple has placed several facts before us in his letter in the *Journal* of April 17 (p 837). He deserves applause. Since judicial birching apparently does so little good why not let the psychologists see what they can do before condemning them and their methods?—I am, etc.,

Norwich May 2

MILLAR PAGE

SIR—Whilst on the whole agreeing with your excellent leading article on the birching of children I think it is very undesirable to spoil a good case by overstatement. I do not believe that children of 8 are birched. I do not believe that a child is tied up to a tripod whilst receiving its punishment, nor do I believe that the birch is soaked in brine. I have the support of chief constables of experience in this. For example the Chief Constable of Brighton says he has never heard of brine soaked birches, and the Chief Constable of Hove (who by the way states

that no child has been birched in Hove since 1923) says no tripod would be used if the necessity arose for whipping a child. Perhaps you will indicate what authority there is for the statements on this matter made in your leader—I am etc.,

Hove, April 23

L. A. PARRY

* The method of tying the offender to a kind of tripod was described by the Earl of Kinnoull in a speech in the House of Lords on July 25 1933 (Parliamentary Debates House of Lords Official Report vol 88 No 77, col 1083) and his statement was neither refuted nor challenged. The soaking of the birch in brine to prevent the twigs from splitting is so well established that phrases such as "a rod in pickle, etc." have long been in common usage. According to a report in the Press (Daily Herald, March 4 1935) a 13 year old boy who was sentenced at Newport (Mon) to six strokes of the birch had to wait four days for his punishment because the only available birch was too dry. On March 2 1937 the same newspaper reported that a 9 year old boy at South Shields had been ordered six strokes of the birch which left weals across his ribs and across an appendicitis scar, an effective complaint about this case was made to the Home Office by Mr J. Cluter Ede M.P. The procedure of birching may vary in different parts of England and Wales but the method described by Lord Kinnoull and discussed in our leading article is undoubtedly practised in many places other than Brighton and Hove. It is satisfactory to know that a Departmental Committee is about to consider the whole question and we may assume that all documents relating to the orders given by magistrates for such punishment and the details of its administration by the police will be in the hands of that Committee.—Ed. B.M.J.

Origin of the Westmorland Consumption Sanatorium

SIR—On account of my absence in South America throughout the winter I did not see until this week your obituary notice of my late friend Dr W. S. Paget Tomlinson in the *Journal* of February 20 in which you say

One of his most ambitious and valuable endeavours was the establishment of the Westmorland Sanatorium for Consumption at Meathop. His partner in this was Dr W. R. Parker of Kendal. There was no such sanatorium for the poor at that time in England; the Meathop institution was the pioneer. He was intimately associated with its activities and its development towards which he was a liberal contributor and he was its president at the time of his death. It was opened by the late Lord Derby in 1900 and it stands as a permanent memorial to the foresight and public spirit of Dr Paget Tomlinson.

Please allow me to supplement this. When six years ago I was a medical student at University College I was much impressed by several articles in "The Manchester Science Lectures" on the connexion between stuffy air and consumption. In 1883 while travelling about New Zealand for the Government Insurance Company I was struck by the absence of consumption and attributed it to the necessary ventilation of the universal wooden houses due to stiffening boards and I reported this opinion to the New Zealand Government. On March 9 1887 there appeared in the *British Medical Journal* a letter by me suggesting that if stuffy air was a cause of consumption in animals why not apply this to man and abolish consumption by open air treatment. In 1898 the *Practitioner*

published two special numbers on tuberculosis. I studied these with great avidity as confirming views which I had long held and supplying me with many new arguments. I immediately wrote sixteen consecutive articles in the weekly *Westmorland Gazette* under such headings as Consumption Preventable, Consumption Curable, "How to Prevent Tuberculosis in Cattle, etc." Failing to get any adequate support, I wrote to Dr W. S. Paget Tomlinson at that time a stranger to me but just then president of the Westmorland Agricultural Society, and he immediately backed me up warmly. We met nearly every week for months and through his influence were supported by numerous influential people and by March 1900 our sanatorium was opened by the late Earl of Derby—I am etc.,

WM. RUSHTON PARKER, M.A., M.D.

London April 25

Obituary

GEORGE PARKER, M.A., M.D., LL.D. (Hon.)

Consulting Physician, Bristol General Hospital

On April 27 at his residence in Clifton Dr George Parker died in his eighty-fourth year after a long illness. Born at Claverdon Hall, Stratford, he was educated at Cambridge House, Stratford-on-Avon and at St John's College, Cambridge, where he took honours in two triposes, moral sciences and history, proceeding to the B.A. degree in 1877. For a time he remained in Cambridge as a coach for the Moral Sciences Tripos. He then passed the first and second examinations for the M.B. degree and continued his medical studies at St Bartholomew's Hospital. He graduated in medicine in 1884 taking the M.D. degree without the preliminary M.B. because he had already taken his M.A. in 1880.

He held the appointment of resident medical officer at the Paddington Green Children's Hospital and after a period of study in Vienna settled to practise in Bristol in 1887 with an appointment as medical officer to the Bristol Dispensary. In 1892 he was appointed assistant physician and in 1901 became physician to the Bristol General Hospital, for a time he took charge of the newly founded electrical department in that hospital. For many years he was lecturer in medical jurisprudence in University College and the University of Bristol. He was an active member of the British Medical Association, was president of the Bath and Bristol Branch in 1911-12, and for several years was a member of the Central Council and of the Representative Body. He also held the office of president of the Association of Physicians of Great Britain and Ireland in 1924 when that association met in Bristol.

Dr Parker was President of the Bristol Medico-Chirurgical Society in 1915-16 and honorary medical librarian to the University of Bristol from 1930 up to the time of his death. During the war he was on the *a la suite* staff of the Second Southern General Hospital (T.I.) in Bristol with the rank of major and subsequently lieutenant colonel.

As a physician Parker was cautious, sound and wide informed. As a teacher he was clear, impressive and interesting. But it was as a medical historian that he gave his talents their fullest play. His *Early History of Surgery in Great Britain* was incomparably the best account that has been written. His researches revealed

many facts previously unknown, his erudition was great and his accuracy in tracking information to its earliest sources was amazing

With all his learning Parker never became pedantic history in his hands always took the form of a coherent and entertaining story His knowledge of the medical history of Bristol was inexhaustible He compiled lists of physicians surgeons, and apothecaries who had practised in Bristol from the earliest times, and ferreted out their biographies with infinite zest Correspondents from all over the world would write to Parker for information about Bristol practitioners from the Middle Ages to modern times and whatever there was to be known about them he had their records and shared his knowledge freely and generously In 1933 Parker wrote a history of the Bristol Medical School for its Centenary, and the account he then compiled of the earliest schools of anatomy, surgery, and medicine in Bristol was a pattern of exact documentation and admirable illustration He hunted out the history of the old monastic hospitals in Bristol and identified their sites In his later years he was associated with Sir Flinders Petrie in exploration in Palestine and the Near East, where he acted as medical officer to the expeditions In 1927 he delivered the Vicary Lecture at the Royal College of Surgeons on "Early Hospitals" In 1934 the University of Bristol, in recognition of his labours as a University lecturer, as honorary medical librarian, and as the chronicler of Bristol medical history, conferred on him the honorary degree of LL.D

George Parker was the most modest of men, kind, courteous, and companionable, he was a universal friend and will be deeply mourned Deep sympathy is felt with his sister, Mrs Stokes

J A N

JOHN WALDY FRCS

Mr John Waldy of Green Park, Darlington, died on April 25 at the age of 76 He was the eldest son of the late Mr Edward Waldy of Barmpton, near Darlington He was educated privately, and joined the Medical College at Newcastle upon Tyne (Durham University) in October, 1877, where he acted for some time as assistant demonstrator of anatomy He passed the primary examination for the FRCS in May 1880 being one of a batch of the first five students to do so without being coached in London In October, 1881, he went to St George's Hospital, and became M.R.C.S in 1882 and L.R.C.P in 1883 He acted as assistant medical registrar at that hospital. In 1887 he was admitted a Fellow of the Royal College of Surgeons He was from 1883 a house surgeon, and later senior house-physician, at the Royal Victoria Infirmary, Newcastle for four years being the last resident to be appointed without a time limit Sir George Hare Philipson was then the senior physician of that institution, and many are the droll stories Waldy could tell of that quaint personality On leaving the Infirmary he joined Dr John Hanley Hutchinson at Catterick, and they soon had a most extensive practice in North Yorkshire, requiring at one time eleven or twelve horses to run it Waldy had often to leave home at 8 or 9 a.m., drive a tandem himself and not return home from his "round" until late in the afternoon Hutchinson had been a contemporary of Sir William Gowers as a student at University College, and was a physician of great ability

About thirty-five years ago Mr Waldy moved to Darlington as a consultant surgeon and enjoyed the confidence of the people and doctors of Darlington and district for many years, though he did not hold any hospital

appointment - In 1930 his sight began to fail and four years ago other painful diseases developed, and he had been confined to bed constantly for the last year and a half The end came suddenly, and he was buried, after being cremated, in the family burial ground beside his first wife who died in 1930, in the churchyard of Haughton-le Skerne He leaves a widow, but no children

He was of a gentle and retiring disposition, and kind to rich and poor alike His methods were slow and somewhat hesitating, but most painstaking and thorough It was these two last qualities which gave his patients such complete confidence in him He cared nothing for society or sport His leisure hours, which were few, were spent at home He was a student all his days, being interested in medicine as well as in surgery He was a teetotaler and a non smoker, and was very fond of horses and dogs, often saying that if he had not been a doctor he would have been a farmer He was a member of the British Medical Association for many years

W R

T G MACAULAY HINE, M.A., M.D

Thomas Guy Macaulay Hine, who died on April 25 aged 66, was the son of the late George T Hine, FRIBA, consulting architect to the Royal Commission in Lunacy, who built some of our largest asylums, including Claybury Dr Hine was educated at Charterhouse, King's College, Cambridge, and St Bartholomew's Hospital, graduating M.B.Cantab in 1904, and became house physician to Sir Norman Moore He then took up bacteriology, and did some research work on the group of organisms that includes the diphtheria bacillus Possessed of a competence, he was able to follow his own bent during the following years, but in 1915, during the first winter of the war, Hine's services were invited as officer in charge of the Central Laboratory that had been formed at Millbank to deal with outbreaks of cerebro spinal fever among troops Hine, who was a trained engineer as well as a doctor, thoroughly entered into the work, devised, set up and presided over a medium making department, prepared standardized, and sent out suspensions of meningococci of various types and agglutinating sera, and latterly distributed specimens of monotypical serum specially prepared for therapeutic trial, and assessed the results in a special report He took over the problem of the mass disinfection of the nasopharynx in meningococcus carriers, and designed a special jet that was operated by steam or compressed air and was particularly effective in keeping the air of inhaling rooms charged with droplets of a 1 in 50 solution of zinc sulphate In this way an efficient NCO, by making his men inhale the atmosphere vigorously through the nose while in the inhaling room, could free them temporarily of the meningococcus. Although the meningococcus in most cases gradually returned, the treatment was useful in reducing the abundance of the meningococcus in droplets expelled during the night into the air of Army huts when carried out that thing, and so helped to check the spread of the disease

For his services during the war Dr Hine received the O.B.E. and was given the honorary rank of major During recent years he had lived in retirement in Devon In 1918 he married Miss Margaret Lillywhite who survives him with a son aged 16 and a daughter His sister Mrs Coxon is the well known novelist Muriel Hine At one time Dr Hine was Master of the Fruiterers Company, and he was a popular figure in lay as well as medical circles in the City of London and elsewhere

M H G

DR ARCHIBALD DONALD

Dr Judson S Bury sends the following tribute Archibald Donald was one of my dearest oldest and best of friends and having shared in his happiness and his sorrows and rejoiced in his successes and honours I should like to say something of his personality and character even though my words can only be an echo of the sentiments so admirably expressed in the *Journal* of April 24 by other colleagues. They have given just testimony to the originality of his pioneer work in gynaecology to his operative skill and to the many advances he introduced in the technique of treatment. There can indeed be no question that Donald's work has had a powerful stimulating influence in the development of gynaecology in this country. Above all, his colleagues lay stress on his reticence in referring to his own discoveries. One instance of this reluctance to speak of his own work is seen in his Lloyd Roberts Lecture entitled *The Transition*. I have just reread it and although there is ample acknowledgement of the investigations of his colleagues I can find no reference to his own. Modesty was certainly one of his most characteristic features but behind this modesty those who knew him well realized that there was a strong personality a transparent honesty of purpose a well-balanced mind and a kindly judgement of others moreover he had the saving grace of humour and an unostentatious generosity. He was constantly doing kindly actions unwearied and indefatigable in his labours for his patients and his students taking infinite pains both in the treatment of patients and in his teaching. His extreme solicitude for the welfare of others was outstanding. His example and his lovable disposition gave him an influence which is woven into the lives of his disciples and his friends. To few has been given a life so fully and so nobly wrought. Can it be wondered that he was so greatly loved so profoundly respected by all who knew him? His last lingering illness was borne with the greatest fortitude and resignation. It is good to know that the end came in his beautiful country home to which and the fine garden he was so much attached. When a few days later we gathered round his resting place in the graveyard of the church at Nether Alderley we knew that we were bidding farewell to an English gentleman of old-world courtesy and it was sad to think that never again should we be able to see his charming smile or listen to the gentle wisdom of his observations. No kinder eyes have ever been sealed by the dust of death. I believe that Donald would have been willing to say of himself

I have loved no darkness
Sophisticated no truth
Nursed no delusion
Allowed no fear

We shall cherish of him a memory that will always be green especially to those who knew his humanity and esteemed his sterling worth

Dr JOHN AUGUSTUS SPEAR died at Guildford on April 15 at the age of 65. He was the son of the late Dr J Spear a distinguished inspector of the old Local Government Board and received his education on the Continent and then at St Bartholomew's Hospital. Shortly after qualifying as M.R.C.S. I.R.C.P. he took up an appointment in Brazil with the St John Del Rey Mining Company for many years. British Vice Consul for the State of Minas Geraes. J. G. I. H. writes. By the intimate friends of the late Dr J A Spear a lasting sorrow will be felt for the loss of one whose strong personality must have left an indelible impression on all with whom he came in contact. His brain power was far above the average which enabled him to pass the primary fellowship examination with unusual ease. That he never proceeded to the final examination was mainly due to his loss of interest and his moderate administrative duties which he held for many years. His memory is still more to him than his name. An old

reader he was familiar with the best of English literature and his retentive memory and happy mode of expression made him an ideal companion. Pomp ceremony and the vanities of this world were to him things of nought. His enduring interest lay in his books and in the hope of finding therein a solution of the problem of the universe which has for ever baffled mankind. Games did not interest him and he had no real heart for field sports, killing being repugnant to his nature. In his younger days his physical energy and impatience at delay earned him the wholesome respect of the native and European population with whom he had to deal. His fiercest tirades were more often than not a prelude to some act of pure philanthropy and his outspoken criticisms lost their sting as the underlying sense of humour came to light. He leaves behind him a devoted wife, and to her all his friends will extend their sympathy.

Dr ROBERT SPIERS FULLARTON who died after a short illness at Helensburgh on April 17 was formerly professor of physiology at Anderson College and a divisional medical officer of health in Glasgow. The eldest son of Colonel John Fullarton of Kilmacoll he was born in 1867 and graduated M.A. of the University of Glasgow in 1886. After some years he took up the study of medicine, and obtained the M.B. and Ch.B. degrees with honours in 1898 proceeding M.D. in 1911. Meanwhile he had been elected a Fellow of the Royal Faculty of Physicians and Surgeons in 1903 and afterwards took the D.P.H. of Edinburgh and Glasgow. For some years Dr Fullarton was resident assistant physician at the City of Glasgow Fever Hospital and later acting superintendent of the City of Glasgow Smallpox Hospital. With Dr R. S. Thomson he published statistics relating to vaccination and smallpox in the last named institution between April 1900 and June 1901. He joined the British Medical Association in 1914, and was honorary secretary of the Section of Public Health at the Annual Meeting in Glasgow fifteen years ago.

We regret to announce the death of Dr FRANCIS MURRAY HAIG which occurred at his home in Woking on April 22. He was the second son of Major General F. T. Haig, R.E. and studied medicine at the University of Cambridge and St Thomas's Hospital. He took his M.A. in 1882 and qualified as M.R.C.S. and L.S.A. in 1885 proceeding to the M.D. and B.Ch. degrees in 1887. Dr Haig had held the posts of house physician at St Thomas's and honorary medical officer to the Woking Cottage Hospital and St. Peter's Convalescent Home. For some years he was in active ophthalmological practice in the Midlands and was elected ophthalmological surgeon (afterwards consulting surgeon) to the Coventry and Warwickshire Hospital. He had been a member of the British Medical Association for just on fifty years.

Dr LUKE GERALD DILLON O.B.E. who practised at Seaham Harbour for half a century and was medical officer of health for more than forty years died on April 27 at Oxford where he was living in retirement. Born in 1862 he was educated at the Jesuit College, Galway and the Queen's University of Ireland graduating M.D. and M.Ch. in 1882. Dr Dillon was one of the pioneers of ambulance work in the North and in recognition of his work was made an officer of the Order of St John. He was gazetted surgeon captain 2nd Durham Volunteer Artillery Brigade in 1894 and retired with the rank of surgeon major. In 1914 he was placed in charge of recruiting for a large area around Seaham and had medical charge of all troops in the district for the period of the war. He was also medical officer in charge of Seaham Hill Auxiliary Military Hospital and Seaham Infirmary. After the armistice he became demobilization officer at Seaham and subsequently medical referee under the Ministry of Pensions. In 1912 Dr Dillon was appointed a magistrate for Durham County.

and regularly attended the courts at Seaham, and he was chairman of the Durham County Panel Committee for twenty one years in succession. As M.O.H. for Seaham he spared no effort to obtain better housing and a higher standard of living for the workers, and he was co-opted a member of the Health Committee of Durham County Council. On retirement from public office three years ago he was entertained to a dinner and presentations were made to him. He had been a member of the British Medical Association for forty years.

The Services

HONORARY SURGEON TO THE KING

The King has approved the appointment of Colonel W. J. Powell C.I.E. I.M.S. Honorary Surgeon to the Viceroy of India as Honorary Surgeon to the King, in succession to Major General A. W. M. Harvey, I.M.S., who has retired.

DEATHS IN THE SERVICES

Major General Sir (MICHAEL) THOMAS YARR K.C.M.G. C.B., late R.A.M.C. died in a nursing home in London on April 24 aged 74. He was born at Cloughjordan, County Tipperary on October 17 1862 the son of Thomas Yarr J.P. of Rathgar, Dublin and was educated at French College Blackrock and in the Medical School of the Royal Irish College of Surgeons, studying subsequently at Paris and Vienna. He took the L.R.C.S.I. and L.K.Q.C.P. in 1882 and subsequently the F.R.C.S.I. in 1894. After filling the post of chief clinical assistant at the Royal London Ophthalmic Hospital he entered the Army as surgeon on January 30 1886 passing first into Netley. He attained the rank of colonel in the long war promotion list of March 1 1915 became major general on December 26 1917 and retired in 1921. He had a more varied experience of service than falls to the lot of most Army medical officers. From 1890 to 1895 he was surgeon to the 1st Battalion of Coldstream Guards and from 1895 to 1899 was seconded as Physician to the Crown Prince of Siam. He served in the South African War in 1900-1 taking part in operations in the Orange Free State the Transvaal and Cape Colony and gaining the Queen's medal with four clasps. From 1903 to 1908 he was surgeon to the Governor of Bombay. He then served throughout the war of 1914-18 first as A.D.M.S. at Gallipoli where he took part in the landing and in the operations of the 29th Division, and later as D.D.M.S. of the Egyptian Expeditionary Force and at Malta was mentioned in despatches in the *London Gazette* of August 5 1915 and received the C.B. in 1916 the K.C.M.G. in 1917 and was made a Chevalier of the Legion of Honour. After the war he was Inspector of Medical Services to the War Office a post which involved much travelling abroad. Throughout his career he specialized in ophthalmology and was the author of *A Manual of Military Ophthalmology* and of many papers and articles on his specialty. After retirement he served on the board of management of St David's Home for Crippled Soldiers at Ealing and of the Royal Normal School for the Blind at Norwood. He was unmarried.

Surgeon Commander JOHN WILLIAM TIGHE R.N. (retired), died at Castlereagh County Roscommon on April 4. He was the only son of Dr J. M. Tighe of Melbourne was educated in Dublin and took the L.R.C.P. and S.I. in 1920 after which he entered the Navy. He became surgeon lieutenant commander on February 12 1927 surgeon commander in 1935 and retired in May 1936.

Lieut.-Colonel FREDERICK J. GARLAND D.S.O., R.A.M.C. (ret.) died on April 29 aged 59. He was born on November 5 1877 and was educated in the Royal University of Ireland where he graduated as M.B. B.Ch. and B.A.O. in 1901. Entering the R.A.M.C. as lieutenant on January 30 1904 he became major on July 1 1915 during the war and retired as lieutenant-colonel on May 18 1929. Before entering the Army he served as a civil surgeon for over a year. He served in the war of 1914-18 when he was mentioned in despatches in the *London Gazette* of July 21 1917 and June 11 1918 and received the D.S.O. in 1918. After retirement he was employed for some years at Lydd.

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 1 the following medical degrees were conferred:

M.B., B.Chir.—*G. D. Pirrie *A. B. Evans *P. J. Wenger
Byrne A. H. Knowles N. A. Buxton L. A. Collins G. C. L.
Pile H. T. H. Wilson F. I. Evans L. N. G. Lytton A. C. Blands
A. A. D. La Touche, I. W. MacKichan D. S. Scott, E. D. Hoare
R. J. Porter

M.B.—*H. Sandeman Allen *G. C. Milner *H. C. MacLaren,
*A. Monk Masoo Payne, *F. Bush, *J. F. Lown *W. A. Briggs
*F. H. Morrell *H. B. Dodwell *C. M. Ryley *D. A. Smith
A. B. R. Finn E. O. D. C. Gratlan J. H. Moseley D. R. Seaton
T. G. Armstrong, R. J. Buxton B. S. C. Gaster A. M. Barry
A. M. Weston C. E. R. Wood H. K. Meller E. Sharp A. F.
Bryson F. Clifton P. A. Walford J. E. A. David R. Colley
E. P. H. Drake H. S. H. Gilmer T. B. L. Bryan R. E. K.
Levick, J. R. G. Harris R. B. Heisch

*By proxy

UNIVERSITY OF LONDON

The following candidates have been approved at the examination indicated:

POST-GRADUATE DIPLOMA IN PSYCHOLOGICAL MEDICINE—(With
Special Knowledge of Mental Diseases) G. A. FitzPatrick
Part A G. L. Ashford Augusta G. Harrison

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

The course of study for the Diploma in Public Health covers a period of nine calendar months whole-time work and commences on September 28. The fee is 54 guineas. One fishmongers Company Studentship which is awarded annually, carries remission of fees for the course and the next examination for the studentship will be held on June 22 and 23. Applications to compete must reach the secretary London School of Hygiene and Tropical Medicine Keppel Street Gower Street London W.C.1 by June 14. A fuller announcement appears in our advertisement columns this week.

UNIVERSITY OF DURHAM

At the summer convocations the honorary degree of Doctor of Science will be conferred on Sir Henry Dale M.D., F.R.C.P. F.R.S., director of the National Institute for Medical Research and the honorary degree of Doctor of Surgery on Mr R. P. Ranken Lyle Emeritus Professor of Midwifery and Gynaecology in the University.

The centenary of the foundation of the University will be celebrated at Durham on Thursday, July 1 and at Newcastle on the following day. Invitations are being issued to other universities and educational bodies to send representatives, and a number of honorary degrees will be conferred.

UNIVERSITY OF MANCHESTER

The Rockefeller Foundation has made a grant of £5,000 to be spread over four years, in support of the research work in biochemistry being carried out under the direction of Professor Heilbron.

Dr Donal Sheehan has resigned his appointment as lecturer in neuro anatomy on his appointment as Professor of Anatomy in the College of Medicine New York University.

The conferment of degrees in science and medicine will take place on Saturday July 10 in the morning.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

A meeting of the Royal College of Physicians of London was held on April 29 with the President Viscount Dawson of Penn in the chair.

The following were elected Fellows of the College:

Arthur Cecil Alport M.D. Ed. Thomas Pearce Williams M.D.
Lond. William Noel Goldsmith M.D. Camb. Henry Fitzgerald
Maudsley M.D. Melb. (Melbourne) Lewis Ralph Yealland M.D.
Ontario Francis Joseph Bentley M.D. Durh. Ernest Noble
Chamberlain M.D. Liverp. (Liverpool) Francis Wiremu Brian
Fitchett M.D. Ed. (New Zealand) Jeffrey Ramsay O.B.E., M.D.
Lond. (Blackburn) Frank Dutch Howitt C.V.O. M.D. Camb.
Oscar Brenner M.D. Birm. (Birmingham) Benjamin Branford
Morgan M.D. Ed. (Norwich) Douglas Kinchin Adams M.D. Glas.
(Glasgow) Percy Selwyn Selwyn-Clarke M.C. M.D. Lond.

period of instruction. When they arrived at a certain age and were thrown out on the streets they were useless and had a wrong mentality.

WORKING HOURS OF JUVENILES UNDER 16

SIR JOHN SIMON said he had studied this subject at the Home Office and had been making inquiries for some time. As far as the present law was concerned in the matter of permitted hours young persons between 14 and 18 and women of any age were all treated on a level. The hours at present permitted for women and young persons were fifty five and a half in textile factories and sixty in other factories. In most cases these hours were never touched. At present there was an agreed working week—say of forty-eight hours—and in addition a large quantity of overtime which might extend over the whole year. The present Bill contained a gradation as regards hours and it was for the Committee to decide whether that gradation was steep enough. There was a statutory limit of forty-eight hours a week for women with permissive overtime limited both in number of hours and number of weeks. For young persons between 16 and 18 the hours were forty-eight a week with a more limited provision concerning overtime, and for persons between 14 and 16 there could not be any overtime. Then came the question whether the Committee could do better than in the Bill as regards juveniles between 14 and 16. He hoped that they could. In the recent Shops Act forty-eight hours was deliberately fixed for young people between 14 and 16 in shops. In the unregulated trades such as the work of page boys in hotels, boys working lifts and so on forty-eight hours had been recommended for juveniles between 14 and 16. Therefore the Bill did not lag behind recent standards either adopted or recommended, but the Committee ought to endeavour to go further.

The problem of interdependence of juvenile and adult work in the cotton industry was difficult and if a substantial difference in the number of hours worked by youthful helpers and others was suddenly decided upon, very serious reorganization would be required in those industries. He had received help from the Factories Department in this matter and had begun to make inquiries outside in various industries. Before the Bill left the House of Commons he would like to see a reduction in the permitted hours of juveniles between 14 and 16. He had asked the medical advisers to the Home Office whether they thought the existing forty-eight hours could be said to be injurious to health and they replied that on present information this could not be said though they would be glad to see more time for leisure and recreation. The Committee must remember that when it talked about forty-eight hours for these young persons it meant working that number of hours week in week out with the exception of very limited holidays and at times when young persons did not feel as fit as usual. That had to be borne in mind even although his impartial advisers could not say that a forty-eight hour week for these juveniles proved injurious to health.

HOURS TO BE REDUCED

MR GIBBINS asked whether the Ministers' medical advisers when suggesting that forty-eight hours a week between 14 and 16 was not injurious had had regard to the consequences later in life for young persons who worked those hours. SIR ERNEST GRAHAM LITTLE asked whether Sir John Simon knew the unanimous opinion expressed in the medical press on this subject.

SIR JOHN SIMON said on general grounds it would be better to get the hours reduced and he would endeavour to secure on the floor of the House that the Bill was altered to provide that for juveniles between 14 and 16 years of age the maximum permitted hours of working should be reduced by statute beyond what was provided in the Bill. He had not yet sufficient information on what the new number of hours should be. It would not be possible to introduce the provision as early as other provisions in the Bill and there must be time for important industries to reorganize but they could possibly bring the improvements into force within two years. They must leave to an industry the opportunity of proving,

if it could that in each case a figure differing from the new statutory figure—but not necessarily as much as forty-eight—was justified. The industry would have to prove first that the hours could not reasonably be regarded as injurious to the health of young people secondly that the proper carrying on of that industry made it desirable that young people should work these longer hours side by side with their elders and thirdly that juveniles would be engaged in such work as would familiarize them with and train them for processes in which the older people were employed and would be likely to lead up to their employment as adult workers in those processes.

MR SILKIN asked if the modified proposals would apply only to children between 14 and 16. SIR JOHN SIMON replied that this was so. MR VIANI said the Opposition were disappointed at the speech of the Home Secretary. The Committee ought to be ready to limit the hours of labour to forty for young persons and the industrialists would fall into line.

The discussion was adjourned until April 22 when SIR JOHN SIMON said that on further reflection he did not think it would be a good plan for the Committee to pass the Bill back to the House without making any adjustment in the matter of juveniles under 16 and to wait for the Report stage for new proposals to be tabled. The modifications he had sketched out would come into force after an interval possibly of two years and would have to be expressed in a clause which provided that after that interval the figure 48 would be altered to a smaller one. That could properly be done in a new clause which would follow the one on the general conditions as to hours of employment of women and young persons and he undertook that the Government would put down a new clause during the Committee stage.

MR W. W. WAKEFIELD said the new clause would deal only with young persons from 14 to 16 but the progress of education was such that before long young persons under 15 would not enter industry, and the new clause therefore would deal only with persons between the ages of 15 and 16. He asked the Home Secretary to reconsider the hours of work of young persons of 16 to 18.

MEDICAL OPINION

SIR ERNEST GRAHAM LITTLE said medical and educational arguments made a special class of the children from 14 to 16 years. That class was relatively small and would be smaller in the near future. Medical opinion unanimously wished to restrict the hours of labour of children from 14 to 16 years. In that period the whole structure of the child's physical and psychological changed. The mental and physical state of the child in those years was in turmoil. The child ought not to be in a factory at all. When the child left school at 14 years of age and went into a factory he was unfitted for this complete break and soon lost the keenness and enthusiasm which he acquired in school. The work done by children in factories at that age was not a preparation for trade and there was a great period of indolence instead of mental activity because of the absence of incentive. At 18 when the children were thrown again on the labour market they were lifeless persons whereas the child at 14 was intellectually curious and anxious to learn more.

The Committee then divided on the amendment moved by MR ALFRED SHORT on April 22 to insert the word "forty" for the words "forty-eight" and this was defeated by 24 to 15.

MR RHYS DAVIES moved an amendment to provide that the period of employment for women and young persons should not exceed ten hours in any day instead of the eleven hours specified in the Bill. MR GEOFFREY LLOYD said MR RHYS DAVIES confused the hours of employment with the period of employment. The period of employment was made up of the hours of employment plus intervals for meals and rest. The amendment would confine the employment period to a shorter time by restricting meal times and rest intervals. The amendment was withdrawn.

The Committee agreed to an amendment substituting 7 a.m. for 6 a.m. as the hour at which employment of women and young persons in factories might begin. He said reports of

inspectors showed that nowadays factory employment did not begin before 7 a.m. unless there was a special reason for doing so and the Government was prepared to agree that it should not begin before that hour except in special cases authorized by the Home Secretary. A new clause would be moved later on dealing with exceptions as to the hours of commencement.

Mr. SILKIN moved to substitute 6 p.m. for 8 p.m. as the hour at which on days other than Saturdays the employment of women and young persons in factories should cease. He said this was to meet the concern felt for the physical fitness and continued education of young children. Mr. BROAD approved the application of the amendment to women, of whom a great proportion had to keep their homes going, do shopping and housework and look after children or even maintain disabled husbands although they worked in factories. Lady ASTOR supported this argument and said that girls all over the country were going to factories from long distances as the new housing estates had not been built around the factories.

Mr. GRIFFITH LLOYD said the hour of stopping work was governed in practice by the hour of starting. In a number of factories the work started relatively late at 8.30 a.m. or 9 a.m. and in other factories longer meal times were given or both circumstances prevailed so that work continued until 6.30 p.m. or 7 p.m. or perhaps until 7.30 p.m. or 8 p.m. on some days for the convenience of the workers. These conditions were largely settled in consultation with the workpeople.

There was some further discussion after which Mr. LLOYD said he was impressed by the way in which members had put their objections. It was not reasonable to say that an adult woman could not start work at 8.30 a.m. or 9 a.m. in any circumstances but young persons had a special case. If the Committee would pass the clause as it stood the Home Office would reconsider it and ask the assistance of Opposition members in pointing out examples where the proposed hours would constitute an abuse. It was not safe to make a concession at this stage. Mr. Silkkin's amendment was then withdrawn.

Mr. GRAHAM WHITE moved to omit the words "or young persons" from a subsection of Clause 68 which provides that a woman or young person could be employed up to four and a half hours without an interval for meal or rest or up to five hours if a break of ten minutes was allowed in the course of the spell. He said this amendment was made in conjunction with the other amendment for limiting the spells of work for young persons to three and a half hours. Mr. LLOYD said the provision in the Bill was put in as a result of the experience of the Factory Department to provide the intervals and rest pauses which were necessary and to avoid unnecessarily long rest pauses which were resented by the workers concerned. As a result of work by the Medical Research Council these proposals had been incorporated in the Bill. The Committee negatived the amendment.

Sir ERNEST GRAHAM LITTLE moved to substitute three hours for four and a half as the length of the continuous spell. He said it was established that spell of work of more than three hours was so long that the attention of the mind and the incidence of accidents was largely increased by intention. Three hours was enough to exhaust the capacity of a child of 14 to 16. He asked whether it was not possible in this provision to separate women from children. There was no reason to separate women from men from the medical point of view, but reason to separate women from children. Mr. GRIFFITH LLOYD and the conclusion that three hours was the maximum spell that should prevail was not the conclusion to which the Industrial Health Research Board came after examination of sickness records and so on. The Board concluded that it was impossible to obtain reliable evidence as to the length in the duration of work spells affected by fatigue. The effect of medical opinion in this matter was confused, but reports of factory inspectors tended to show that it was not at the end of a period of work, even in terms of hours, that a decision was required. They tended to show that the length of work or during periods of

Sir Ernest Graham Little's amendment was negatived.

Mr. WHITE moved to leave out the permission allowing the working spell to be five hours with a ten minute break but this was defeated by 22 to 9. The Committee then adjourned until April 27.

INTERVALS FOR MEALS

When discussion was continued on April 27 Mr. SILKIN moved to provide that where young persons were employed during the hours of 11.30 a.m. and 2.30 p.m. an interval of not less than three-quarters of an hour should be allowed between those hours for dinner if taken in the factory or in a building of which the factory formed part or of one hour if not taken in such buildings. Sir JOHN SIMON said the existing powers of the Home Office as regards welfare orders did not give an actual mandatory power to make directions on the length of the interval for meals. The amendment was negatived and the CHAIRMAN then suggested that amendments on the paper dealing with the employment of women before and after childbirth should better be discussed as a new clause. Mr. GRAHAM WHITE and Mr. RHYD DAVIES agreed to this.

On the motion that Clause 68 as amended stand part of the Bill Sir WALTER SMILES said that he had made inquiries in Blackburn from working people themselves and found they preferred children to go to work before they were 15 and to work forty-eight hours a week. They pointed out that the children got better discipline in the factories than they seemed to do in the schools. Sir ERNEST GRAHAM LITTLE said no part of the Bill aroused more attention from medical and educational authorities than the reduction of hours for young persons between 14 and 15 and if possible between 16 and 18. Sir JOHN SIMON said there would be later opportunities for debating this matter. By supporting the present clause Sir Ernest would promote the object he had in view. Lady ASTOR asked whether on the new clause the Committee could discuss the hours of those from 16 to 18. Sir JOHN SIMON said these had been discussed on Clause 68. The new clause would deal with persons between 14 and 16. Overtime for persons between 16 and 18 would arise on Clause 70.

The Committee approved the clauses amended by 34 to 25 to 18. Clause 69 (Notice fixing hours of employment) was ordered to stand part of the Bill without discussion.

THE QUESTION OF OVERTIME

On Clause 70 (Overtime employment of women and young persons over 16) Mr. ELLIS SMITH moved to leave out the reference to young persons who had attained the age of 16. After discussion Sir JOHN SIMON said the present legal hours for young persons between 16 and 18 in a year were 3,640 taking out one week for statutory holidays but the Bill would reduce that total to 2,550 hours in a fifty-one week year or ten hours a week less. Even this limited amount of overtime ought not to be allowed in an industry injurious to the health of young people and a subsection of Clause 70 had been inserted to meet any case which might arise of increased hours over forty-eight being injurious to health. The Home Office had no interest in overtime but he was not prepared to say that a young man of 17 was less capable of doing two or three hours overtime than the average woman.

Mr. ELLIS SMITH's amendment was defeated by 34 to 19 and an amendment to provide that no young person should work more than fifty hours overtime in any calendar year was also defeated.

The Committee adjourned till April 29. On resumption Mr. RHYD DAVIES moved that the overtime in the factories should not exceed in the aggregate 100 hours in any calendar year or 15 hours in any week, nor occur in more than thirty days in any calendar year. The chairman ruled the amendment out. Other amendments on the same subject were moved and withdrawn.

Sir JOHN SIMON moved an amendment to enable the Home Secretary to order an inquiry by a representative committee that in any class or description of factory the overtime allowed under the Bill could be reduced without the consent of the industry. After the inquiry the Home Secretary would make regulations reducing the amount of

overtime of women or young persons employed in this section of the industry. The amendment was carried by 23 votes to 12. The Committee agreed to a further amendment moved by Sir John Simon enabling him in special conditions to provide that no woman should be employed overtime for more than seventy-five hours and no young person for fifty hours in any calendar year and that neither except as otherwise provided in regulations should be employed overtime in a factory more than six hours in any week or in more than twenty-five weeks in the calendar year. The clause as amended was then added to the Bill by 22 votes to 9.

Clause 71 (Supplementary provisions as to overtime) was also added to the Bill after proposed amendments dealing with holidays had been defeated.

The Committee adjourned until May 4.

Maternity Services in Scotland

In the House of Lords on April 27 Lord STRATHCONA moved the second reading of the Maternity Services (Scotland) Bill which has passed the House of Commons. He explained that the main purpose of the Bill was to improve the standard of domiciliary midwifery in Scotland. It aimed at providing a domiciliary midwifery service of high standard securing adequate nursing and medical and specialist obstetrical services for women confined at home. Scottish medical men took a much larger part in midwifery practice than English doctors. The Bill took account of this fact and was therefore not limited to a midwife service only. Under the arrangement proposed every expectant mother who desired to be confined in her own home would be entitled to obtain the services of a midwife and a doctor. If the need arose the doctor would be at liberty to call for the advice or help of an obstetrician of recognized standing. A thorough system of ante-natal and post-natal care would be a fundamental feature of the scheme. The idea was to have a co-ordinated service of the midwife and the doctor acting in co-operation with the assistance if need be, of the expert obstetrician.

Local authorities would be free to select the type of arrangements they preferred for securing the medical services so long as the services were adequate. In some areas medical arrangements other than those relating to obstetricians might be made with all general practitioners in that area who were willing to take service on the terms offered by the local authority. In others the ante-natal and post-natal examinations might be carried out at the authority's clinics, and arrangements made either with all practitioners or a limited number of those in the area to provide the intra-natal service. No insuperable difficulty was anticipated in securing the services of qualified obstetricians in most areas. Adjoining areas might in some cases find it desirable to combine for the purpose of this specialist service. As in the case of the midwife service the local authority was required to consult with any local organization representing the medical practitioners in the area before submitting its proposals for the Department's approval and any such organization if dissatisfied might make representations to the Department.

The remuneration of midwives and doctors participating in the service would be a matter for negotiation between the local authorities and those with whom they proposed to enter into agreement or their representatives. As those fees would be payable by the local authorities one of the beneficial aspects of the scheme would be the elimination of bad debts which had hitherto been a source of much worry particularly to midwives.

MEDICAL STUDENTS AND DOMICILIARY MIDWIFERY

Clause 6 of the Bill the object of which was to prevent the attendance of unqualified persons on women in childbirth contained a proviso exempting from the prohibition medical students and pupil midwives attending as part of their course of training. Fears were expressed while the Bill was under discussion in the House of Commons that under this exemption it might be possible for students and pupil midwives in the early stages of their training to undertake the delivery of women and the Secretary of State for Scotland promised

to look into the question whether there was any possibility that this might occur. He accordingly arranged a conference between the Department of Health and representatives of the university medical schools and of the maternity hospitals engaged in the training of midwives. The conference was held on April 23. The representatives of the training bodies assured the Department that the fears which had been expressed were groundless. As regarded medical students they pointed out that the effect of the recommendations of the General Medical Council was that no student could undertake any practical midwifery work until the latter part of the fourth year of his curriculum and before undertaking any domiciliary case he must have had adequate theoretical and practical instruction in midwifery including the witnessing of demonstrations and the delivery of women under qualified supervision in a maternity hospital or ward. They assured the Department that the arrangements for training in every Scottish university were such as to ensure the safety of the patients and had been recognized by the General Medical Council as complying with its requirements.

With regard to pupil midwives the rules of the Central Midwives Board for Scotland secured that the pupil before undertaking any domiciliary case should not only have received sufficient theoretical and practical instruction, including demonstrations but should have delivered under qualified supervision five patients in a maternity hospital or institution giving a course of training which had been approved by the Board. No pupil midwife was trained in Scotland otherwise than in accordance with those rules which were subject to the approval of the Department of Health. It was clear therefore that neither medical students nor pupil midwives were sent out to the homes of the people until they had been properly tested out in the maternity ward and had satisfied their teachers that they could be trusted with outside cases.

Lord STRATHCONA welcomed the Bill as a very long step towards a State medical service.

The Bill was read a second time.

In the House of Lords on May 4 the Maternity Services (Scotland) Bill passed through committee without amendment.

Causes of Silicosis

Mr JAMES GRIFFITHS asked on April 29 whether the Secretary for Mines could give information regarding the claim made by the Institute of Mining and Metallurgy that recent researches made by the institute had resulted in discoveries capable of reducing the incidence of silicosis in mines by 90 per cent. Commander SOUTHBY replying for Captain CROOKSHANK said that in a speech on April 22 the President of the Institute pointed out that among certain categories of miners on the Rand the incidence of silicosis in 1935 was 90 per cent. less than in the period 1920 to 1923. This improvement was attributable to preventive measures—for example as regards drilling and shot-firing—which were already applied in the United Kingdom where risk of silicosis was to be apprehended with the exception that in the United Kingdom there was no system of initial or periodical medical examinations. The President had also made mention of recent developments in research into methods of collecting and examining samples of dust from the air. This was not suggested to be a case of cause and effect and the researches had not yet reached the stage of providing further preventive measures of practical application.

On May 4 Captain CROOKSHANK replying to Mr J. Griffiths said that the South African regulations with regard to silicosis applied only to the scheduled mines which generally were the metalliferous and not the coal mines. As at present advised he did not propose as regards the coal mines of this country to displace the method of differentiating requirements according to risk in favour of applying the same requirements to all these mines. The whole matter was however under consideration by the Royal Commission now sitting.

Training of Blind Persons

Sir KINGSLEY WOOD told Sir WM JENKINS on April 29 that the test for the certification of blindness in England and

Wales was that the person was so blind as to be unable to perform any work for which eyesight was essential. There was substantial uniformity in applying this test in accordance with criteria set out in a circular.

On the same date Mr OLIVER STANLEY told Sir Wm Jenkins that the number of blind boys and girls as distinct from the partially sighted who left the schools for the blind each year at the age of 16 was about 200. Practically all likely to be employable entered vocational courses of training. On March 31 1936 the total number of boys and girls from schools for the blind who were being trained was 698. The Board of Education had no record of border line cases of pupils in schools for the blind but he agreed with the conclusion of the Committee on Partially Sighted Children that such children should be taught in schools or classes for partially sighted children and that hardship was involved if they were educated and brought up as blind and had later to enter the sighted world for which their education had not fitted them.

Midwives Act and Maternity Benefit

On May 3 Mr Dr ROBINSON asked the Minister of Health whether he would introduce legislation to amend the National Health Insurance Acts so as to increase the amount of maternity benefit payable by approved societies seeing that the Midwives Act 1936 by making compulsory the attendance of a qualified midwife at all confinements threw an added financial burden on insured contributors at such times. Mr R S HENSON said that the position of a woman entitled to maternity benefit as regards the arrangements for attendance at her confinement was not materially affected by the provisions of the Midwives Act 1936. The National Health Insurance Acts had always contemplated that such a woman should be attended either by a medical practitioner or a qualified midwife. The Midwives Act expressly provided that the fees charged by local authorities for the services of their midwives might be remitted in whole or in part where the circumstances justified such remission. The Minister of Health did not therefore consider that the coming into operation of the new Midwives Act afforded any reason for the suggested amendment of the National Health Insurance Act.

Maternal Mortality—On May 4 Mr R S HENSON replying to Mr G Griffiths said that for 1936 the deaths classified to pregnancy and childbearing in England and Wales were 2,302 while the deaths not classified to those causes but returned as associated therewith were 677. These figures were provisional.

In our advertisement columns this week the London County Council invites applications for the appointment of a coroner for the County of London at a salary of £1,700 per annum.

The Rt Hon Arthur Greenwood M.P. will perform the opening ceremony of the Metropolitan Borough of Hackney's Maternity and Child Welfare Centre at 136 Richmond Road Hackney, to-day (Saturday May 8) at 4 p.m.

We are asked to announce that the May meeting of the South West London Medical Society (originally fixed for May 12) will be held at the Bolingbroke Hospital, Wandsworth Common S.W. on Wednesday May 19 at 9 p.m. when Dr Wilfred Sheldon will speak on 'Abdominal Distension in Children'.

The Court of Inquiry appointed by the Minister of Labour to investigate and report on the issues involved in the London omnibus strike has been meeting daily this week at the Middlesex Guildhall. On Monday Dr James Woodhall chief medical officer at Manor House Hospital, N.W., was called by Mr Bevin on behalf of the men and gave evidence regarding complaints of irregularity of meals and irregular hours of work, the constant vibration of buses fumes from motor engines and the increased nervous tension attributable to the speeding up of services. Dr H B W Morgan medical officer to the Trades Union Congress referred to the number of complaints of gastric symptoms etc. received from men in transport work and classified these into digestive symptoms and neuro-muscular symptoms. He shared Dr Woodhall's impression that there was a higher incidence of gastric trouble among omnibus drivers and conductors than among other classes of workers. On Tuesday Dr Millais Culpin professor of medical industrial psychology at the London School of Hygiene and Tropical Medicine gave evidence regarding his examination of a number of bus drivers at the Manor House Hospital diagnosed as suffering from gastric disturbances. He agreed with Mr Bevin that his preliminary studies led him to the view that there was at least a strong *prima facie* case for a thorough investigation into the effects upon the nervous system of speed vibration fumes and inspection.

Queen Mary has appointed Mr C B Goulden O.B.E., F.R.C.S. as Surgeon Oculist and Mr Francis Donovan C.V.O. L.D.S. R.C.S. as Surgeon Dentist to Her Majesty's Household.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

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QUERIES AND ANSWERS

Motoring Queries

"MEDICAL MOTORIST (St Helens) writes I would be grateful for formulae of the following from my fellow medical motorists (a) an effective corrosion inhibitor for the radiator and (b) a reliable anti freeze solution with the amount to be added

Income Tax

Partnership—Separate Allowances

PERPLEXED inquires in what way he should approach the authorities so that he can claim his allowances without the necessity of their becoming known to his partners

•• The income tax in the case of a partnership is assessable on the firm as such and as the allowances must be shown on the firm's assessment notice it follows that to the extent to which the allowances are claimed on the form of return they will become known by inference to the other partners. We suggest that as regards any particular allowances which

Perplexed wishes to remain unknown to his partners he should omit them from his declaration for assessment pay the additional tax and claim it back as a separate matter. It might avoid misunderstanding if he took an opportunity of explaining what he proposes to do and his reasons for doing it, to his local inspector of taxes.

LETTERS, NOTES, ETC

Minnitt's Apparatus

Dr O DONEL BROWNE (Dublin) writes Although the "Queen Charlotte's" gas air apparatus is already well known to many practitioners elsewhere I hope it will soon be available for more general use in this country. It is unquestionably one of the most outstanding advances in present-day obstetrics being excellent for maternity practice whether in the private house or nursing home. My experience with this apparatus has been most satisfactory and completely agrees with the several reports issued to date. The patients themselves though possibly mistrustful of the apparatus at first sight now feel they cannot recommend it too enthusiastically. Whether used by itself alone or in conjunction with twilight sleep the results have been excellent, and I have had no anxiety for any mother or child following its use. I sincerely hope that the rate of production of this apparatus will be accelerated in the near future and that this means of relieving the pains of labour will soon be available for and accepted by all doctors and nurses, both for their nursing home and private house maternity practices. I heartily congratulate the doctors and manufacturers on their enterprise and achievement.

Short wave Therapy

Dr H J TAYLOR writes from the St. John Clinic and Institute of Physical Medicine London SW1 May 1 draw the attention of your readers who are interested in short wave therapy to the following quotation from a report recently issued by the American Council of Physical Therapy a body which should certainly have its counterpart in this country.

Much of the work of the council in the past year has been confined to the consideration of so called short wave diathermy machines. In view of the deliberations the council believed it was justifiable to state, based on the present available evidence the following conclusions (1) there is no specific biologic action of high frequency currents (2) there is no specific bactericidal action (3) the therapeutic effect is due to the heat produced. Elaborating these three conclusions, the council felt that the general practitioner should understand that when he buys a short wave diathermy machine he is simply purchasing an apparatus capable of producing heat. In the light of available evidence it has absolutely no other specific action."

The Red Cross in Spain

The International Committee of the Red Cross reports that its appeal for funds and for gifts in kind for the relief of the victims of the civil war in Spain continues to meet with response from Red Cross societies in all parts of the world but that considerably larger sums are required to meet the appalling needs. There is a gratifying recognition of the impartiality and prestige of the Red Cross by both parties to the conflict and this has enabled its representatives to carry into effect many schemes for the relief of suffering. The committee continues to pay special attention to the question of help to prisoners. This work more than any other depends on the good will of the respective authorities but visits to prisons by Red Cross representatives are now permitted in many localities and standardized parcels of food and clothing are distributed. Prison hospitals have been established and in some cases the exchange of prisoners has been effected. One valuable aspect of the work has been the organization of intercommunication between the various members of families separated by the exigencies of the war. Standardized post cards, approved by the censors of both parties have been instituted and consent obtained for their dispatch and distribution through local Red Cross bureaux.

The Veterinary Curriculum

Mr M HARVEY CLARKE M.R.C.V.S. writes In an interesting article in the *Journal* of April 10, under the heading Veterinary Education it is stated that it appears that at some future time it will be necessary to extend the course of the veterinary curriculum from four to five years. May I point out that the course of the veterinary curriculum is five years, and has been so for some time but it has recently been suggested that it may be necessary at some future time to extend this course from five to six years.

Air Raid Precautions Instruction in Wandsworth

Dr H B DODWELL (Hon Sec Wandsworth Division of the B.M.A. 57 Albert Bridge Road SW11) writes May 1 remind those readers living in the boroughs of Wandsworth or Battersea who have not yet attended air raid precautions (anti gas) classes that there will be two more courses, beginning on Friday May 21 either afternoon or evening. If they wish to attend will they kindly get in touch with me.

Coronation Maps for Motorists

A map of London showing the "Coronation areas" and the roads leading to or avoiding them has been issued by the Automobile Association. On one side the map shows an area within twenty five miles of the "Processional Route" and all important approach or "ring" roads. The position of all A.A. roadside telephone boxes is marked especially those which will be manned by patrols from May 10 and equipped with copies of this and other maps and leaflets showing garages near railway stations on the outskirts of London. On the reverse side a large scale street map of Central London shows the Royal Procession route the Coronation area which will be closed to ordinary traffic and the roads affected by police regulations. An inset map also gives particulars of the traffic regulations in force when floodlighting takes place from May 12 to 17 inclusive. Members of the Automobile Association may obtain copies of the map free of charge from any A.A. office.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

356

Austin Flint's Murmur

H. FLEISCHHAUSER (*Munch med W'chr*, March 12, 1937, p. 409) draws attention to the presystolic or diastolic murmur at the apex in cases of aortic insufficiency first described by Flint in 1860. It is due to (1) a throwing back of the segments of the mitral valve producing a resistance to the inflow of blood from the left atrium—that is a mitral stenosis exists without anatomical changes in the valve segments or (2) the murmur is due to a swinging of the valve segments resulting from a meeting of the blood stream returning from the aorta and that flowing in from the left atrium. The differential diagnosis between an organic and a 'functional' Flint's murmur is often very difficult. The author describes a case of subacute endocarditis examined post mortem. Yellowish masses of the size of a lentil were found on the three segments of the aortic valve. On the anterior segment of the mitral valve an aneurysm was present which gave rise to a stenosis of the venous ostium. Fleischhauser believes that the aneurysm was due to pressure of the blood flowing back from the aorta and that it gave rise to the presystolic murmur noted during life. He is of the opinion that Flint's murmur is more often due to a swinging of the mitral valve segments following a meeting of two blood streams than to a functional stenosis of the valve such as occurred in this case.

357 Anaemic Crises in Haemolytic Jaundice

H. G. DIDIKSEN (*Norsk Mag Lægevidensk*, March 1937, p. 279) gives an account of two Norwegian families several of whose members erected an epidemiological sensation. In one of these families there were eight cases of an acute febrile disease in February and March 1934. Profound icterus, enlargement of the spleen and great general debility were accompanied in several cases by loss of consciousness. Two of the patients died after an illness of only a few days. In another family in a neighbouring parish four similar cases had been observed a few months earlier. The nature of the disease being obscure two of the patients were admitted to hospital in Oslo for observation. Though they were no longer febrile they still suffered from icterus and enlargement of the spleen. In both cases familial haemolytic jaundice was diagnosed. A little later two members of the other family were admitted to hospital and they too proved to be suffering from familial haemolytic jaundice. Further investigations showed that altogether eighteen members of these two families suffered from familial haemolytic jaundice. It is probable that the two families were overtaken by some acute infectious disease such as influenza and that their reaction to it with acute anaemia and various other manifestations was largely determined by their basal disease—the familial haemolytic jaundice which under normal conditions runs a comparatively mild course. The author suggests that the acute manifestations precipitated by what was presumably an attack of influenza came under the heading *crises haemolytiques* or *crises febriles*.

this method in twenty persons whose electrocardiograms were characteristic of bundle branch block the writers came to the following conclusions: (1) Among seventeen cases with electrocardiograms indicating right bundle branch block fifteen clearly showed that the right ventricle contracted first thereby indicating a left bundle branch block. In the other two cases no signs of ventricular asynchronism could be discovered. (2) Of three cases with electrocardiograms characteristic according to Wilson and others of a right bundle branch block in one the left ventricle contracted before the right, while in the two others no asynchronism was detected. (3) The electrocardiogram by itself therefore is not a reliable means of diagnosing complete bundle branch block with its mechanical consequences.

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Acetanilide Poisoning

E. LUNDSTEEN, E. MEULENGRACHT and A. RISCHTEL (*Ugeskr Laeg*, February 11 1937, p. 155) draw attention to the frequency with which acetanilide enters into the composition of 'headache powders' whose sale in Denmark is comparatively unhampered by legal restrictions. In the course of the past five or six years they have observed ten patients suffering from obvious chronic acetanilide poisoning the dosage of this drug ranging from 0.3 gramme to 4.5 grammes daily. In some cases the drug had been taken for relief of headache for ten to fifteen years. The condition which drew attention to this chronic poisoning was a characteristic cyanosis of the face lips and tongue. It was mainly due to para-imido-phenol derivatives. What was remarkable was the way in which the patients clung to their 'headache powders' for which they could find no satisfactory substitutes in other anti-neuralgic drugs. Acetanilide must be considered as a drug of addiction which creates a definite craving. It is therefore incorrect to consider the disfiguring cyanosis as the most important consequence of chronic acetanilide poisoning. It also induces emaciation and anaemia. But what the authors consider as most important is the vicious circle started by acetanilide medication. The indications for this drug are usually headache and lassitude both of which are temporarily relieved but in the long run aggravated by it. The authors therefore recommend changes in the regulations governing the sale of this drug in Denmark. At present a medical prescription containing this drug may be presented to a chemist as often as the holder likes within five years of its signature.

Surgery

360

Bilateral Urinary Calculi

K. TZSCHIRNITSCH (*Z Urol*, Bd 31, Heft 3, 1937, p. 20) takes a gloomy view of the prognosis and treatment of bilateral urinary calculi which according to him are present in 20 to 25 per cent of all cases. Operation is only indicated if (1) it is possible to leave the kidney intact, (2) danger to the patient's life can thereby be averted, (3) pain is so acute that life becomes unbearable. Pyelotomy is the operation of choice, nephrostomy is to be preferred to nephrectomy. The consensus of opinion with regard to operation on both sides at once or one at a time is slightly in favour of the latter practice. The time interval between the two operations varies between ten days and four months. There is no consensus of opinion as to whether the better or worse side should be operated on first. In nine cases of his own the author recorded a cure of the calculi after operation on all of them. Urinary calculi are more prone to recur than other calculi. He gives 11 cases from which twenty-five cases had even recurred.

of which two required a third operation. Calculi are found after operation (a) because they were not seen in the radiographs and were not removed at the time (b) because of the persistence of infection, (c) because slackness of the pelvis of the kidney leads to retention of urine and (d) because of lack of vitamin A in the diet. The excretion of urinary colloids is held to prevent recurrence of stones. A vegetable diet disturbs the protective element of colloids, a protein diet enhances it. The administration of chondroitin sulphuric acid is the best-known therapeutic agent for the prevention of stone formation. Tzschirntsch advocates greater attention to the indications for operation and research into other methods of treatment for the prevention and recurrence of stone formation.

361 Buccal Cancer and the Salivary Glands

V MAGRI (*Polichinico Sez Prat*, March 15, 1937, p 515) made a systematic examination of the salivary glands in fifty cases of buccal cancer at the Institute of Morbid Anatomy at Venice. He found that involvement of these glands was very uncommon, only three examples of the kind being noted. When the salivary glands were involved the new growth developed not as the result of metastases but by direct spread of the tumour.

352 Haematoma of the Rectus Muscle in Women

F NORGGAARD (*Hospitalstidende* March 2, 1937, p 246) contrasts the comparatively common haematoma of the rectus abdominis due to severe strains or infectious diseases with the rare spontaneous haematoma in the same muscle. He records as many as four new cases. As in earlier publications on the subject all the patients were women, one of whom had always bruised readily. Her capillary resistance as determined by Göthlin's instrument, was found to be reduced. The predisposing cause of a spontaneous haematoma in the rectus abdominis seems to be one or several pregnancies while the direct cause is a lesion of either a muscle or a blood vessel. In some cases rupture of a muscle has been found at operation, and in others the fibres of the rectus have been separated from each other by a haematoma. It is therefore probable that both processes may play a part. Only one of the seventy-two cases previously on record was that of a nullipara and as many as eleven cases occurred at the time of pregnancy. In fifty-seven cases a cough or some sudden but slight movement was held responsible for the accident. The clinical picture is usually misinterpreted and though practically all the seventy-two patients came to operation, rupture or haematoma of the rectus abdominis was diagnosed beforehand only in eleven cases. The mistaken diagnoses were tumour of the ovary in seventeen cases and various forms of the acute abdomen in the remainder. If the haematoma is fairly large, operative treatment is preferable to conservative treatment, and the prognosis is good.

Therapeutics

363 Russell's Viper Venom

J B HANCE (*Indian med Gaz* February, 1937, p 76) records three cases in which bleeding was controlled by preparations of Russell's viper venom. In the first case there was a direct application of a 1 in 10,000 solution of stypven on cotton swabs to the site of a haemorrhage following tonsillectomy in a male of 48 years, in whom the coagulation time was known to be six minutes. The oozing stopped at once, permitting suture of the faucial pillars over a dry tonsillar bed. In the second case two intravenous injections of 0.5 c cm of 1 in 100,000 solution were employed as a desperate and heroic measure to clear post-operative haemorrhage in a female of 36 years following hysterectomy for menorrhagia. She had had seven-

teen previous severe confinements and was grossly undernourished, but assisted by a direct arm-to-arm transfusion she made an uninterrupted recovery. Intradermal injections were used in the third case that of a male aged 68 known to be a 'bleeder', and complaining of severe biliary colic. His clotting time was reduced from 9 minutes 20 seconds to 6 minutes 30 seconds by the administration of calcium and haemoplastin and half an hour before operation 0.5 c cm of a 1 in 10,000 solution of stypven was injected intradermally. A difficult cholecystectomy was performed, and as the subcutaneous tissues were observed to ooze a further intradermal injection was given. Although the following morning the coagulation time rose no further visible oozing took place. Colonel Hance therefore although aware of the danger of deduction from isolated cases feels that there is a definite wide field of application for Russell's viper venom, and hopes that these cases will induce other observers to confirm his results.

364 Psychopathology of Prolonged Narcotic Sleep

V A GILYAROVSKY (*Arch Sci biol* 1936, vol 42, p 89) considers lengthy narcotic sleep to be the only method of curing schizophrenia. He was able to show that a lengthy narcotic sleep brings about a typical intoxication which is in some cases responsible for a peculiar hallucinatory condition, as well as for a condition of euphoria. During this sleep deep changes observed in the entire organism were manifested by disorders of the vegetative nervous system and also by symptoms resembling those observed in epidemic encephalitis.

Radiology

365 Pitressin in Radiography

J C KENNING and J E LOFSTROM (*Amer J Roentgen* January 1937, p 28) report on the use of pitressin for the elimination of intestinal gas shadows in 1,000 cases. Gas in the intestines often obscures delicate structures on the radiograph, and may even lead to faulty radiographic interpretation in cholecystography and intravenous and instrumental pyelography. Pitressin helps the elimination of intestinal gases. The maximum degree of response to the injection of pitressin occurs between thirty and forty-five minutes after the injection. The gas shadows reappear in about three hours. The authors have adopted the following routine. An enema is given the night before the examination and again half an hour to an hour before the examination next morning, one hour before 0.5 c cm of pitressin is given intramuscularly and is repeated after half an hour. In stubborn cases as many as six injections of 0.5 c cm may be given at suitable intervals. Some gas still remains in the bowel but the radiographs are much clearer and the hepatic flexure is shortened, being drawn away from the gall-bladder area. Very rarely the patients complained of transitory cramps, giddiness, weakness, cold perspiration or slight nausea following the injections. A glass or two of water given during the injection minimized the complaints. Pitressin should be used very cautiously in cases of cardiac decompensation, high blood pressure, coronary disease and acute complete mechanical intestinal obstruction. Pregnancy has not proved to be a contra-indication.

366 Dangers of Arteriography

E VERSCHUYL (*Nederl Tijdschr Geneesk* March 6, 1937, p 1007) who records two personal cases, states that in spite of the statements made by Reynaldo dos Santos in 1933 and by Leriche in 1935, arteriography is liable to lead to serious complications. These have been recorded chiefly by French writers and may be divided into two groups. The first consists of a livid discoloration of the skin with peculiar violet spots which later become gan-

prenous, as recorded by Lambret, Matthieu, Texeuf, Deplat, and Reboul. The second group consists of gangrene without a transitional stage of discoloration of which examples have been recorded by Leclerc, Moniz, and Reboul. Verschuyl's first case was that of a man aged 70 who was admitted to hospital for violent pain in the left leg which was pale and cold. There was a history of slight attacks of pain in the leg for the last ten years. The aorta was punctured at the level of the third lumbar vertebra and 20 ccm of 35 per cent perabrodil was injected. The arteriograph showed an obstruction of the arteries on the right side below the common iliac artery. Death took place suddenly the following day. At necropsy the pericardial sac was found to be filled with large blood clots owing to rupture of the ascending aorta and there was an extensive retroperitoneal haematoma. No rupture could be observed in the abdominal aorta and Verschuyl attributes the haematoma to puncture of the aorta. The second case was that of a woman aged 28 admitted to hospital for severe pain in the right arm accompanied by cyanosis and swelling. Arteriography was performed by the injection of 20 ccm of perabrodil into the right subclavian artery. Immediately after the injection the patient had a typical epileptic attack, but rapid recovery took place. The arteriograph showed nothing abnormal.

367 Serial Radiographs of the Chest

F. A. POTT, I. W. PAUL, and S. R. BEATTY (*Radiology*, January, 1937, p. 40) have examined radiographically the chests of 2,719 university students who showed a positive Mantoux reaction. Of the cases examined 2.79 per cent showed some adult type of lesion while 21 per cent presented evidence of previous early infection or some infantile type of tuberculosis. Radiographic films were taken in every case; small lesions may be overlooked at a fluoroscopic examination. The work of carrying out the examination was organized in such a way that only forty-five seconds were required for each examination and one hundred patients could be examined in about an hour. In spite of this speed a second examination was necessary in only 3 per cent of cases. The authors describe in detail the technical organizations for the carrying out of the work.

368 Radium Therapy of Uterine Fibroids

R. GASTROUMAU (*J. Radiol. Electrol.*, January, 1937, p. 1) considers x-ray therapy to be the treatment of choice of uterine fibroids. However, in a limited number of cases it may be advantageous to use radium therapy instead. Radium therapy is indicated in cases where transportation of the patient presents difficulties or where patients are very anxious to get through the treatment in the shortest possible time. The results of such therapy are probably just as good as those of x-ray therapy, but radium therapy presents certain dangers such as septic uterine complications, phlebitis, and pelvic peritonitis. The author had one fatal complication among twenty-nine cases treated with radium, but over a number of years no complications have followed x-ray therapy.

irradiation treatment alone is applied high filtration—at least 2 mm of copper—should be used and treatments given every day for sixty to seventy days through small fields until a total dose of 12,000 r units is reached. These large doses are certain to result in an x-ray pleuro-pneumonitis, but this should not deter the radiologist from giving an adequate dose.

370 Radium Therapy of Mediastinal Tumours

M. JOLY (*Paris med.*, February 6, 1937, p. 131) discusses the different types of mediastinal tumours and their treatment by x-rays. The most common mediastinal tumours are lymphosarcomata. They grow rapidly and soon invade the lungs and they may also invade the pleura and pericardium. They may cause compression of the aorta, the large veins, or of the recurrent laryngeal vagus or phrenic nerves. These tumours are very radio-sensitive. The author advises four fields for irradiation—namely, an anterior, two lateral and a posterior field. He recommends the use of a deep therapy of 180 to 200 kilovolts filtered through 0.5 mm of copper with 1 mm of aluminium and large fields of about 15 by 15 cm. Wherever possible the first treatment should aim at the administration of 750 r to the tumour itself at the first sittings. This, however, may give rise to a severe reaction. In cases with considerable dyspnoea it is therefore preferable to start the treatment with 625 r applied to the anterior field. If no severe reaction follows, further doses of 625 r may be given daily to successive fields until each field has had a total of 3,500 r. In resistant cases the filtration may be increased to 1 mm of copper and the total dose for each field to 4,500 r. Diuretics, laxatives, and daily warm baths are useful during the course of treatment.

371 Encephalography in Epilepsy

F. LAURENTIAU (*Med. Welt*, February 27, 1937, p. 267) has investigated 285 cases of epilepsy by means of encephalography. Fifty of these cases definitely belonged to the category of hereditary epilepsy, while in another twenty-six cases the diagnosis of hereditary epilepsy was probable. Marked encephalographic changes were found in a large number of cases of hereditary epilepsy. The most common changes were unilateral or bilateral enlargement of the lateral ventricles, enlargement of the third ventricle or else non-filling of the ventricles or enlargement, unevenness or mottling of the subarachnoid spaces, but the author never observed in hereditary epilepsy a hydrocephalic ventricular enlargement or a displacement of the ventricles or filling defects or excavations in the ventricular outline. In doubtful cases circumscribed changes in the subarachnoid filling pointed towards a local pathological condition. There was no definite relation between the gravity and the duration of the epilepsy and the encephalographic changes. Pathological changes in the cerebrospinal fluid were found mainly in cases showing ventricular enlargement. The encephalography proved perfectly harmless in 450 cases investigated.

372 Diagnosis of Perinephritic Abscess

Obstetrics and Gynaecology

373 Labour in Elderly Primiparae

J LIMPACH (*Gynécologie* January, 1937, p 24) advises the admission of elderly primiparae to hospital at presumed term and confirms the general opinion that the prognosis for their gestation and labour is somewhat unfavourable. His conclusions are based on the records of 712 primiparae aged 30 to 34 and 223 aged 35 to 45 delivered at the Strasbourg Maternity Hospital. Although pelvic abnormalities were rare (2.1 per cent only) anatomical and functional rigidity of the soft parts, especially of the cervix, gave an increased incidence of dystocia and interventions—forceps, version, incision of the cervix, or perforation being necessary in the 30–40 and 35–45 groups in 13.9 and 19.7 per cent of cases respectively. These groups had 1.8 and 4 per cent of Caesarean sections as compared with 1.5 in younger primiparae. The duration of delivery was not increased, being less than twelve hours in 76 and 69 per cent of the respective age groups. Premature labour was notably frequent—over 11.5 per cent. The foetal mortality (3.7 is the average for the country) was 5.2 per cent in the younger and 11 per cent in the older age groups. There were only four maternal deaths in 935 cases. Cases of toxæmia were very few, probably owing to strict supervision being possible—this consisted of six cases of eclampsia, one of pregnancy dermatosis, and five of hyperemesis. Renal complications on the other hand—albuminuria, oedema, and increased blood pressure—occurred frequently, namely in 5.8 per cent of cases.

374 Urethral Disease

ARTHUR H PAINE (*NY St J Med* December 1, 1936, p 1827) discusses the present state of knowledge of female urethral disease. He points out that whereas urinary disease in the male has been accorded intensive study owing to its obstructive nature and danger to life, disorders of the female lower urinary tract have been largely ignored. The evolution of the cystoscope from the right-angled to the more oblique lens and the use of the open cystoscope have clarified the anatomy of the bladder neck, disclosing a definite angulation with anterior curvature at the urethral upper third. At the meatus and anterior two thirds the following pathological changes may occur: (1) congenital stenosis (2) stricture congenital or inflammatory (3) hyperplasia and extrusion of inflamed mucosa; (4) caruncle which may be a granuloma from chronic urethritis, a papillary angioma or a mucoid polyp (5) suburethral abscess (6) carcinoma. Diagnosis should be based upon close inspection of the fourchette, manual palpation of the urethra through the anterior vaginal wall, microscopical examination of Skene's and Bartholin's gland contents, and catheterization, urethroscopy and cystoscopy. Uterine disease and diabetic conditions should be excluded. Relief of all types of stricture is frequently experienced by mechanical dilatation of the urethra. A caruncle can be excised, cauterized or treated with radium seeds. Urethro-trigonitis will respond to alkalis and sedatives, suburethral abscess or calculi to incision and drainage or extraction through the anterior vaginal wall. By these means Paine considers the casual diagnosis of pyelitis is avoided and much minor misery alleviated.

375 Honey for Pruritus Vulvae

According to F SCHULTZE RHONHOFF (*Zbl Gynäk* March 13, 1937, p 610) there is a large group of cases of pruritus vulvae which are of obscure causation and in which the most varied lines of treatment prove useless or only transiently successful. In general, irradiation by x rays and the administration in quick succession of massive doses of ovarian hormone are the most helpful lines of treatment. Schultze Rhonhoff and his pupils

however have recently had excellent results in refractory cases from local applications of honey every evening. The treatment is empirical, for little evidence is forthcoming that honey contains significant amounts of vitamins or hormones.

Pathology

376 Sedimentation Rates in Tuberculosis

S FLORELIUS (*Tidsskr norske Lægeforen* March 15, 1937, p 313) gives an account of the various tests employed in 1935 by the Norwegian Army authorities for the elimination of the tuberculous from among recruits. All of them were tested with Pirquet's reaction, and the positive reactors were examined by the sedimentation test. All whose rate of sedimentation was above normal were given a radiological examination. Among 3,392 Pirquet positive recruits were 248 whose rate of sedimentation was above normal. In as many as 130, or about 53 per cent of the 248, the radiologically demonstrable changes in the lungs were so definitely indicative or suggestive of tuberculosis that the men were discharged. Of the 3,144 Pirquet positive recruits with a normal rate of sedimentation only thirty-four or 1.08 per cent were discharged. The percentage of Pirquet positive recruits was lowest in and about Oslo and highest in the extreme north of Norway, where 47 per cent of those examined proved to be positive reactors. In the Guards regiment representing an army élite, only 25.9 per cent of the recruits were Pirquet-positive. In 1924 Pirquet testing of this regiment showed 57 per cent to be positive reactors. In those units in which the Pirquet tests were carried out both at the beginning and at the end of military service very little change was found in the proportion of positive and negative reactors, an observation suggesting that there had been very little infection in the course of military service.

377 Regional Differences in Leucocyte Counts

M GÄNSSLEN (*Disch med Wschr* March 26, 1937, p 505) found that while he worked in Tübingen the leucocyte counts of healthy patients conformed to text book standards. But soon after he moved to Frankfurt he noticed certain inexplicable differences in his leucocyte counts from what he had hitherto considered as normal. These differences concerned not only the total number of leucocytes but also their mutual relationship. According to both Naegeli and Schilling the total leucocyte count is normal between 6,000 and 8,000, and the percentage of lymphocytes is normally between 20 and 25 according to Naegeli and 23 according to Schilling. But in Frankfurt the leucocyte count of 1,084 patients not suffering from any disease of the blood showed an average of only 6,300, the number being below 6,000 in 45 per cent of all the cases. The average percentage of the lymphocytes was 30. To control these observations Professor Gänsslen obtained 500 blood counts from three Frankfurt hospitals other than his own and again it was found that the average leucocyte count was 6,300 and 31.9 per cent of the leucocytes were lymphocytes. Another control observation was an examination of 160 young male adults in towns near Frankfurt. In this series the average leucocyte count was 6,340, and 34.3 per cent of the leucocytes were lymphocytes. After examining the blood of various other groups and obtaining figures similar to those already quoted Professor Gänsslen notes that he and his family, and assistants who moved with him from Tübingen to Frankfurt have undergone profound leucocyte changes since moving from the one town to the other. The percentage of their lymphocytes has approximately doubled and the total number of leucocytes has fallen below 6,000. The conclusion to be drawn from these observations is that certain geographical and climatological factors must have an influence on the leucocyte count, but precisely what these factors are has yet to be discovered.

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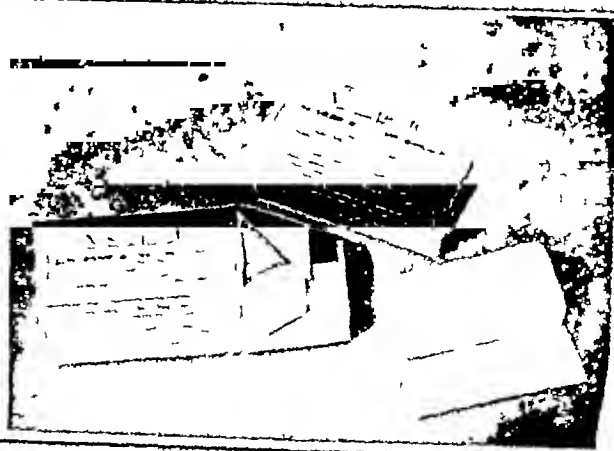
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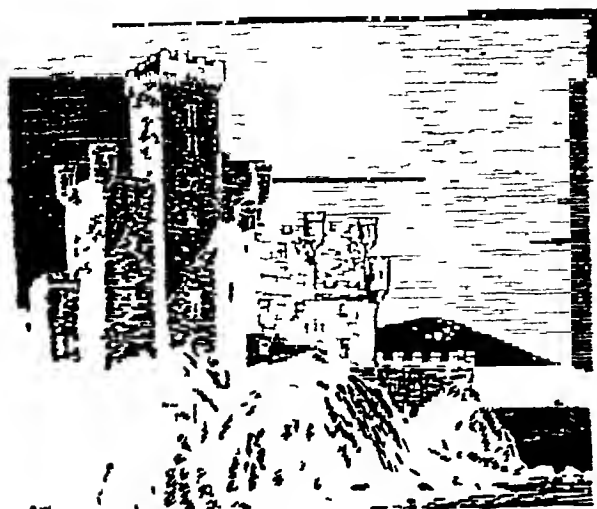
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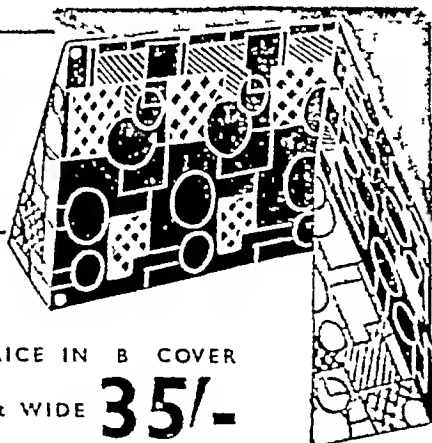
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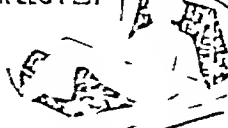
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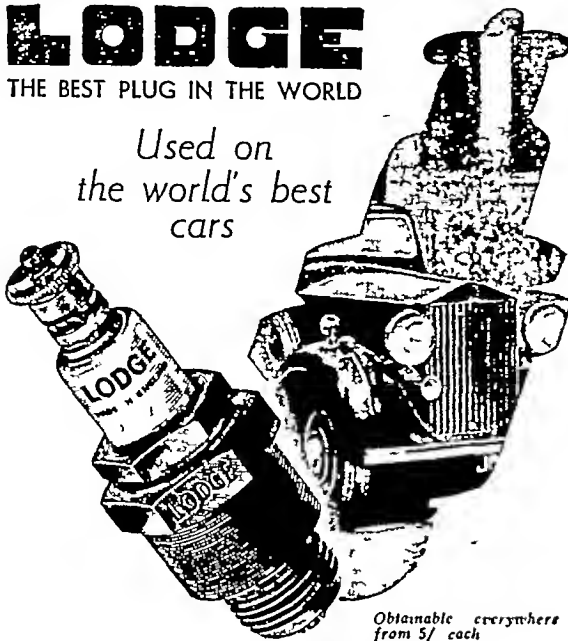


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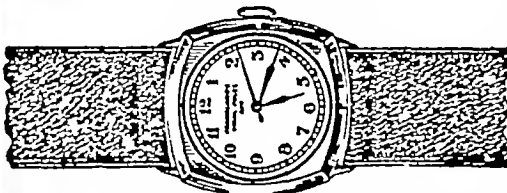
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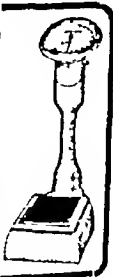
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Tuesday 1st June	Rheumatoid Arthritis.	The Staff of the Red Cross Clinic for Rheumatism.	Dyspepsia	Dr. T. C. HUNT, D.M. F.R.C.P.
Wednesday, 2nd June	Surgery of the Colon.	Prof. G. GREY TURNER, D.Ch. M.S. F.R.C.S. F.A.C.S.	Common Respiratory Diseases	Dr. JAMES MAXWELL, M.D. F.R.C.P.
Thursday, 3rd June	New Therapeutic Agents.	Dr. E. R. CULLINAN, M.D. F.R.C.P.	Common Types of Anaemia Their Diagnosis and Treatment.	Dr. JANET M. VAUGHAN, D.M. M.R.C.P.
Friday 4th June	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital Gray's Inn Road W.C.1	Diagnosis of Nervous Diseases.	The Staff of the National Hospital, Queen Square W.C.1
Saturday 5th June	Eye Conditions in General Practice	The Staff of the Royal London Ophthalmic Hospital City Road E.C.1	—	—
Monday 7th June	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1
Tuesday 8th June	The Acute Abdomen.	Mr. R. J. McNEILL LOVE, M.S. F.R.C.S.	Common Gynaecological Conditions	Dr. J. CHASSAR MOIR, M.D. F.R.C.S. F.C.O.G.
Wednesday 9th June	Diseases of the Skin	Dr. R. T. BRAIN, M.D. F.R.C.P.	Infectious Fevers.	Dr. W. GUNN, M.A. M.R.C.P., D.P.H. North Western Hospital, Lawn Road N.W.3
Thursday 10th June	Demonstration of Local Anæsthesia	The Staff of the School.	Injuries of the Ankle and Wrist.	Mr. St. J. D. BUXTON, F.R.C.S.
Friday 11th June	Heart Attacks	Dr. D. E. BEDFORD, M.D. F.R.C.P.	Thyroid Dysfunction.	Dr. H. GARDINER HILL, M.D. F.R.C.P.
Saturday 12th June	Psychiatry in General Practice.	Dr. J. R. REES, M.D. M.R.C.P.	—	—

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LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (University of London)

Incorporating the Ross Institute

The course of study which qualifies students to sit for the University of London Diploma covers a period of nine calendar months whole time work commencing on

28th SEPTEMBER, 1937

The fee (54 guineas) covers the cost of the ordinary lectures and demonstrations visits to centres of public health interest the necessary practical work with the Medical Officer of Health and instruction in infectious diseases

FISHMONGERS' COMPANY STUDENTSHIP

One Fishmongers Company Studentship is awarded annually and carries remission of fees for the DPH Course. Next examination June 22nd and 23rd. Applications to compete for the Studentship must be sent to the Secretary by June 14th.

Enquiries in regard to this course or the courses of study in Bacteriology Epidemiology and Vital Statistics Industrial Physiology and Psychology Tropical Medicine and Hygiene etc. should be addressed to the Secretary London School of Hygiene and Tropical Medicine Keppel Street, Gowar Street, London, W.C.1

MEDICAL CORRESPONDENCE COLLEGE,

19, Welbeck Street, London, W 1

CONJOINT BOARD EXAMINATIONS

Candidates taking the First, Second, or Final Conjoint Examinations should make sure of passing at the first attempt by enrolling for the short intensive Revision Courses of the College

POSTAL, ORAL, PRACTICAL, CLINICAL COURSES, MICROSCOPE AND MUSEUM WORK

Highly qualified Tutors with accurate knowledge of the special features of these examinations

Write at once for booklet *How to Pass the Conjoint Board Examinations* Sent free on application

Address The Secretary,
MEDICAL CORRESPONDENCE COLLEGE,
19, Welbeck Street, London, W 1

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION

The Examination for the GASKELL GOLD MEDAL AND PRIZE and the Examination for CERTIFICATE IN PSYCHOLOGICAL MEDICINE will be held at MAUDSLEY HOSPITAL, Denmark Hill London, on Wednesday May 20th, and Thursday May 27th 1937.

LATEST DATE FOR ENTRY May 14th 1937. The fee for the M.P.C. Examination is THREE GUINEAS. There is no fee for the Examination for the Gaskell Gold Medal and Prize. Application for entry to be made to the Registrar R.M.P.A. St. Andrew's Hospital Northampton.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE

(UNIVERSITY OF LONDON)
Incorporating the Ross Institute

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE (Eng.)

Dates of the Courses, 1937-8

(Part II cannot be taken before Part I)

PART I

September 27th—December 17th 1937

January 3rd—March 25th 1938

April 4th—June 24th 1938

PART II

January 17th—March 18th 1938

April 19th—June 17th 1938

FEES (inclusive)

Part I £25 Part II £15

INDUSTRIAL PHYSIOLOGY AND PSYCHOLOGY

Two Courses are provided one lasting a year and the other two weeks. The shorter Course is restricted to persons with adequate industrial experience.

DIPLOMA IN PUBLIC HEALTH

Course of Study (whole-time nine months) commencing September 28th. Inclusive fee, 54 gns.

DIPLOMA IN BACTERIOLOGY

Course of Study (whole-time one academic year) commencing in October. Inclusive fee £47 15s.

EPIDEMIOLOGY AND VITAL STATISTICS

Special three-monthly advanced courses. Inclusive fee 7 guineas.

For Prospectuses and Synopses of Lectures etc. apply to the SECRETARY LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE Keppel Street (Gowar Street) London W.C.1 (Museum 3041)

BRITISH POST-GRADUATE MEDICAL SCHOOL

(University of London)
Department of Pathology

Applications are invited for the post of ASSISTANT IN BACTERIOLOGY in the Department of Pathology at the above named School to commence duty on September 1st, 1937. Salary £300 per annum rising by annual increments of £50 to £500.

Further particulars can be obtained from the Dean of the School Ducane Road Shepherd's Bush W.12, to whom applications accompanied by two testimonials should be sent to arrive not later than first post on Tuesday June 14th 1937.

THE LONDON SCHOOL OF DERMATOLOGY

St John's Hospital for Diseases of the Skin
5 Lisle Street, Leicester Square W.C.2.

Conducted by the Honorary Staff of the Hospital together with the Physicians in charge of the Dermatological Departments of the London Teaching Hospitals. Lectures and Demonstrations twice weekly during October and November and again during January and February and four times weekly during May. General Practitioners desiring to attend any particular lecture or occasional lectures can do so without paying a fee. Clinics daily at p.m. and 6 p.m. Saturdays 2 p.m. only. The Laboratory is particularly well equipped and arrangements can be made for classes, individual instruction or for research work. Enquiries The Dean or Secretary of the School.

UNIVERSITY OF BIRMINGHAM

INGLEBY LECTURES 1937

THE INGLEBY LECTURES

will be delivered on TUESDAY and THURSDAY MAY 18th and 20th at 4 o'clock in the MEDICAL LECTURE THEATRE (Edmund Street, Bldg.), by Professor ARVID WALLÖREN M.D. (Physician-in-Chief The Children's Hospital Oorheburg, Sweden).

Subject—(First Lecture) Erythema Nodosum—(Second Lecture) Childhood Infection and Adult Type of Pulmonary Tuberculosis.

Members of the Medical Profession and Students of Medicine are invited to attend.
STANLEY BARNES Dean.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

LICENCE IN DENTAL SURGERY

Notice is hereby given that the Final Examination will commence on Friday June 11th.

Candidates who have fulfilled the necessary conditions, and who desire to present themselves for examination must give notice in writing to the Director of Examinations Examination Hall 8/11 Queen Square, London W.C.1 at least twenty-one days before the date of the examination, transmitting at the same time such certificate as may be required by the Regulations of the Board.

HORACE H. REW Director of Examinations

UNIVERSITY OF LONDON KING'S COLLEGE

DEMONSTRATOR IN ANATOMY

The Delegacy invite applications for TWO DEMONSTRATORSHIPS IN THE DEPARTMENT OF ANATOMY. Salary £100 per term. Full particulars from the Secretary King's College Strand W.C.2.

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY READERSHIP IN OBSTETRICS AND GYNAECOLOGY tenable at the British Postgraduate Medical School. Initial salary £800 a year. Applications (12 copies) must be received not later than first post on June 4th 1937 by the Academic Registrar University of London W.C.1 from whom further particulars should be obtained.

F.R.C.S. (Edin)

POSTAL and ORAL COURSES

Full details of above and Private Tuition—H. C. OZBURN, F.R.C.S. Surgeon's Hall Edinburgh.

COUNTY BOROUGH OF HUDDERSFIELD

ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above post, in which a good knowledge of diseases of children and experience in bacteriology are essential.

Salary according to scale—£500 per annum increasing to £700. The commencing salary will be based on the candidate's previous experience.

The post is designated under the Superannuation Act, 1922, and the appointment therefore is subject to a satisfactory medical examination.

Applications stating age and giving full particulars regarding training qualifications and appointments held since qualification should be forwarded to the Medical Officer of Health along with copies of two recent testimonials so as to reach him not later than Thursday May 20th 1937.

UNIVERSITY COLLEGE HOSPITAL

Gower Street W.C.1

Applications are invited for the post of HONORARY PHYSICIAN in charge of the DEPARTMENT OF PHYSIOTHERAPY at 100, October 1st, 1937, and should reach the Secretary by first post on Thursday May 14th 1937.

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate Study

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than May 31st, 1937

COUNTY COUNCIL OF MIDDESEX HILLINGDON COUNTY HOSPITAL, LADBROKE

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £1,000 per annum (together with board lodging and laundry). Candidates must be registered medical practitioners who have held resident appointments in a general hospital. Experience in an obstetric is desirable.

The officer appointed will be required to work under the control of the Medical Superintendent and to devote his whole time to his official duties.

The appointment will be subject to medical examination. It is for a period of six months in the first instance, and may be extended for an additional six months, and is subject to one month's notice either side. At the expiration of one year's service the officer appointed will leave the Council's service unless promoted to a higher grade. Relationship to any member or officer of the Council must be declared in the application.

Applications, with copies of not more than three recent testimonials, must be received by the undersigned not later than May 15th, 1937. Applications must be accompanied by envelopes for testimonials. Candidates may apply directly or indirectly to the undersigned.

C. W. BALCH, J. Z.

Midsex Guildhall,
Westminster S W 1
April 1st 1937

THE LEEDS VOLUNTARY HOSPITALS THE CENTRAL INFIRMARY AT LEEDS

The Council of the Leeds Voluntary Hospitals are seeking for the post of HONORARY PHYSICIAN in the above Institution. Candidates must be registered medical practitioners who have held resident appointments in a general hospital. Experience in an obstetric is desirable.

Applications, with copies of not more than three recent testimonials, must be received by the undersigned not later than May 15th, 1937.

COUNTY BOROUGH OF OLDHAM Municipal Hospital RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £200 per annum with board residence and laundry.

Candidates should be unmarried.

The appointment will, in the first instance, be for a period of six months. The successful applicant, however, will be eligible for re-appointment for a further period of six months.

The hospital comprises 375 beds with facilities for gaining experience in medicine, surgery, midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health, Town Hall, Oldham, and should be returned endorsed "Resident Assistant Medical Officer" as soon as possible but not later than Monday, May 17th, 1937.

JOSEPH J. WILLIAMS, LL.D.
Town Clerk
Town Hall, Oldham
April 6th 1937

THE ROYAL BOROUGH OF KENSINGTON APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Deputy Medical Officer of Health. Applicants must possess the qualifications prescribed by the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations, 1930, for a Tuberculosis Officer and must hold the Diploma in Public Health.

The appointment will be a whole-time one, and the successful candidate will be required to act as Clinical Tuberculosis Officer for the Borough and to carry out other duties in the Public Health Department under the direction of the Medical Officer of Health.

Salary £200 per annum, rising by annual increments of £10 to £110 per annum, plus an annual travel allowance of £10.

The age limit for candidates is 45 years.

Candidates who are disqualified by the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations, 1930, must be obtained from the undersigned.

Applications, with copies of not more than three recent testimonials, must be received by the undersigned not later than Monday, May 17th, 1937.

Town Hall, Kensington W 8
April 1st 1937

COUNTY BOROUGH OF OLDHAM EDUCATION COMMITTEE

Applications are invited from qualified and registered medical men for the position of whole-time ASSISTANT SCHOOL MEDICAL OFFICER. Salary £500 per annum, rising by annual increments of £25 to £700 per annum.

The duties of the appointed Officer will be principally connected with the work of the School Medical Department, but the Officer will be called upon to undertake any other duties under the School Medical Officer who is also the Medical Officer of Health.

The applicants must have had three years' experience since qualifying. Any experience in excess of this or similar service under another Authority will be taken into consideration when fixing the commencing salary. The Officer appointed will be required to devote his whole time to the duties, will not be allowed to engage in private practice, and will be required to reside within the County Borough. All fees and emoluments of any kind whatsoever must be handed over to the Corporation.

Forms of application may be obtained from the undersigned and must be returned to this Office immediately.

Candidates strictly prohibited.
Education Officer: W. KERSHAW
Chairman: Director of Education.
April 23rd 1937

WILTSHIRE SUFFOLK COUNTY COUNCIL ASSISTANT COUNTY MEDICAL OFFICER AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the above whole-time appointments (men or women) who in addition to the duties of School Medical Officer in the above County, will be required to undertake any other duties under the School Medical Officer who is also the Medical Officer of Health. Applicants must be registered medical practitioners and not exceed 35 years of age. The successful candidate must hold the Diploma in Public Health. Salary £600 per annum, rising by annual increments of £25 to a maximum of £800, plus a travelling allowance. Particulars of appointment and terms of appointment may be obtained from the undersigned, to whom applications must be accompanied by testimonials. Applications must be received not later than May 15th, 1937.

Candidates may apply to the undersigned or to the County Council, 10, St. Edmund's Street, Bath, Somerset.

COUNTY BOROUGH OF WEST HAM**APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER**

Applications are invited from qualified medical men holding a Degree in or Diploma of Public Health for the appointment of Medical Officer of Health and School Medical Officer at a salary of £1,500 per annum rising by annual increments of £50 to a maximum of £1,750 per annum inclusive of all fees and emoluments.

Applicants must not be more than 45 years of age (except in respect of applications from persons already in the service of the Council) and be fully qualified to carry out and perform all the duties of Medical Officer of Health and School Medical Officer and appertaining to the medical services of the Council including those as Administrative Officer under the Mental Efficiency Acts, and such other duties as may from time to time be prescribed by the Council.

The appointment will be subject to the approval of the Ministry of Health and the Board of Education and will be terminable on three months' notice on either side. The person appointed will be required to devote his whole time to the duties of the office and to pay over to the Council all moneys received by him in connection with the appointment from whatever source such moneys are received.

The appointment will also be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and to a medical examination as required by the Council for the purposes of that Act and the statutory contributions to the Superannuation Fund under the Act will be deducted from the salary.

Applications on the form provided (which will be forwarded by the undersigned on receipt of a stamped addressed foolscap envelope) must reach me not later than June 1st, 1937.

Canvassing members of the Council is prohibited and will disqualify.

For full particulars apply to
CHARLES E. CRANFIELD
Town Clerk,
West Ham E.15
April 30th 1937

COUNTY BOROUGH OF WEST HAM

Applications are invited by the Council for the post of **SECOND ASSISTANT RESIDENT MEDICAL OFFICER (male)** at Central Home, Union Road, Leytonstone, E.11. Salary £350 per annum rising by annual increments of £25 to a maximum of £450 per annum together with apartments board and laundry valued for superannuation purposes at £150 per annum. The salary is inclusive and all fees received from whatever source must be paid to the Council. The successful candidate must be prepared to serve in any of the Council's other institutions and to carry out any other duties which may be assigned to him.

This institution accommodates chronic sick aged and infirm patients.

Candidates must be qualified registered medical practitioners preference being given to candidates who have had in addition to a general hospital appointment experience in Poor Law Institutions.

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, or to the Poor Law Officers Superannuation Act, 1896 and the statutory contributions will be deducted from the salary.

Forms of application must be obtained from the Deputy Medical Officer of Health Municipal Health Offices, Romford Road Stratford E.15 or will be forwarded on receipt of a stamped addressed envelope, and returned to the undersigned not later than May 22nd, 1937.

Canvassing members of the Council is prohibited and will disqualify.

For full particulars apply to
CHARLES E. CRANFIELD
Public Assistance Officer Town Clerk,
Union Road, Leytonstone, E.11
April 28th 1937

**ROYAL DEVON AND EXETER HOSPITAL
EXETER****HOUSE SURGEON (male) to the EAR NOSE AND THROAT DEPARTMENT**

Applications are invited for this post which is now vacant.

The appointment is for six months, but candidates are eligible for re-election.

Salary at the rate of £150 per annum with board lodging and washing.

Applications giving particulars as to age and qualifications together with copies of three recent testimonials, should be sent to the undersigned as soon as possible.

For full particulars apply to
S. S. COLE
Secretary and Manager
May 3rd 1937

**HOUSLOW HOSPITAL,
STAINES ROAD HOUSLOW MIDDLESEX.**

The Board of Management invite applications for the appointment of **HONORARY DERMATOLOGIST** at the above Hospital. Applicants should hold or have held a similar appointment in a recognised London Voluntary Hospital.

Applications together with three recent testimonials, should be sent to the undersigned by May 1st endorsed **Dermatologist**.

For full particulars apply to
HORACE W. CARPENTER
Secretary

SURREY COUNTY COUNCIL**ASSISTANT MEDICAL OFFICER**

Applications are invited for the appointment of an Assistant Medical Officer (male). Applicants must possess a qualification in Public Health and have had experience in the Medical Inspection of School Children, Maternity and Child Welfare and the control of a Venereal Diseases Clinic. The officer appointed will be required to undertake such other Public Health Duties as may be allocated to him. He will be on the staff of the County Medical Officer of Health must reside in the County of Surrey and devote his whole time to the work. Salary £600 per annum, rising by annual increments of £70 to £700 per annum. Travelling expenses in accordance with the Council's scale will be allowed.

The appointment will be subject to the approval of the Ministry of Health and of the Board of Education to the successful candidate passing a medical examination to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and to the Staffing Regulations of the Council which provide inter alia that appointments may be determined at any time by three months' notice.

Applications stating age, qualifications, and experience, together with copies of three recent testimonials, should be made on the prescribed form and sent to the County Medical Officer of Health County Hall Kingston-upon-Thames, from whom copies of the application form may be obtained and to whom any enquiries relating to the appointment should be addressed.

Last day of receipt of applications, May 15th 1937.

Canvassing, directly or indirectly will disqualify
DUDLEY AUKLAND
County Hall Clerk of the County Council
Kingston-upon-Thames
May 3rd 1937

SURREY COUNTY COUNCIL

Botleys Park Colony (Certified Institution for Mental Defectives) near Chersey Surrey

APPOINTMENT OF MEDICAL SUPERINTENDENT

Applications are invited from registered Medical Practitioners (male) for the whole-time appointment of Resident Medical Superintendent at the above-mentioned Certified Institution. The first section of the Colony which is now in course of erection will provide accommodation for 1,200 patients and the necessary resident staff and will eventually provide 1,500 patient beds. In addition there is accommodation for another 300 patients in an immediately adjacent institution which is under the same administration as the main colony. Commencing salary £1,000 rising by annual increments of £50 to a maximum of £1,375 per annum with emoluments valued for superannuation purposes at £125 per annum.

The appointment will be subject to the provisions of the Asylums and Certified Institutions (Officers' Pensions) Act, 1915 and to the Council's Staffing Regulations. The person appointed will be required to undergo a medical examination and to commence his duties on October 1st, 1937.

Applications stating age and whether married or single accompanied by copies of three recent testimonials must reach the undersigned not later than Monday May 24th, 1937. The envelope should be marked **Botleys Park Medical Superintendent**.

For full particulars apply to
DUDLEY AUKLAND
Mental Hospitals Department,
County Hall Kingston-upon-Thames
April 27th 1937

SURREY COUNTY COUNCIL**JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER**

Junior Assistant Medical Officer (either sex) required at County Sanatorium (360 beds) Milford near Godalming. Resident experience in general hospital essential. Appointment is for six months renewable for further six months. Salary £350 per annum less a deduction of £100 per annum in respect of board lodging and laundry.

Appointment subject to the Staffing Regulations of the County Council.

Forms of application from County Medical Officer County Hall Kingston-upon-Thames to whom forms should be returned with copies of three recent testimonials, by Friday May 21st 1937.

For full particulars apply to
DUDLEY AUKLAND
County Hall Clerk of the County Council
Kingston-upon-Thames
May 3rd 1937

**KING GEORGE HOSPITAL, ILFORD
(Near London) (207 Beds.)**

HOUSE SURGEON (male) required immediately for a period of six months. Salary £100 p.a. Forms of application may be obtained from the undersigned to whom they should be returned duly completed as soon as possible.

For full particulars apply to
G. AUSTIN HEPWORTH
Secretary and Superintendent.

COUNTY BOROUGH OF EAST HAM AND SOUTHEAST-ON-SEA

RUNWELL HOSPITAL
nr Wickford Essex
(103 Beds.)

ASSISTANT RESIDENT PHYSICIAN

Applications are invited for the post of Assistant Physician to the above new hospital for mental and nervous disorders.

Salary £350 rising by annual increments of £25 to £450 per annum plus furnished quarters, board, attendance and laundry valued for superannuation purposes at £150. An additional £50 will be given to any candidate who holds or obtains the D.P.M. Should the successful candidate be married permission may be given him to live out and he would then be allowed the value of his emoluments in cash.

The hospital is built on modern lines and on the villa system and offers unusually good opportunities for research and post-graduate work.

Forms of application together with further particulars are obtainable from the Physician Superintendent Runwell Hospital near Wickford Essex to whom they should be returned with copies of three recent testimonials as soon as possible and in any case not later than the first post on Tuesday May 18th 1937. Envelope to be marked **Physician**.

For full particulars apply to
H. J. WOODWARD
Clerk to the Committee.

COUNTY OF LONDON**APPOINTMENT OF CORONER**

The London County Council invites applications for the appointment of a **CORONER** for the County of London. The salary attached to the office is £1,700 a year inclusive and it is probable that the selected candidate will be allocated to the Eastern District of the County. The Coroner will be required to provide at his own expense any necessary office accommodation and clerical assistance and to defray all other expenses of the office (including the services of an approved deputy and if appointed on assistant deputy) except actual disbursements under the approved schedule of fees etc. Candidates, who must be not less than thirty-five or more than fifty years of age on May 31st 1937 must possess both a legal and a medical qualification. A pension is payable on retirement under an approved scale. The candidate appointed must give an undertaking to give his whole time to the duties of his office.

Application must be made on the official form a copy of which containing full particulars may be obtained by sending a stamped addressed foolscap envelope to the Clerk of the Council The County Hall Westminster Bridge S.E.1. Applications must be received by the Council not later than Monday May 31st 1937. Canvassing disqualifies.

LONDON COUNTY COUNCIL**TEMPORARY DISTRICT MEDICAL OFFICER REQUIRED FOR AREA X DISTRICT II (WOOLWICH) - Provisional salary £250**

Person engaged required to carry out duties prescribed by Public Assistance Order 1930 and to reside in or near district. Engagement until March 31st 1938 in first instance. Remuneration and conditions subject to review.

Application form obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health Staff Division 2 A County Hall S.E.1 returnable by May 18th. Canvassing disqualifies.

LONDON COUNTY COUNCIL**WOMAN MEDICAL PRACTITIONER required for the EXAMINATION OF GIRLS at Stamford House Remand Home Goldhawk Road Shepherd's Bush W.12. Occasional duties only.**

Remuneration at rate of 10s. 6d. a case. Applicants must reside within easy reach of Home. Forms with full details obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (S.O.) County Hall, Westminster Bridge S.E.1 returnable by May 17th.

**NOTTINGHAMSHIRE COUNTY COUNCIL
PUBLIC HEALTH DEPARTMENT****ASSISTANT SCHOOL MEDICAL OFFICER (MALE)**

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and must have had at least three years experience since qualification.

The salary will be at the rate of £500 per annum, rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's scale.

Forms of application and conditions of the appointment may be obtained from me and applications accompanied by copies of not more than three recent testimonials should be forwarded to the County Medical Officer, Shire Hall Nottingham not later than May 2nd 1937.

For full particulars apply to
K. TWEDALE MEADY
Nottingham Clerk of the County Council
April 27th 1937

COUNTY BOROUGH OF CROYDON PUBLIC HEALTH DEPARTMENT

Appointment of DEPUTY MEDICAL OFFICER OF HEALTH AND DEPUTY SCHOOL MEDICAL OFFICER

Applications are invited from qualified Medical Practitioners for the appointment of a Deputy Medical Officer of Health and Deputy School Medical Officer.

Applicants must be medical men holding a special qualification in State Medicine or a Diploma in Public Health and must have had three years' experience of the practice of medicine since obtaining their medical qualification.

Preference will be given to applicants who (a) Have had some definite experience of School Medical work.

(b) Have enjoyed special opportunities for the study of Diseases in Children.

(c) Have had experience in Infectious Diseases.

(d) Have held one or more Resident Hospital appointments and

(e) Have held or are holding a position as Assistant Medical Officer of Health elsewhere.

The candidate appointed will be required to produce a recent satisfactory medical certificate of health and to devote the whole of his time to the duties of the office.

The minimum salary will be £70 per annum. The post is an established post under the Local Government and Other Officers Superannuation Act 1922.

Applications to be made on forms to be obtained by sending a stamped addressed foolscap envelope in the Medical Officer of Health Public Health Department, Town Hall, Croydon, to whom they should be returned accompanied by copies (in triplicate) of not more than three testimonials of recent date not later than 10 a.m. on Wednesday May 19th 1937 endorsed Deputy Medical Officer of Health. Canvassing in any form is prohibited.

Town Hall, Croydon, April 16th 1937.

JOHN M. NEWNHAM
Town Clerk.

CITY OF SHEFFIELD NETHER EDGE HOSPITAL

Applications are invited from duly qualified medical women for the appointment of ASSISTANT MEDICAL OFFICER at the above hospital.

The Medical Officer appointed will be required to assist in the general work of the hospital but her principal duties will be in the Maternity Section. She will also be required to assist at the Maternity and Child Welfare Clinic as directed.

Candidates should have previous hospital experience and postgraduate experience in Midwifery and Ante-natal work is essential.

The salary offered is £150 per annum plus by £4 to £40 with the usual residential allowances.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and deductions will be made under this Act.

Applicants stating age, qualifications and experience accompanied by three recent testimonials should be sent as soon as possible to the Medical Superintendent, City General Hospital, Sheffield.

LANCASHIRE COUNTY COUNCIL PARK HOSPITAL, DAVYHULME NEAR MANCHESTER

APPOINTMENT OF SECOND RESIDENT MEDICAL OFFICER

Applications are invited from registered male Medical Practitioners for the appointment of Second Resident Medical Officer at the above hospital. Candidates must be unmarried.

The appointment will in the first instance be for a period of six months. The successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Salary £25 per annum together with the usual residential allowances.

The hospital comprises 400 beds for acute cases and is fully equipped in every respect.

The duties will include in addition to medical work those of House Surgeon to the Vascular, Ear, Nose and Throat Surgeon and preference will be given to candidates who have had or who desire experience in Ear, Nose and Throat work.

The hospital is recognised as a complete Training School for Nurses.

Forms of application may be obtained from the County Medical Officer of Health, Hospital and Medical Department, County Offices, Preston, to whom all applications accompanied by copies of not more than two recent testimonials must be forwarded so as to be received not later than Wednesday May 13th 1937.

County Offices, GEORGE ETHERTON
Preston, Clerk of the County Council

May 13th 1937

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners for the post of AREA ASSISTANT TUBERCULOSIS PHYSICIAN (3 vacancies).

Salary £200 per annum rising by annual increments of £25 to £700 per annum together with travelling and subsistence allowances when away from base.

Preferably candidates should have had at least six months special training in tuberculosis with eighteen months' experience in general clinical work of which six months should have been spent in a hospital not confined to the treatment of tuberculosis.

Knowledge of Welsh desirable. The persons appointed will be required to pass a medical examination and to contribute 5 per cent of their salary to the Superannuation Fund of the Association. Applicants not already in the service of the Association must be under 45 years of age.

Applicants stating age, qualifications, experience and together with copies of three recent testimonials should reach the undersigned not later than TUESDAY May 18th 1937.

Memorial Offices, D. A. POWELL
Westgate Street, Principal Medical Officer
Cardiff.

May 18th 1937

KENT COUNTY COUNCIL RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Resident Assistant Medical Officer at the Farnborough Public Assistance Hospital (900 beds).

The salary is at the rate of £250 a year with residential emoluments valued at £100 a year.

CITY OF LIVERPOOL PATHOLOGIST

Applications are invited for the appointment of full-time Pathologist for certain of the Corporation Hospitals at an inclusive salary of £250 per annum rising by three biennial increments of £50 and one of £37 10s. to £527 10s. per annum. Avo fees received in connection with the appointment to be handed over to the City Council.

Candidates must be fully qualified and registered must have specialised in pathology and biochemistry and have had considerable experience in a recognised pathological department.

The gentleman appointed will be responsible for supervising the work of the different laboratories and will be required to co-operate generally with the medical staffs so far as this particular service is concerned.

Forms of application and particulars of duties can be obtained from the Medical Officer of Health, Municipal Annex, Dale Street, Liverpool.

The appointment will be made subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council and will be determinable by three calendar months notice on either side.

Applications endorsed Pathologist to be forwarded to the undersigned not later than Wednesday May 19th 1937.

Canvassing members of the City Council either directly or indirectly will be regarded as a disqualification.

Municipal Offices, W. H. BAINES
Dale Street, Liverpool 2, Town Clerk
May 1937

CITY OF LIVERPOOL CLEAVER SANATORIUM FOR CHILDREN Hewall, Cheshire

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for a full-time Resident Medical Officer at the Cleaver Sanatorium for Children, Hewall, Cheshire (100 Beds).

The appointment is for a term of one year at a salary of £300 per annum together with residential allowances.

Candidates who must be fully qualified and registered should have previous hospital experience especially of tuberculosis.

Applications to be made on forms obtainable from the Medical Officer of Health, Municipal Annex, Liverpool, to be endorsed Resident Assistant Medical Officer and returned to the undersigned so as to be received not later than Wednesday May 19th 1937.

Canvassing members of the City Council will be considered a disqualification.

Municipal Buildings, W. H. BAINES
Dale Street, Liverpool 2, Town Clerk
May 1937

CITY OF NORWICH ASSISTANT MEDICAL OFFICER OF HEALTH and ASSISTANT SCHOOL MEDICAL OFFICER etc

Applications are invited for the post of Assistant Medical Officer of Health and Assistant School Medical Officer to include the duties of Medical Officer with residence at the Isolation Hospital.

BOOTLE GENERAL HOSPITAL, BOOTLE, LIVERPOOL, 20

HONORARY ORTHOPAEDIC SURGEON

The Board of Management invite applications for an HONORARY ORTHOPAEDIC SURGEON. The Rule governing the appointment is as follows —

Every candidate for the office of Honorary Orthopaedic Surgeon shall have obtained a degree of Master of Surgery at one of the Universities of the United Kingdom or shall be a Fellow of one of the Royal Colleges of Surgeons in the United Kingdom.

Candidates should send one copy of their application and testimonials to each member of the General Committee and Medical Board and one to the undersigned from whom a list of Committee Members can be obtained.

The last day for the receipt of applications is FRIDAY MAY 21st, 1937.

A. J. COOPER
Secretary-Superintendent.

NATIONAL SANATORIUM, BENEDEN KENT

MEDICAL SUPERINTENDENT

The Council of the National Sanatorium Medical Association invites applications for the post of Medical Superintendent.

The salary will be £600 per annum rising by £50 per annum to a maximum of £750.

A house will be provided and lighting will be free. Fuel will be supplied at cost price to the Association.

Annual leave will be four weeks and generally speaking every other Sunday will be free.

Applications stating age, nationality, qualifications and experience of the candidate, with copies of three recent testimonials, should be addressed to C. C. LAWRENCE, Hon. Secretary.

National Sanatorium, Beneden, Kent.

And should be received by him not later than May 16th 1937. Letters should be marked "Personal".

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON

(Beds 272—Six R.M.O.s.)

HOUSE SURGEON (male) required about June 15th 1937. Charge of beds, part casualties, and anaesthetics. Salary £150 per annum with board residence and laundry.

Candidates must hold medical and surgical qualifications of the British Empire and be duly registered under the Medical Act.

They must be unmarried and when elected under thirty years of age.

Applications with copies of recent testimonials should be sent as soon as possible to the undersigned.

L. L. W. LANCASTER-GAYE,
Secretary-Superintendent.

WEST KENT GENERAL HOSPITAL (Incorporated) MAIDSTONE (120 Beds.)

Applications are invited for the post of HOUSE SURGEON who must be a Male of British nationality.

Salary at the rate of £175 per annum with board, apartments, and laundry.

Candidates must possess registered qualifications. Applications, stating qualifications and experience together with copies of testimonials, should be sent to the undersigned not later than May 12th 1937.

The successful candidate will be required to take up residence on May 17th 1937.

EDWARD J. GREGO
House Governor and Secretary

WEST SUFFOLK GENERAL HOSPITAL, BURY ST EDMUNDS (112 Beds.)

Applications are invited for the post of HOUSE SURGEON. Duties include charge of the Surgical Beds. Salary £180 per annum with Board Lodging and Laundry.

One other resident Medical Officer. Applicants must be registered Practitioners. Applications, stating age, experience, and nationality with three copies of three recent testimonials, to be sent to the Secretary by May 11th 1937.

April 1st 1937 E. E. HARDWICKE,
Secretary

STROUD GENERAL HOSPITAL, Stroud, Glos.

RESIDENT MEDICAL OFFICER required. Candidates must be fully qualified and registered. Six months appointment from June 1st. Salary £160 per annum with board and laundry. Applications, stating nationality together with copies of three recent testimonials, to be sent to the undersigned, from whom further particulars may be obtained.

C. FORD SPENCER
Secretary

ROYAL SOUTH HANTS AND SOUTH AMPTON HOSPITAL (280 Beds.)

Applications are invited for the following appointments —

One HOUSE PHYSICIAN
One HOUSE SURGEON
One RESIDENT ANAESTHETIST AND HOUSE SURGEON to the Ear, Nose and Throat Department

One CASUALTY OFFICER (for the six months commencing July 1st, 1937, each at a salary of £150 per annum with board lodging and laundry. Candidates must be male and unmarried. Applications, accompanied by not more than three testimonials, should be sent to the undersigned not later than May 22nd 1937.

H. TRUSSON
House Governor and Secretary

ROYAL SOUTH HANTS AND SOUTH AMPTON HOSPITAL (280 Beds.)

Applications are invited for the appointment of SENIOR HOUSE SURGEON for the period commencing June 1st, 1937, and ending June 30th 1938 at a salary of £200 per annum with board lodging and laundry. Candidates must be male and unmarried and preference will be given to those holding the F.R.C.S. diploma. Applications, accompanied by not more than three testimonials, should be sent to the undersigned not later than May 15th.

H. TRUSSON
House Governor and Secretary

MANCHESTER ROYAL INFIRMARY ASSISTANT SURGICAL OFFICER (DENTAL)

The Board of Management invite applications for the above appointment from Dental Surgeons holding British or Irish qualifications.

The duties are to assist in the treatment of Dental Out-patients on two mornings per week. The appointment (non-resident) is for one year but the holder of the office is eligible to apply for re-election on two subsequent occasions for a similar period. Salary £35 per annum.

Candidates must state age and qualifications, and send twelve copies of their application and testimonials to the undersigned by Thursday May 13th 1937.

By Order
R. TINDALE,
General Superintendent and Secretary
April 26th 1937

ROYAL SALOP INFIRMARY SHREWSBURY (150 Beds.)

Applications are invited from fully qualified unmarried gentlemen for the appointment of RESIDENT HOUSE SURGEON.

The appointment is for six months in the first instance subject to reappointment for a further period of six months if desired.

Salary at the rate of £160 per annum with board residence, etc.

Applications stating age, qualifications and experience, together with copies of three recent testimonials to be sent to the undersigned immediately.

J. W. NOBLE
Secretary-Superintendent
Board Room April 22, 1937

BEDFORD COUNTY HOSPITAL

Wanted at once to take over the duties of SECOND HOUSE SURGEON for a term of six months at a salary of £150 per annum. He must be fully qualified male, unmarried and with previous hospital experience. Board lodging and laundry.

Applications stating age, nationality, qualifications, together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee.

CITY MENTAL HOSPITAL, HUMBERSTONE, LEICESTER.

Wanted LOCUM TENENS ASSISTANT MEDICAL OFFICER for the summer months from May 2nd 1937. Experience of Mental Hospital practice is desirable.

Terms ten guineas per week. It will be necessary for the gentleman appointed to live on the premises. Apply without delay giving particulars and three references to The Medical Superintendent.

VICTORIA HOSPITAL FOR SICK CHILDREN PARK STREET HULL.

The Board of Management of the above Hospital requires a RESIDENT HOUSE PHYSICIAN (Lady) at a salary of £120 with Board Residence and Laundry. Applications with copies of recent testimonials stating age, qualifications and when at liberty to be sent to the Secretary April 16th, 1937.

BRISTOL ROYAL INFIRMARY AND BRISTOL GENERAL HOSPITAL, AMALGAMATED

A meeting of the Joint Election Committee will be held at the Bristol Royal Infirmary on Tuesday May 25th 1937 at 3.15 o'clock p.m. to appoint TWO HONORARY RADIOLOGISTS in the Joint Radiological Department, which includes the Radium Centre Dr G. B. Bosh an Assistant Radiologist will be a candidate for one of the appointments.

Candidates who must possess a special diploma in Radiology are requested to send their applications stating age, with copies of testimonials and proof of qualifications, to the undersigned on or before Wednesday May 19th 1937 from whom further particulars may be obtained.

Every candidate is also required to forward a copy of his application and testimonials to each member of the Joint Election Committee.

THOMAS W. GREGG F.C.C.S.,
Secretary Bristol General Hospital

BRISTOL ROYAL INFIRMARY AND BRISTOL GENERAL HOSPITAL

The Joint Radiological Committee invites applications for the appointment of a whole-time RADIO-DIAGNOSTICIAN. Salary at the rate of £500 per annum.

Candidates who must possess a special diploma in Radiology are requested to send their applications stating age, with copies of testimonials, to the undersigned on or before Saturday May 15th, 1937, from whom further particulars may be obtained.

THOMAS W. GREGG F.C.C.S.,
Secretary Bristol General Hospital

THE OXFORD EYE HOSPITAL, WALTON STREET OXFORD

Applications are invited for the post of HOUSE SURGEON to the OPHTHALMIC DEPARTMENT of the above institution. The post is tenable for 12 months from July 1st.

It is desirable that candidates should have some knowledge of refractions.

Salary is at the rate of £150 per annum with free board residence and laundry and share of school clinic fees amounting to from about £70.

Applications with copies of three recent testimonials should be sent to the undersigned.

MILES IRVING
April 23rd 1937 Honorary Secretary

ABERDEEN ROYAL INFIRMARY

There is a vacancy for a SECOND HONORARY OPHTHALMIC SURGEON.

Each candidate should submit a full statement of his qualifications and experience together with copies of recent testimonials.

Further particulars of the appointment may be obtained from the undersigned with whom twelve copies of applications and testimonials should be lodged not later than 10 a.m. on Wednesday May 19th 1937.

JOHN A. MCCONACHIE,
Clerk and Treasurer
230 Union Street Aberdeen.

BECKETT HOSPITAL AND DISPENSARY BARNLEY (153 Beds.)

CASUALTY OFFICER (male) required June 1st to deal with the injuries and fractures. Capable to perform emergency operations a recommendation by testimonials and experience together with board, residence and laundry.

Applications, stating age, qualifications and experience (Ophthalmologist desirable) accompanied by testimonials, should be sent to the undersigned by May 11th.

ARTHUR L. BOURNE,
April 27th 1937 Secretary-Superintendent

MOUNT VERNON HOSPITAL, NORTHWOOD MIDDLESEX

Applications are invited for the appointment of CLINICAL PATHOLOGIST at a salary of £100 a year. There are good facilities for and the routine work allows of ample time for research in radiology and cancer. Preference will be given to applicants having experience in research work, or in bio-chemistry.

Applications with copies of testimonials to be sent to —

W. J. MORTON Secretary
Offices 37 Fitzroy Square W.1

BURSLER HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL, Tunstall Stoke-on-Trent.

Applications are invited for the post of RESIDENT HOUSE SURGEON salary £175 per annum with board residence and laundry. The appointment is for six months in the first instance. Reappointment may be applied for.

Applications stating age and experience with copies of three recent testimonials, to be sent to the undersigned immediately.

C. E. LOWDES,
Secretary

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRY

Main Hospital 307 Beds
Convalescent Hospital 40 Beds

Applications are invited for an HONORARY ASSISTANT SURGEON, who must be a qualified practitioner and have held the post of House Surgeon for six months in a hospital containing at least 100 beds.

Candidates shall be resident in the City of Coventry or within six miles thereof or shall take up their residence within that radius within six months from date of appointment.

Canvassing either directly or indirectly will be deemed a disqualification.

Applications with original testimonials and registration certificates must reach the undersigned on or before May 31st 1937.

Candidates will in due course receive notice of their eligibility or otherwise from the Secretary, and after receipt of such notice eligible candidates are at liberty to send through the post printed copies of their application and testimonials to Members of the Board of Management of the Hospital a list of whose names and addresses will be furnished by the Secretary. No such application or copies of testimonials shall be sent until receipt of such notification from the Secretary.

The appointment shall be made for twelve months and the candidate appointed shall be eligible for re-election at the end of that period.

The appointment may be terminated at any time by the Board of Management.

BY ORDER OF THE BOARD
(MISS) R. HOOPER Secretary

May 3rd 1937

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRY

Main Hospital 307 Beds
Convalescent Hospital 40 Beds

Applications are invited for the post of RESIDENT HOUSE SURGEON, CASUALTY OFFICER and RESIDENT HOUSE SURGEON FOR THE AURAL AND OPHTHALMIC DEPARTMENTS at Salaries of £150 per annum with board residence attendance and laundry.

Candidates must be duly qualified and registered. Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately.

(MISS) R. HOOPER Secretary

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKES-ON-TRENT 100 Beds

HOUSE SURGEON FOR AURAL AND OPHTHALMIC DEPT.

The committee invite applications for the above post. Salary at the rate of £150 per annum with board residence and laundry.

The appointment will be made for 6 months renewable.

Applications stating age and experience, with copies of recent testimonials to be sent to the undersigned immediately.

BY ORDER
W. STIVENS
Secretary and House Governor

May 3rd 1937

THE PRINCE OF WALES'S HOSPITAL Greenbank Road Plymouth

(Formerly South Devon and East Cornwall Hospital) (64 Beds)

Applications are invited for the post of HOUSE SURGEON. Salary £150 per annum with board residence and laundry.

The appointment is tenable for six months and is subject to renewal. Duties to commence May 1st.

The Hospital is officially recognised for the surgical practice required before admission to the Final Fellowship Examination of the Royal College of Surgeons of England.

Applicants must be registered under the Medical Act.

Applications stating age and qualifications to reach the undersigned forthwith.

ARTHUR R. CASH
Gen. Supt. and Secretary

May 3rd 1937

THE PRINCE OF WALES'S HOSPITAL Devonport Plymouth

(Formerly Royal Albert Hospital Devonport) (64 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £100 per annum with board residence and laundry.

Duties to commence immediately.

Appointment is tenable for six months and is subject to renewal or promotion to the senior position when this post becomes vacant.

Applicants must be registered under the Medical Act.

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned forthwith.

FRANK ROWE
Secretary

May 3rd 1937

THE PRINCE OF WALES'S HOSPITAL Greenbank Road Plymouth

(Formerly South Devon and East Cornwall Hospital) (64 Beds)

Applications are invited for the post of RESIDENT SURGICAL OFFICER (male). Salary £250 per annum with board residence and laundry.

Appointment tenable for six months and subject to renewal. Duties to commence June 6th.

Candidates must be registered under the Medical Act and it is desirable they should possess the F.R.C.S. England or Edinburgh.

Applications stating age and qualifications together with copies of three recent testimonials to reach the undersigned by May 1st.

ARTHUR R. CASH
Gen. Supt. and Secretary

May 3rd 1937

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER (25 Beds Free Residents)

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary at the rate of £150 per annum with board residence and laundry.

The appointment is for six months which may be extended for similar periods by re-election from time to time.

Applications stating age and qualifications and nationality with copies of not less than three recent testimonials should be sent to the undersigned immediately.

DOWN COUNTY MENTAL HOSPITAL Downpatrick Northern Ire. and

JUNIOR ASSISTANT MEDICAL OFFICER (male)

The Committee of Management will at its meeting on May 9th 1937 consider application for the above post. Salary £150 per annum rising by annual increments of £5 to £200 per annum plus £50 per annum if the applicant possesses or obtains the Diploma in Psychological Medicine with emoluments of furnished apartments, ratings, laundry, fuel, light and attendance valued for pensionable purposes at £130 of which the present ration allowance of £52 per annum is commuted for cash. A deduction of 3 per cent will be made from the salary and allowances under the Asylum Officers Superannuation Act 1909.

Candidates must be registered unmarried and not more than 30 years old. Previous Mental Hospital experience not necessary. Proficiency in bacteriological and pathological technique a recommendation.

Forms of application giving further particulars may be obtained from the Resident Medical Superintendent up to May 2nd 1937.

ANCOATS HOSPITAL, MANCHESTER 4 EAR NOSE AND THROAT DEPARTMENT

HONORARY REGISTRAR required to ASSIST the Honorary Aural Surgeon at the Clinic on Thursday afternoons and to do such other work in the inpatient department as may be delegated to him by the Honorary concerned.

ORTHOPAEDIC REGISTRAR REGISTRAR required to ASSIST the Hon. Orthopaedic Surgeon in the out-patient department clinics on Tuesday afternoons and Thursday mornings. Honorarium £50 per annum.

The above appointments are for twelve months and are renewable on January 1st each year.

Applications from duly qualified Medical Practitioners (together with copies of three recent testimonials) to be forwarded to the undersigned on or before May 19th next from whom further particulars can be obtained on request.

By Order of the Board
HERBERT J. DAFORNE
Gen. Supt. and Secretary

ROYAL BLKSHIRE HOSPITAL, READING (335 Beds)

Applications are invited for the following resident appointments:

ONE CASUALTY OFFICER (male)
ONE HOUSE SURGEON TO THE SPECIAL DEPARTMENTS (Eye Ear Nose and Throat) (male)

Appointments are for six months and candidates must be fully qualified and registered. Remuneration at the rate of £150 per annum with board residence and laundry.

Applications stating age and experience with copies of testimonials to be sent to the undersigned as soon as possible.

H. E. RYAN
Secretary and House Governor

PRESTON HALL SANATORIUM near Maudstone Kent (300 Beds)

ASSISTANT MEDICAL OFFICER (male) to

COUNTY BOROUGH OF BARNSELY ST HELEN MUNICIPAL GENERAL HOSPITAL (150 Beds)

APPOINTMENT OF MEDICAL OFFICER (MALE)

Applications are invited for the above whole time appointment at an inclusive salary of £650 per annum rising by annual increments of £25 to £700 per annum.

The Hospital was appropriated for administration under the Public Health Acts on April 1st, 1936.

The Officer appointed will be on the staff of the Public Health Department and the appointment will be determinable by three months notice on either side. The successful applicant will act also as Medical Officer for the adjacent Institution and for the Municipal Maternity Home, and may be called upon to act in a consultant capacity for the maternity services of the Borough. He will in the first instance be permitted to reside outside the hospital precincts within such reasonable distance as the Council may agree.

Candidates must have held resident appointments. A high medical qualification with obstetrical experience and experience in hospital administration are desirable.

It is contemplated that the hospital will be developed mainly for medical and obstetric cases, and that in the near future there will be made an appointment of Resident Medical Superintendent when the Medical Officer will then be considered for promotion to such appointment.

Applications stating age, qualifications, etc. together with copies of not more than three recent testimonials, must be sent to reach me not later than May 15th 1937 and should be endorsed Medical Officer St Helen Hospital. Canvassing in any form will be a disqualification.

Town Hall, A E GILFILLAN
Barnsley, Town Clerk
April 26th 1937

ESSEX COUNTY COUNCIL LADY ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH

The County Council of the Administrative County of Essex invite applications for the above appointment from duly qualified Registered Medical Practitioners holding a Diploma of Public Health and not over 45 years of age.

The Officer appointed must have had experience as a Medical Officer of an ante-natal clinic.

The salary will be £500 per annum and will rise subject to satisfactory service by annual increments of £5 to £700 per annum and travelling expenses will be allowed.

The appointment will be held by the successful candidate during the pleasure of the Council and will be determinable by the Officer by three months notice in writing.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under the Local Government and Other Officers Superannuation Act 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of not more than three testimonials (which will not be returned) should be addressed to me and delivered at the County Hall, Chelmsford, not later than 10 a.m. on MONDAY, May 24th 1937.

County Hall, E. S. HOLCROFT
Chelmsford, Clerk of the County Council.
May 3rd, 1937

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN Dyke Road Brighton. (100 Beds)

HOUSE SURGEON (male) required. Salary at the rate of £1.0 per annum with board lodging and laundry. Good experience. No canvassing. To take up duties immediately.

Applications in writing accompanied by testimonials, should be sent to PERCY F. SPOONER, the Secretary.
April 26th 1937

MANCHESTER AND SALFORD HOSPITAL FOR DISEASES OF THE SKIN

TWO ASSISTANT MEDICAL OFFICERS wanted. Fully qualified and registered. To attend three mornings per week each. Salary £100 per annum. The appointments are for twelve months from July 1st. Applications with copies of three testimonials, to be sent to the undersigned on or before May 24th.

JOHN NALL, Secretary

MANCHESTER ROYAL EYE HOSPITAL.

JUNIOR HOUSE SURGEON required. Salary £120 per annum with residence, board, etc. Applications (with copies of testimonials) endorsed "House Surgeon," to be addressed to the Chairman of the Board of Management not later than May 14th, 1937.

H R NORTH
Gen. Supt. and Secretary

EAST SUSSEX COUNTY MENTAL HOSPITAL HELLINGLY SUSSEX.

APPOINTMENT OF SENIOR ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Senior Assistant Medical Officer (registered and qualified) at the above Mental Hospital. Salary £600 per annum (which includes £50 for D.F.M.) together with the usual emoluments of board lodging and washing valued for superannuation purposes at £90 per annum. Arrangements can be made for a married Medical Officer.

Candidates must possess the Diploma in Psychological Medicine, and be interested in PSYCHOTHERAPY. The hospital possesses a well-equipped laboratory and four out-patient clinics are held in voluntary hospitals in East Sussex. The appointment will be subject to the provisions of the Asylums Officers Superannuation Act, 1909 and may be terminated by one calendar month's notice on either side.

Applications with copies of three recent testimonials stating age and full particulars to be sent to the Medical Superintendent not later than May 21st 1937.

ST BARTHOLOMEW'S HOSPITAL ASSISTANT PHYSICIAN and ASSISTANT DIRECTOR TO THE MEDICAL PROFESSORIAL UNIT

Notice is hereby given that a meeting of the Election Committee will be held on Tuesday June 8th 1937 at four o'clock in the afternoon to elect an ASSISTANT PHYSICIAN, which office is held in conjunction with that of ASSISTANT DIRECTOR TO THE MEDICAL PROFESSORIAL UNIT. Candidates must be Fellows or Members of the Royal College of Physicians of London.

Fifty copies of applications and testimonials should be left with the undersigned on or before Saturday, May 29th 1937.

THOMAS HAYES
May 4th 1937 Clerk to the Governors

MILLER GENERAL HOSPITAL, Greenwich Road S.E.10

Applications are invited for the following posts:
TWO HOUSE PHYSICIANS (male) on married salary £100 per annum
HOUSE SURGEON (male) unmarried salary £100 per annum

Board residence and laundry are provided.

The appointments are for six months from July 1st 1937. There are six Resident Officers. Application forms can be obtained from the Secretary and must be returned not later than May 24th 1937.

May 4th 1937

ROYAL EAST SUSSEX HOSPITAL, HASTINGS

Applications are invited for the post of JUNIOR HOUSE SURGEON (female) vacant May 21st. The appointment is for a period of six months.

Salary at the rate of £150 per annum with board and residence.

Candidates must be duly registered Medical Practitioners.

Applications with copies of recent testimonials, to be addressed to the Secretary.

WILFRID O. KEMSLEY
Secretary

THE ROYAL OWENT HOSPITAL, NEWPORT MON (210 Beds)

HOUSE SURGEON

Applications are invited from male registered practitioners for the post of House Surgeon. Salary at the rate of £135 per annum together with board quarters and laundry.

The appointment is available immediately and terminates on October 30th 1937.

Applications, with copies of testimonials, should be addressed to the undersigned.

S CECIL HILL
Secretary-Superintendent

GROSVENOR SANATORIUM ASHFORD KENT (236 Beds) 4 Resident Medical Officers.

Applications are invited from fully qualified men for the appointment of RESIDENT HOUSE PHYSICIAN.

The appointment is for a period of at least six months at a salary of £100 per annum with board lodging and laundry.

Previous experience not necessary. Applications stating age, qualifications, nationality and accompanied by copies of recent testimonials, to be sent to the Acting Medical Superintendent.

LIVERPOOL HEART HOSPITAL, 34 Oxford Street, Liverpool

Applications are invited for the position of HONORARY ASSISTANT PHYSICIAN to the above Hospital. Applications to be sent to the Secretary at the above address.

HULL ROYAL INFIRMARY

Applications are invited from registered Medical Practitioners for the following posts (male unmarried):—

(1) FIRST HOUSE SURGEON vacant May 31st. This post is recognised by the Royal Colleges for the F.R.C.S. Examinations and is also approved by the University of London for the M.S. Branch 1 (Surgery) Examination.

(2) HOUSE SURGEON TO THE OPHTHALMIC AND EAR NOSE AND THROAT DEPARTMENTS vacant June 2nd.

This post is recognised by the Conjoint Board of the Royal Colleges for the clinical work required in the regulations for the D.O.M.S. and D.L.O.

(3) SECOND CASUALTY OFFICER vacant now to addition to carrying out duties in the Casualty Department. The Officer appointed will act as House Surgeon to one of the Honorary Assistant Surgeons and will thus obtain Ward and Theatre experience. He will be eligible for promotion to a more senior post when a vacancy occurs.

Salary for each of the above posts £150 per annum plus residence, board and laundry. The appointments will be for a period of six months, but will be determinable at any time by one month's notice on either side.

Applications, giving particulars of age, experience and nationality, together with copies of recent testimonials, should be addressed to the undersigned.

R. J. CARLESS
House Governor

THE PRINCE OF WALES'S HOSPITAL, PLYMOUTH

Incorporating
South Devon and East Cornwall Hospital.
Greenbank Road
Royal Albert Hospital, Devonport
Central Hospital, Lockyer Street

Applicants are invited for the following posts on the Honorary Medical Staff:

(1) HONORARY PHYSICIAN (A member of the Assistant Staff is a candidate for this post).

(2) HONORARY PHYSICIAN WITH CHARGE OF OUTPATIENTS.

Candidates for both the above posts must be Doctors of Medicine of a University of the United Kingdom or Fellows or Members of the Royal College of Physicians of London or Edinburgh.

(3) HONORARY OPHTHALMIC SURGEON (Department at Devonport Hospital).

Candidates must be masters of surgery of the United Kingdom or Fellows of the Royal College of Surgeons of England or must hold the special diploma in Ophthalmology.

Applicants must send twelve copies of their application and testimonials to the undersigned by May 21st 1937. Canvassing disqualifies.

Greenbank Road, ARTHUR R. CASH
Plymouth, Gen. Supt. and Secretary
May 4th 1937

QUEEN CHARLOTTE'S MATERNITY HOSPITAL Marylebone Road, N.W.1

Applications are invited from registered Medical Practitioners for the following appointments:

ASSISTANT RESIDENT MEDICAL OFFICER (male) Salary £80 per annum

RESIDENT ANAESTHETIST AND DISTRICT RESIDENT MEDICAL OFFICER 6 months Salary £90 per annum

RESIDENT ANAESTHETIST 3 months. Salary £100 per annum

with board residence and laundry allowance (4s. weekly). Appointments to commence on July 1st, 1937.

The Assistant Resident Medical Officer is appointed for three months and on completion will be expected to proceed to the post of Senior Resident Medical Officer (for three months) on the recommendation of the Medical Staff (salary £100 per annum). Obstetric experience desirable.

Applications, stating age and with copies of three testimonials, should be sent to the Secretary by May 24th 1937.

H. B. STOKES
Secretary-Superintendent

THE ROYAL INFIRMARY SUNDERLAND (90 Beds)

HOUSE PHYSICIAN (Male) required for June 1st. Salary £120 per annum with board residence and laundry etc. Applications stating age, qualifications and accompanied by copies of testimonials to be sent to the undersigned by May 22nd. The Infirmary possesses modern equipment and has up-to-date Pathological and X-Ray Departments. The Resident Medical Staff consists of a R.M.O. and six others.

J. A. BEARDSALL
House Governor and Secretary

STANNINGTON CHILDREN'S SANATORIUM

Wanted LOCUM TENENS (woman) for 8 weeks from June 17th. Previous Sanatorium experience essential. Fee 7 guineas per week with usual residential emoluments.

Apply giving full particulars to Medical Secretary, Stannington Sanatorium, Otford, Morpeth, Northumberland

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B M A House Tavistock Square, W C 1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District.
CONTRACT PRACTICE	CONTRACT PRACTICE (cont'd)	CONTRACT PRACTICE (cont'd)
ABERTYSSWIG MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OAKDALE, MON (Medical Officer for Medical Aid Association)
BLACKFOOT AND FYLDE FRIENDLY SOCIETIES COUNCIL (Medical Officer)		OCMORE VALLEY GLAMORGAN (Wynham Colliery Medical Aid Society) (Workmen's Medical Scheme)
GILFACH COCH GLAMORGAN (Workmen's Medical Scheme)	NID RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
GRANTHAM FRIENDLY SOCIETIES MEDICAL INSTITUTE (Medical Officer)	NEATH AND DISTRICT (Medical Aid Association)	FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B M A House Tavistock Sq, W C 1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (All Territories & Islands Appointments)	The Medical Secretary New South Wales Branch 135 Mac quarie St Sydney N.S.W.	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association (Medical) Society Hall Albert St East Melbourne Victoria.	WESTERN AUSTRALIA (Contract and Lodge Practices)	Hon Sec Western Australian Branch British Medical Association "Shell House" 64 St George's Terrace Perth Western Australia
QUEENSLAND (All Branches & Islands & Friendly Societies Institutes)	The Hon Sec Queens land Branch British Medical Association B.M.A. Building 35 Adelaide St Brisbane				

May 5, 1937

By Order of the Council

G C ANDERSON, Medical Secretary

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WANTED—EXPERIENCED MALE ASSISTANT for industrial practice on Tyneside. Salary £375 (including allowance for car) Live indoor branch surgery. Must be single and a Protestant.—Address No 3478 B.M.A. House, Tavistock Square W.C.1

WANTED IMMEDIATELY—INDOOR AND Outdoor ASSISTANTS for Town and Country Practices, with and without view to Partnership. Good salaries offered. State full particulars.—British Medical Bureau 33 Cross Street, Manchester 2

WANTED IMMEDIATELY RELIABLE OUTDOOR ASSISTANT mixed practice 29 miles from London. Salary £450 p.a. the assistant to supply own car and living accommodation.—Address, No 3357 B.M.A. House Tavistock Square W.C.1

WANTED—INDOOR MALE ASSISTANT IN semi-country industrial and colliery practice. Little night work. Protestant preferred. Apply stating age qualifications and essential particulars.—Address, No 3416 B.M.A. House Tavistock Square W.C.1

WANTED IN PLEASANT LANCASHIRE town outdoor ASSISTANT preferably Scots. Would suit recently qualified graduate. Salary £400. Applicants please state nationality, age, and religion.—Address, No 3558 B.M.A. House Tavistock Square W.C.1

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WANTED—LADY ASSISTANT OUTDOOR for mixed practice near Bham Good experience N.H.I. and midwifery essential £350 + £50 car allowance. rooms, and attendance. Testimonials and photo if possible.—Address No 3429 B.M.A. House, Tavistock Square W.C.1

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DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers, Secretary Dispensers or Chauffeur Dispensers are invited to write, wire, or phone Temple Bar 5858. The Dispensers Bureau 3 Lindsay House, 17 Shaftesbury Avenue London, W.C.2

EXPERIENCED LADY DISPENSER SECRETARY seeks post. Good knowledge shorthand typewriting, book keeping and accounts.—Address No 3404 B.M.A. House Tavistock Square W.C.1

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THE LONDON AND PROVINCIAL MEDICAL STAFF BUREAU (Licensed annually by the L.C.C.) 24b Hereford Road W.2, will supply qualified Dispensers, Secretaries, Receptionists, etc without fee to Medical Practitioners. Phone Bayswater 08.3

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APPOINTMENTS—Contd

LONDON HOMOEOPATHIC HOSPITAL
(Incorporated by Royal Charter)
Great Ormond Street Bloomsbury W.C.1
A General Hospital (200 Beds)

APPOINTMENT OF GYNAECOLOGICAL
HOUSE SURGEON

Applications are invited for appointment of Gynaecological House Surgeon vacant July 1st. The appointment is one of three Resident Medical posts which occur periodically during the year and is for a period of six months with salary at the rate of £100 per annum and board apartments and laundry.

Candidates must be legally qualified and registered.

Selected candidates will be required to attend a meeting of the Medical Committee for interview on June 9th.

Applications stating age with copies of testimonials to be sent to the undersigned.

L. J. KNOWLES Secretary

ROYAL WATERLOO HOSPITAL FOR
CHILDREN AND WOMEN
Waterloo Road S.E.1

There will be a vacancy on June 1st 1937 for a HOUSE SURGEON (male) at the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum with board and residence. Applications, with copies of testimonials should be forwarded not later than Tuesday morning May 18th to the Secretary at the above address from whom further particulars can be obtained.

THE ROYAL WATERLOO HOSPITAL FOR
CHILDREN AND WOMEN
Waterloo Road S.E.1

Applications are invited from qualified male practitioners for the post of RESIDENT CASUALTY OFFICER vacant on May 17th 1937 to work in the Out Patient Department at £150 per annum. Candidates for this post should have held a previous appointment. The appointment is in the first instance for a period of six months. Applications with copies of testimonials should be forwarded not later than May 12th to the Secretary at the Hospital from whom further particulars can be obtained.

ROYAL NATIONAL SANATORIUM
BOURNEMOUTH

Applications are invited from duly registered male unattached Medical Practitioners for the post of ASSISTANT RESIDENT MEDICAL OFFICER. Experience in pulmonary tuberculosis desirable. Duties to commence as soon as possible. Salary £200 per annum with board residence and laundry.

The appointment will be for one year (renewable).

Applications with full particulars and copies of recent testimonials should be sent to the Secretary.

A. G. A. MAJOR Secretary

KETERING AND DISTRICT GENERAL
HOSPITAL

Applications are invited for the following posts: RESIDENT MEDICAL OFFICER and SECOND RESIDENT MEDICAL OFFICER (male).

Salaries £160 and £140 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months.

Applications, stating age, nationality and qualifications, together with copies of three testimonials, to be sent to the undersigned as soon as possible.

G. W. JACKSON

Secretary Supt

THE CORBETT HOSPITAL STOURBRIDGE
(94 Beds and Special Departments)

Applications are invited for the post of HOUSE SURGEON which is now vacant.

The appointment will be for a period of six months terminable by six weeks' notice carries a salary at the rate of £100 per annum with board and laundry.

The Hospital has a Specialist X-ray Staff and Resident Surgical Officer.

Applications giving full details of qualifications and experience, accompanied by three copies of testimonials should be addressed to the undersigned forthwith.

W. G. H. WESTON

The Corbett Hospital
Stourbridge

SOUTHALL NORWOOD HOSPITAL

RESIDENT MEDICAL OFFICER wanted. Male single. Salary £150 per annum. Ample time for study. Apply Hon. Secretary. Medical Committee the Hospital Southall Middlesex.

BRIDGWATER GENERAL HOSPITAL
Somerset

HOUSE SURGEON required as soon as possible. Salary £130 with board and residence. Applications stating age qualifications. Medical School and nationality to be sent to the Secretary immediately.

CONNAUGHT HOSPITAL
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118 Beds, with five Resident Medical Officers.

CASUALTY OFFICER (male) required at on Salary £100 per annum with residence, board and laundry. Appointment for about six months.

Applications stating age nationality qualifications and experience, accompanied by copies of more than three recent testimonials, should be received on or before Thursday May 13th.

KENELM S. ELLISON

General Secretary

BATTERSEA GENERAL HOSPITAL
London S.W.11

Applications are invited for the resident appointments of:

1 HOUSE SURGEON Salary at rate of £130 p.a.
2 HOUSE PHYSICIAN AND CASUALTY OFFICER Salary at rate of £170 p.a.

Tenable for six months from June 1st 1937. Applications with copies of testimonials should reach the undersigned by May 15th.

O. L. BENNETT

Secretary

GORDON HOSPITAL FOR RECTAL
DISEASES
Vauxhall Bridge Road S.W.1

A RESIDENT HOUSE SURGEON is required for six months from June 7 next. Salary at the rate of £150 per annum with board and laundry. Applications with particulars of age qualifications and experience and copies of three recent testimonials to reach the undersigned not later than May 24.

R. S. REGAN

Secretary

EVELINA HOSPITAL FOR SICK CHILDREN
Southwark S.E.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from June 12th (first two months in the Casualty and Out Patient Department). Salary at the rate of £120 per annum with full board and residence.

Applications with copies of three recent testimonials should be sent to the undersigned from whom particulars can be obtained not later than first post on Monday May 24th.

W. H. SIDNELL

House Governor

DISTRICT INFIRMARY ASHTON UNDER
LYNE. (700 Beds)

RESIDENT SURGICAL OFFICER required early in June. Six months appointment.

Salary at the rate of £200 per annum with board residence and laundry.

Applications with testimonials to be sent as soon as possible to the undersigned.

FRANK OLIVER

General Superintendent and Secretary

May 4th 1937

TAUNTON AND SOMERSET HOSPITAL
TAUNTON (104 Beds)

HOUSE PHYSICIAN required June 1st for a six months appointment. Senior R.M.O. and House Surgeon also on staff. Salary at rate of £100 p.a. and the retention of certain fees.

Applications with copies of 3 recent testimonials to be sent to the Secretary by the 18th inst.

BRADFORD CHILDREN'S HOSPITAL

HOUSE SURGEON (lady) required immediately. Fully qualified. Salary £100 with board residence and laundry.

Applications, with recent testimonials and so on, are to

J. W. LONOLEY Secretary Supt

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Northbrook Road Dublin

Applications are invited for the post of WHOLE TIME ASSISTANT RADIOLOGIST. Previous experience. O. Radiography. Chemical. D.M.P.E. preferred. Salary dependent on experience. Applications to be submitted before May 24th to the Secretary.

HOSPITAL FOR TROPICAL DISEASES LONDON

The Committee of Management of the Seamen's Hospital Society invite applications for the appointment of HONORARY ASSISTANT PHYSICIAN with charge of beds at the Hospital for Tropical Diseases, 4 Condon Street, W.C.1, which Institution constitutes the Clinical Division of the London School of Hygiene and Tropical Medicine. Candidates must (a) hold the degree conferred by the General Medical Council of Doctor or Bachelor of Medicine of a University in the British Empire, and (b) be Fellow or Members of the Royal College of Physicians of London, or be prepared to take the Membership within a reasonable time. Candidates must have had experience of medicine in the Tropics, and possession of a Diploma in Tropical Medicine will be considered an additional qualification. The elected candidate will be appointed for twelve months but will be eligible for re-election. Applications with copies of not less than three nor more than six testimonials in form sent in on or before July 31st 1937 to the undersigned from whom further particulars can be obtained.

D. A. C. PRICE

Secretary
Hospital for Tropical Diseases

April 7 1937

HOSPITAL FOR TROPICAL DISEASES LONDON

The Committee of Management of the Seamen's Hospital Society invite applications for the appointment of PATHOLOGIST to the Hospital for Tropical Diseases, 4 Condon Street, W.C.1. Candidates must be graduates of an approved University of the British Empire and preference will be given to applicants with experience of tropical pathology. It is anticipated that the post will carry with it an association with the London School of Hygiene and Tropical Medicine. Commencing salary will be £40 per annum and the elected candidate will be appointed for twelve months but will be eligible for re-election. Applications with copies of not less than three nor more than six testimonials in form sent in on or before July 31st 1937 to the undersigned from whom further particulars can be obtained.

D. A. C. PRICE

Secretary
Hospital for Tropical Diseases

April 7 1937

BOLINGBROKE HOSPITAL Wandsworth Common S.W.11 (115 Beds)

CASUALTY OFFICER (male unmarried) required. The appointment is for six months commencing on June 1st, 1937. Salary £120 per annum with board residence and laundry. Candidates must be fully qualified and registered.

Applications stating age, qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before May 1st 1937.

W. S. RANDOLPH BISS

Secretary Superintendent

BOLINGBROKE HOSPITAL Wandsworth Common S.W.11 (115 Beds)

HOUSE SURGEON (male unmarried) required. The appointment is for six months commencing on June 1st 1937. Salary £10 per annum with board residence and laundry.

Candidates must be fully qualified and registered.

Applications stating age, qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before May 1st 1937.

W. S. RANDOLPH BISS

Secretary Superintendent

ROYAL FREE HOSPITAL Gray's Inn Road W.C.1

Applications are invited from duly qualified medical men for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st 1937 and renewable for one year.

Candidates must have had at least one year's resident hospital experience. Salary £150 per annum with board and residence. Intending candidates should submit applications stating age and experience accompanied by copies of three recent testimonials to the undersigned on or before May 15th 1937.

RICHARD T. BARTLEY

Secretary

ROYAL FREE HOSPITAL GRAY'S INN ROAD W.C.1

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill, London S.E.18

General Hospital (112 Beds)

There are vacancies for three HONORARY ANAESTHETISTS on the Staff of the Hospital and for which the Board of Management invites applications. The candidates appointed will be required to attend the following sessions respectively:

- (a) Wednesdays 2 p.m. and Fridays 9.10 a.m. (General Surgical)
- (b) Tuesdays 8.30 a.m. (Ear, Nose and Throat)
- (c) Tuesdays Noon (Gynaecological)

Candidates are requested to state the particular appointment for which they are applying—(a), (b), or (c).

The Board also invites applications for the post of SURGICAL REGISTRAR for a period of one year from June 1st 1937. An honorarium of £100 per annum will be paid in respect of this appointment.

Applications accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him by Monday May 17th 1937. Short-listed candidates will be required to attend for interview with the Appointments Committee on Friday May 21st.

HAMSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.3

APPOINTMENT OF CASUALTY SURGICAL OFFICER

Applications are invited from unmarried registered medical men for the position of Casualty Surgical Officer at the Out-patient Department of the hospital, Bayham Street, Camden Town, which will be vacant on July 1st next. The salary will be at the rate of £100 per annum together with board residence etc., and the term will be for six months.

Applications to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials should reach the Secretary not later than noon on May 1st next.

HAMSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.3

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1. LOCUMS.—Reliable Locums urgently required. Send details.
2. LONDON W.—Mixed PRACTICE for sale. Panel 1945. Receipts £1,735 p.a. Some ophthalmic work. Premium £3,500. House buy or rent.
3. W. ENGLAND.—PARTNERSHIP in rapidly increasing Practice near sea. Good Hospital. Scope for mid and anaes. Panel 2,100. Average £3,270 p.a. 5/12 share now with increase later. 2 years purchase. Good house. £950. Short preliminary Assistantship.
4. KENT.—PRACTICE in favourite coast resort. Receipts £1,453 p.a. Selected panel over 400. Premium £2,900. House rent.
5. S.E. ENGLAND.—PARTNERSHIP to country town. Receipts £2,538 p.a. Panel 1,790. Third share at 2 years purchase. House rent.
6. LONDON W.—Old-established PRACTICE doing over £700 p.a. Panel 400 increasing. Premium £1,150. Corner house £1,340.
7. BRISTOL.—Good mixed PRACTICE doing £1,360 p.a. Panel 1,360. Premium £3,000. House rent.
8. E. MIDLANDS.—PARTNERSHIP to pleasant and prosperous town. Panel 2,000. Receipts £2,500 increasing. Half share at 24 years purchase.
9. MIDDLESEX.—PRACTICE to good part within easy reach of London. Panel 1,600. Receipts £1,800 p.a. 24 years purchase. House sale or rent.
10. LONDON E.—Mixed PRACTICE for sale. Panel 750. £800 p.a. 2 years purchase or offer for quick sale. House rent.

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HANTS.—COAST TOWN.—Old estab. Vendor retiring. Nearly £1,200. sale. Panel 1,192. Nice house, garden, etc. scope or rent. Premium 14 years purchase—1.

LONDON W.—AVERAGE £1 and scope. Panel about 1,950. Good-class house and pool. Small apartment. Large house bed. For sale or rent. Premium £3,400—2.

EAST YORKS.—CLEAN TOWN. SHARE worth about after preliminary. Middle and working-class and panel of 2,600. Premium 2 years purchase. Choice of houses—3.

LONDON W.—SEMI CONSULTA and Electro-therapeutic PRACTICE. £700. p.a. Old estab. No panel. 2 appts. Fees up. Good house 6/7 bed etc. and garage. floor could be easily sublet. Premium 1.

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SOUTH EAST COAST.—POPUL. Resort. Over £1,450 p.a. Panel 500 or more. 3/16 to 2/1. Premium 2 years purchase. 2 recep. 3 bed consulting room etc. to rent.

ESSEX. SUBURB.—ABOUT £880 P.A. Panel 750. 3/16 surgery. 2/16 up. 1/16 4 bed garage and garden. Rent only £5. Premium £1,700 including lease fixtures etc.

SURREY.—SHARE OF £2,100 P.A. steadily increasing PRACTICE. 3/16 2/8 M. 4/2. Large panel. Premium £1,350. Choice houses to rent or buy—6.

LONDON SE.—SUBURBAN GOOD class non-panel non-dispersing. Over £800. Fees 5/ up. Impending corner family house rent at £95 p.a. Premium £1,250—9.

WITHIN 10 MILES OF TOWN S. C. Thames. Over £3,300 p.a. increasing. Grow panel now 3,000. Scope. Would suit 1 partner. Premium £7,500. Large house to rent smaller one for sale—10.

MIDDLESEX.—NUCLEUS ESTD 70 months. Receipts last year £350. Panel 70. 1. tached house 3 bed etc. Rent £90 p.a. Premium £350—11.

URGENT SALE.—KENT COAST. Favourite Resort. Very old estab. Vendor retiring through ill-health. Average over £600 p.a. Better class non-panel non-dispersing. 3/16 2/1. Surgery 10/6. Good house 6 bed. Sell or 1/2. Premium £1,000 or offer—12.

SPA PRACTICE.—ABOUT £1,400 P.A. Old estab. Fees £1 1/1 upwards. Premium 2 years purchase. Excellent detached house, 3 recep. cons., 8 bed etc. Close to chief hotels and Put. Room £3,000 freehold—13.

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S. MIDLANDS.—ABOUT 60 MILE from Town. £1,000—£1,100 p.a. Increasing panel and appts. worth over £600. Very old estab. country PRACTICE. Good sporting district. Premium £2,500 to include fittings etc.—15.

DEVON.—COUNTRY UNOPPOSED. About £1,000 p.a. Panel over 400. Fees £1 1/1. 10/6. Premium £1,500. Charming house 2 recep. 6 bed surgery etc. 1 acre. Price £2,100—16.

LONDON W.—ABOUT £1,000 P.A. Small panel. Middle and better-class. Premium £1,250. 2 recep. 4 bed. Cons. Wall etc. in garden. Rent £100 inclusive on lease—17.

LONDON SE. NEAR OVAL.—CASH PRACTICE. £500 p.a. Panel 400. Rent 1/1. rapidly. Ample scope—reducing. Rent £80 p.a.—18.

KENT.—OVER £600 P.A. PANEL worth £1,000 approx. Fees 3/6 to 10/6. Surgery. House. 3 recep. 4 bed. etc. Rent £100 p.a.—19.

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CHESHIRE TOWN—Very old-established mixed-class PRACTICE. Cash receipts £1,500 p.a. Panel 1700. Good house 3 reception, 4 bedrooms, and dressing rooms, 3 professional rooms, garage and garden. Premium—2 years purchase.—No 957

EAST YORKSHIRE—Old-established unopposed PRACTICE in nice country district. Cash receipts approximately £1,040 p.a. Panel 700. Excellent detached house 3 reception 4 bedrooms, 3 professional rooms (separate entrance) garage. Rent £50 p.a., or would sell for £750. Three-quarter acre garden. Premium—1½ years purchase or near offer for quick sale.—No 959

LANCS TOWN—PARTNERSHIP in Panel and Private Practice, about 7 miles from Manchester. Average cash receipts £4,325 p.a. Panel 3,610. Scope. Detached house 2 reception 5 bedrooms, garage and half acre garden. Premium—2½th share (about £1,730 p.a.)—2 years purchase.—No 962

DEATH VACANCY—STAFFS—Old-established mixed-class PRACTICE in pleasant country district offering great scope. Cash receipts over £400 p.a. Panel 300. Good house, 2 reception, 5 bedrooms, garage and large garden. Rent £80 p.a. Premium best offer.—No 960

NORTH WEST COAST—Old-established middle-class PRACTICE in Seaside and residential town. Cash receipts last year £1,100. Panel 350. Nice detached house 2 reception 5 bedrooms, garage and large garden. For sale or may be rented. Premium—1½ years purchase.—No 961

NEAR MANCHESTER—PARTNERSHIP in sound old-established Practice. Cash receipts last year £4,900. Panel 3,200. Excellent house 3 reception 5 bedrooms, garage and nice garden. To rent. Premium—2½th share—(approximately £1,950 p.a.)—2 years purchase.—No 944

WIRRAL COAST—PARTNERSHIP in old-established mixed-class Practice. Cash receipts last year £2,830. Panel 2,615. Scope. Excellent corner house 2 reception, 4 bedrooms, garage. Premium—1 share—2 years purchase.—No 946

MANCHESTER—Old-established Mixed Panel and Private PRACTICE. Cash receipts £1,200 p.a. Panel 850. Appointment £380 p.a. Good house 2 reception, 4 bedrooms, 3 professional rooms (separate entrance). For sale, or would rent. Premium—1½ years purchase. Vendor retiring.—No 958

EASTERN COUNTIES—Partnership in old-established Country PRACTICE with income of about £2,500 p.a. Panel 2,000. Excellent house, 3 reception, 5 bedrooms, garage and good garden. Rent £60 p.a. Premium—half share—£2,000.—No 933

NEAR MANCHESTER—PARTNERSHIP in old-established middle and working-class Practice. Cash receipts approximately £2,600 p.a. Panel 2,300. Good detached house 2 reception, 5 bedrooms, garage and garden. Rent £80 p.a. Great scope. Premium—4½th share—(about £1,600 p.a.)—2 years purchase.—No 949

SHEFFIELD—Old-established mixed-class PRACTICE. Cash receipts last year £1,112. Appointment (transferable) £100 p.a., plus bonus. Panel 600. Scope. Detached house 2 reception, 3 bedrooms, small garden. Rent £52 p.a. Premium—1½ years purchase.—No 940

NEAR NOTTINGHAM—PARTNERSHIP in practically unopposed mixed class Practice. Average cash receipts £3,500 p.a. Panel over 1,600. Appointment £120 p.a. Attractive house 2 reception, 5 bedrooms, garage and pleasant garden. Premium—1/3rd share—2 years purchase.—No 953

MANCHESTER—Middle and better-class PRACTICE in present hands 40 years. Cash receipts last year £2,151. Panel over 600. Good house 3 reception 6/7 bedrooms, garage and garden. Premium—Practice and house—£3,000. Long introduction if desired. Vendor retiring.—No 858

LANCS TOWN—Mixed panel and private PRACTICE, in present hands 30 years. Cash receipts approximately £1,500 p.a. Panel 1,500. Great scope. Good house 2 reception 4 bedrooms, garage and small garden. Rent £50 p.a. Premium, best offer.—No 945

SHEFFIELD—LIFE INSURANCE, MEDICAL REFEREE connection, etc. Income £550 p.a. Sult doctor living in one of the suburbs, with or without a Practice. Premium—£600.—No 963

NEAR MANCHESTER—Sound middle and working-class PRACTICE. Average cash receipts £2,600 p.a. Panel £2,500. Scope. Detached corner house 2 reception, 4 bedrooms, 3 professional rooms, garage and garden. Premium—1½ years purchase.—No 952

DERBYSHIRE—Old-established PRACTICE in pleasant district near large town offering great scope for increase owing to building developments. Suitable for two men in partnership. Cash receipts last year £3,000. Panel 3,359. Two good houses with ample accommodation and modern conveniences, each with garage, garden and tennis court. Premium—best offer.—No 955

NEAR LIVERPOOL—Well-established middle-class PRACTICE in pleasant district. Ample scope as district developing. Cash receipts £800 p.a. Panel 650. Nice house, 2 reception 5 bedrooms, and garden. Premium—1 year's purchase. Vendor retiring.—No 928

MANCHESTER—Old-established middle and better working-class PRACTICE in present hands 34 years. Average cash receipts £1,082 p.a. Panel 470. Scope for energetic man. Good house 2 reception 5 bedrooms, garage and good garden. Premium, best offer. Vendor retiring.—No 875

NORTH WALES—Old-established middle class PRACTICE in beautiful Seaside and Country district. Average cash receipts £1,417 p.a. Panel 415. Well-built house in good position 3 reception, 7 bedrooms garage for 2 cars and garden. Good sport and educational facilities. Premium—Practice—£2,100.—No 929

DERBYSHIRE—PARTNERSHIP in old established Country Practice near to large town. Cash receipts last year £3,238. Panel 1,800. Scope as district developing. Attractive house specially built, 2 reception 5 bedrooms, garage and large garden. Electric light and main drainage. Rent £80 p.a. Premium—1/3 share—2 years purchase.—No 854

LANCS TOWN—Well-established Panel and Private PRACTICE. Earnings last year £2,254. Panel 1,750. Good house available. Premium—1½ years purchase. Partnership if desired.—No 920

YORKSHIRE (W R)—Well-established mixed-class PRACTICE within easy reach of large city. Cash receipts last year £1,167. Panel 850. Good house 2 reception, 4 bedrooms, and maid's room, garage, and garden. Premium—Practice house and book debts, best offer.—No 934

NORTH STAFFS—PARTNERSHIP in old-established mixed Panel and Private Practice. Cash receipts last year £5,521. Panel 7,500. Incoming partner may choose own residence. Premium—2½th share (about £1,200)—2 years purchase. Further share later.—No 941

LANCS TOWN—Old-established mixed-class PRACTICE, about 22 miles from Manchester. Cash receipts last year £1,084. Panel 1,040. Scope. Good house, 2 reception 5 bedrooms 3 reception rooms (separate entrance) garage and garden. Premium—1½ years purchase.—No 951

NORTH WALES—Very old-established mixed Panel and Private PRACTICE near sea and beautiful country. In present hands 44 years. Cash receipts approx £1,550 p.a. including £522 p.a. from Panel. Excellent house for sale or may be rented. Premium—Practice—Best offer.—No 966

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REVISED TERMS ON APPLICATION

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FULL TERMS ON APPLICATION

Practices and Partnerships for Disposal

Full particulars sent free

1 LONDON, NW—Old established and increasing good-class non-dispensing PRACTICE in one of the best residential districts. Cash receipts last year £1,400. Select panel 300—could be greatly increased if desired. Fees 7/6 to 10/6. Semi-detached house in first rate quarter containing 7 bedrooms etc. Rent £240 p.a. on lease. Scope Premium £2,500.

2 N WALES—Old established PRACTICE in growing district with beautiful surrounding country. Receipts average £1,550 p.a. including over £800 from panel. Visits 5/ to 15/. Nice private residence which can be bought or rented on lease. Professional accommodation rented at £45 p.a. on lease. Premium two years purchase or near offer. Knowledge of Welsh an advantage, though not essential.

3 SCOTLAND—Good-class PRACTICE in Dundee. Receipts average over £1,300. Panel 1,350. House (4 public rooms, 5 bedrooms waiting and consulting rooms), which must be purchased. Price about £1,500. Premium £2,000.

4 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London. Panel 400 increasing. Semi-detached house (2 bed and dressing rooms) with garage and garden. Rent £125 p.a. inclusive. Rent of Branch Surgery £50 p.a. inclusive. Scope for increase. Premium £500.

5 SW OF ENGLAND—FAVOURITE WATERING PLACE—THIRD PARTNER required in old-established and increasing middle-class non-dispensing Practice about £3,000 p.a. Panel over 1,800. Detached house (7 bedrooms, etc.) with garage and good garden to rent on lease. Considerable scope especially in Midwifery. One third share at two years purchase with prospect of further share in two years.

6 MIDDLESEX—Well-established and increasing middle-class non-dispensing PRACTICE in residential district. Gross earnings last year £3,800. Panel about 1,050. Corner house in residential part (4 bedrooms) with garage and small garden for sale. Premium two years purchase based on cash receipts for past three years. Hospital.

7 YORKSHIRE (NR)—Very old-established and steadily increasing country PRACTICE between £1,400/£1,500 a year including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden for sale. Good schools and sport. Scope. Premium one and a half years purchase.

8 LONDON, SW—Well-established PRACTICE averaging £1,735 p.a. including about £130 from eye work. Panel 1,940. Private residence with ample accommodation and garage for sale or rent. Net rent of surgery premises about £10 p.a. Scope for increase. Premium £1,500.

9 WESTERN AUSTRALIA—Old-established PRACTICE, averaging £1,235 p.a. in small town in centre of one of the best and most prosperous pastoral areas. Brick built house (4 bedrooms) electricity and water. Rented on lease. Premium £640 sterling. Two Hospitals in town.

10 LONDON, SE—Increasing PRACTICE in populous outlying suburban district. Receipts last year £1,120. Panel nearly 1,200. Large house for sale or rent. Two Branch Surgeries. Scope for increase. Premium £2,000.

11 CANARY ISLANDS—Small compact PRACTICE in one of the healthiest and pleasantest parts. Cash receipts 1936, over £550. Fees 10/6 and £1 1s. Excellent scope. Premium 300 guineas.

12 OPHTHALMIC PRACTICE in S Rhodesia—Locum Tenens required immediately with view to purchase. Gross receipts 11 months ended March 31st 1937 £1,536. Possibilities of expansion for man with D.O.M.S. or D.O. and operative experience. Good well-equipped Hospital.

13 DEATH VACANCY—BOURNEMOUTH DISTRICT—Old-established PRACTICE doing about £250 p.a. but offering good scope. Panel recently started with 20 patients. Excellent non-basement house (6 bedrooms etc.) with garage and small garden. Price freehold £3,150.

14 LONDON, SW—Old-established and increasing middle-class PRACTICE averaging nearly £3,200 p.a., in suburban district. Panel 1,200. Visits 3/6 to £1 1s. mostly about 5/ to 7/6. House with 4 bedrooms to rent on lease. Also Branch Surgery valued at £800. Premium £6,000 or near offer, or one half share would be sold.

15 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village. Cash Receipts last 12 months £1,240. Panel over 500. Small expenses. Detached house (5 bedrooms) with electric light main water, etc. garage and garden for sale. Premium £2,100.

16 EAST ANGLIA—PARTNERSHIP in old-established country practice about £3,700 p.a. Easy distance of the coast. Panel over 2,000. House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale. Freehold. Premium two-fifths share two years purchase. Partner must be married aged 35-40. Preliminary Assistantship.

17 LONDON, NW—Increasing PRACTICE of £725 p.a. in growing district 30 minutes from Piccadilly. Panel about 530. No midwifery or night work. Semi-detached double fronted freehold corner residence (4 bedrooms) garage and garden for sale. Scope. Premium £1,450.

18 SCOTLAND—PRACTICE averaging over £1,300 p.a. in Edinburgh. Panel over 900. Good house for sale.

19 LANCs—Rapidly increasing mixed class PRACTICE of £3,800 p.a. in manufacturing town. Panel about 2,670. Two houses to be purchased or rented at first. Alternatively a one half share would be sold at two years purchase.

20 S COAST—Good middle-class non-dispensing PRACTICE about £1,100/£1,200 in popular watering place. Panel about 200. Fees 3/6 to 10/6. Very attractive detached residence (3 bedrooms etc.) with garage and garden. Price £3,000. Freehold. Scope. Premium £2,250.

21 EASTERN COUNTY—PARTNERSHIP (after short preliminary Assistantship) in very old-established Practice in market town in hands of Medical Woman. Receipts £7,000. House available. Applicant must be Medical Man aged 30-35 and graduate of Cambridge or London preferred.

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Practices and Partnerships for Disposal (continued)

22 E ANGLIA—Partnership in Country PRACTICE in agricultural district with good appointments and substantial panel. Visits 3/6 to 10/6. Charming old country house (6 bedrooms and dressing room) garage and 3½ acres of ground for sale. Premium for share of about £1 700 p.a., two years purchase.

23 LONDON S.W.—Well-established mixed PRACTICE of £1,725, including about £130 from appointments and a panel between 1 600/1 650. Rent of flat £105 p.a. and surgery £91 p.a. inclusive. Premium £4,500 to include drugs etc. etc.

24 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2,500 p.a. Panel 1 790. House with 4 bedrooms and separate surgery accommodation garage and garden to rent at £55 p.a. Scope. Premium one-third share two years purchase.

25 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London. Panel 900. Well built house (5 bedrooms etc.) available for sale. One third or two-fifths share at two years purchase.

26 HOME COUNTIES—Old-established good-class easily run PRACTICE in a beautifully situated country district. Cash receipts average over £1,570 p.a. Panel just over 500. Visits 3/6 to £1 1s. medicine extra. Nice house (6 bedrooms) with main electric light gas and water 2 garages and ½ acre of garden for sale. Premium 2 years purchase. Good Hospital in district.

27 S OF ENGLAND—Well established Practice averaging nearly £1,200 p.a. in a seaside resort. Panel over 700. Visits 3/6 to 10/6 mostly 5/-. Very little midwifery. Good corner house (5 bedrooms) with central heating garage and small garden for sale. Well-equipped Cottage Hospital. Good scope. Premium 2 years purchase.

28 LONDON, W 2—Practice averaging over £800 p.a. including panel 165. Consultations 5/- upwards. Private residence to rent at £120 p.a. and surgery premises at £60 p.a. Scope for increase. Premium two years purchase.

29 LONDON S.W.—Partnership in well-established working-class Practice nearly £3 150 p.a. in Favourite Suburban District. Panel 3 000. One half share would be sold at two years purchase.

30 LONDON, W—Practice of about £700 p.a. in residential district. Panel 500. Large corner house (7 bedrooms) with separate surgery entrance and good garden. Price of lease £1 350. Scope. Premium £1,250.

31 MIDLANDS—Partnership in old-established increasing Practice in pleasantly situated Country Town. Good appointments and panel. Visits 3/6 to £1 11s. 6d. medicine extra. Suitable house obtainable. Incoming partner must be good Surgeon—English or Scottish—aged 30-35. Small well-equipped Hospital. Share worth £1,250 p.a. at first at two years purchase.

32 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town. Receipts average £750 p.a. including P.M.S. worth £125 p.a. and panel about 750. Pleasantly situated house (5 bedrooms attics etc.) on main road. Price (freehold) £3,200. Ample scope. Premium one and three-quarter years purchase.

33 E ANGLIA—Partnership in old-established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town. Panel 1 850. Good society and sport. Scope. One-third share at first. Premium two years purchase.

34 N DEVON—Old-established Practice averaging over £1 050 p.a. in small Watery Place. Panel about 400.

Well built semi-detached house (5 bedrooms etc.), garden, for sale. Beautiful surrounding country. All kinds of sport. Scope. Premium two years purchase.

35 TASMANIA—Practice doing £1,500 a year, including good appointments. Fees range from 10/6 to £1 1s. House with 2 bedrooms etc. and garden for sale. Purchaser should be able to do major surgery. Premium £900.

36 ESSEX—Old-established Practice in outlying Suburban District. Receipts average £2,125 p.a., including appointments worth about £260 p.a. and a panel of 1 784. Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance. Garage and fair-size garden. Rent £120 on lease. Premium two and a quarter years purchase. Purchaser must be English Scottish or Irish.

37 LONDON, N—Well-established Practice averaging £450 p.a. in pleasant growing District. Panel about 600. Well situated house on main road to rent at about £65 p.a. Good scope—building going on. Premium £600 or offer to include surgery fittings and drugs.

38 SURREY—Increasing middle and working-class PRACTICE in thickly populated Suburban District. Receipts 1936 £1 720. Panel 660. Small house. Rent £78 p.a. (branch £55 p.a.) Ample scope. Premium £2 600.

39 SOUTH SUFFOLK—Partnership in sound old-established Practice over £6 000 p.a. in most desirable Country Town. Good appointments and panel over 3,000. Not much midwifery. Choice of suitable houses. One sixth share at first at two years purchase.

40 LONDON, N—Medical Woman's Practice in populous district. Receipts average £560 p.a. including panel 470. House (4 bedrooms) to rent at £100 p.a. Premium £850.

41 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3 300 p.a. in Market Town. No panel. Fees 5/- to £1 1s. Suitable house obtainable. Premium one half share two years purchase.

42 CO DURHAM—Well-established Practice about £1,100 p.a. in Residential Colliery District within easy distance of Newcastle. Appointments worth £85 p.a. and panel 840. Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent. Premium one and a half years' purchase.

43 N WALES WATERING PLACE—Good-class non-panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden. Scope for panel work if desired. Premium one year's purchase.

44 HOME COUNTIES—Old-established Practice of £500 p.a. in first rate town 20 miles from London. Panel over 500. Visits 5s. No midwifery. Modern nine roomed house with garage and attractive garden—about quarter of an acre. Premium freehold house and Practice £2,000.

45 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3,500 p.a. in an important town. Appointments £250. Suitable house available to rent. A one third share would be sold at two years purchase to a suitable man preferably one holding the M.D. or M.R.C.P.

46 LONDON, S.E.—Old-established Practice of about £1 000 p.a. in outlying residential district. Panel 100. Detached house (4 bedrooms etc.) for sale. Premium two years purchase.

47 LONDON, N—Old-established Practice in suburban district. Cash receipts 1936 (10 months) £1 450. Panel 1 240 increasing. Fees 2/6 upwards. Suitable house (9 rooms) to rent at £160 p.a. Premium £3 400.

Purchasers for cash are available for Practices with Incomes of £1,250 to £2 000 p.a. Purchasers can raise additional capital for the purchase of approved practices or shares. Particulars will be forwarded on application.

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Accountancy and legal services furnished by the Agency where desired at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 **SOUTH WESTERN AREA**—Old-established PRACTICE held by vendor many years, averaging £1 735 p.a. with panel of 1940. About £130 p.a. is derived from eye work. Good private house with ample accommodation can be rented or bought. Rent of branch surgery £80 p.a. part sublet at 27/6 per week. Premium £3 500.
- 2 **HOMER COUNTIES**—PARTNERSHIP—A SEVEN SIXTEENTHS SHARE with succession to the whole eventually is offered in sound old-established Practice in growing district within each reach of London. Gross cash receipts for immediate past 12 months approximately £2,700. Panel of 2,500. Moderate expenses and appointments worth over £200 p.a. Detached house on main road containing 4 bedrooms, etc., with garden. Rent on lease £80 p.a.
- 3 **SUSSEX**—ATTRACTIVE DISTRICT NEAR SEA—PARTNERSHIP—A ONE FOURTH SHARE is offered (after preliminary assistantship of 6 to 12 months) in old-established Practice having good scope. Gross cash receipts for last 12 months approximately £3,275. Panel of about 1,300. Appointments worth over £300. Choice of houses on rental for ingoing partner. Premium 2 years purchase.
- 4 **SURREY**—RAPIDLY DEVELOPING AREA—Recently established PRACTICE producing for last 12 months £720 including Panel of 680. Suitable house can be purchased. Moderate premium. Ill-health reason for sale.
- 5 **CO DURHAM**—Mixed-class PRACTICE producing about £987 p.a., including Panel of 1 350 and club bringing in about £5 per week. Suitable house available.
- 6 **ESSEX**—FAVOURITE COAST TOWN—PARTNERSHIP—A SHARE producing about £900 to £1,000 p.a. is offered in sound mixed-class Practice after preliminary assistantship of about 12 months. Salary during preliminary period £450 p.a. with free unfurnished house.
- 7 **NORTH LONDON**—Sound mixed class PRACTICE. Established over 40 years, producing last 12 months nearly £2,900. Substantial panel. Nice house in good repair. Rent £104 p.a.
- 8 **LONDON S W 2 DISTRICT**—Well established mixed class PRACTICE. Gross cash receipts for last 12 months approximately £800 including panel of 1,200. Fees from 2/6. Suitable house stated to be in good repair. Premium £1 600.
- 9 **LONDON SOUTH EAST**—Old-established middle and workman class PRACTICE. Gross cash receipts for last 12 months about £1 320. Panel of approximately 900 and P.M.S. worth £25 p.a. House contains 2 reception, 4 bedrooms, small garden. Can be rented on lease at £100 p.a. Premium £2,250.
- 10 **OUTLYING SOUTHERN DISTRICT**—Mixed class PRACTICE steadily increasing and situated in rapidly developing neighbourhood. Gross cash receipts for last 12 months approximately £1,200. Panel of about 1 200. Fees from 2/6. Well situated house with 2 reception 4 bedrooms, good garden. Can be leased. Premium 1½ years purchase or near offer.
- 11 **NORTH LONDON**—Old-established PRACTICE producing about £700 p.a. including panel of nearly 600 patients. Suitable house, ample accommodation and good garden, garage to rent at £100 p.a. Premium £1 200.
- 12 **DEATH VACANCY**—SOUTH COAST TOWN—PRACTICE producing about £250 p.a. Five years ago it was doing £1,000 p.a., but has decreased owing to ill health. Modernised house with ample accommodation. Price for freehold and practice £3 150.
- 13 **WEST OF ENGLAND**—Seaside resort combined with lovely country—good middle and better working-class PRACTICE, established over 50 years. Gross cash receipts average £1,670 approximately. About £650 is derived from panel and P.M.S. Fees 3/6 to 2/11. Well-built house with 3 sitting rooms and 6 bedrooms, good garden, tennis lawn and garage. Can be rented on lease.
- 14 **LONDON WESTERN AREA**—Mixed class PRACTICE in populous district. Gross cash receipts for last 12 months about £700 but capable of increase. Panel of 500. Well situated house with ample accommodation, will be put into thorough repair. Good garden. Price for Practice and house £2 500. £500 down.
- 15 **WELSH BORDERS**—Unopposed chiefly agricultural PRACTICE in beautiful district. Average gross cash receipts £913 p.a. (last year £998). Panel produces about £370 p.a. and appointments worth about £132 p.a. Very low expenses. Suitable house in own grounds with tennis court, etc., containing 2 reception, 6 bedrooms, etc. Freehold for sale £1,200. £700 on mortgage. Premium £1 500.
- 16 **WEST COAST OF SCOTLAND**—Old-established mixed-class non-dispensing PRACTICE held by vendor many years. Gross cash receipts average about £1,000 p.a. Panel of 1,213. Appointments worth about £30 p.a. Fees 3/6 to 15/- . Purchaser can choose his own house. Good golf and other sports. Premium 14 years purchase.
- 17 **CUMBERLAND**—Old-established unopposed PRACTICE held by vendor who is retiring for 30 years. Gross cash receipts average about £800 p.a., including panel worth over £250 p.a. and appointments worth nearly £80 p.a. Suitable 8-roomed house with bathroom surgery dispensary, etc., garden, garage. Rent £30 p.a. Shooting, fishing, golf, etc. Premium 14 years' purchase.
- 18 **SOUTHERN RHODESIA**—Hospital Town on Railway. Beautiful climate and country. Good-class prescribing PRACTICE, easily run. Visits 7/6 to 10/6. Midwifery £10 10s. 0d. Average income for past 5 years £1,900 p.a. Well appointed house with tennis court, garage, surgery, etc., can be rented or bought. Good operating surgeon will greatly increase practice. Excellent schools. Sport of all kinds, big game shooting, fishing, etc. Income tax 6d in the £. Premium £2,000 to include drugs, surgery fittings and furniture.
- 19 **LONDON NORTH**—Old-established chiefly working-class PRACTICE. Receipts for last 12 months approximately £1 600 with panel of about 2,700. Suitable accommodation can be rented at £92 p.a.
- 20 **SOMERSET**—MARKET TOWN—Established over 40 years, averaging about £1,000 p.a. Panel of nearly 900 and appointments worth over £100. Non-dispensing with fees from 5/ to 2/11. Midwifery encouraged. Good house available freehold containing 3 reception, 6 rooms, with separate surgery. 1½ acres, of productive garden and 2½ for two cars. Electric light and water. Price £1 500. Premium 2½ years purchase.
- 21 **EASTERN COUNTIES**—COUNTRY PARTNERSHIP—ONE THIRD SHARE available in mixed-class Practice over £2,500 p.a. including panel nearly 1 800. House contains 2 reception 4 bedrooms, large and attractive garden and good garage. Rent £55 p.a. Sport of all kinds. Free 2 years purchase or near offer.
- 22 **SUSSEX COAST TOWN**—PRACTICE established 45 years for drawing to retirement of Vendor. Present receipts about £600. There is a scope for increase as receipts have fallen owing to Vendor's ill health. Panel about 650. Large house can be rented at £150 or purchaser can probably choose own residence.
- 23 **WESTERN DISTRICT OF LONDON**—Old-established good mixed class PRACTICE producing between £1 600 and £1 700 p.a. including panel 1 500. Roomy corner house in excellent position with garage. Freehold for sale or rented on lease.
- 24 **LONDON SOUTH EAST**—Old-established PRACTICE producing about £1 830 p.a. including selected panel of 500. Fees from 3/6. Suitable house available with 2 reception 5 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 25 **SOUTH CORNWALL**—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1,100 p.a. including selected panel of about 3 Fees from 5/11. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.
- 26 **NORTH WALES**—FAVOURITE SEASIDE RESORT—A ONE THIRD SHARE (with increase later) is offered after short preliminary assistantship in old-established better-class practice producing about £3,400 p.a. Panel of 1 100. Suitable flat available for ingoing partner who should have experienced. Premium 2 years purchase.
- 27 **LONDON NORTH WEST**—PARTNERSHIP—A ONE THIRD SHARE is for disposal in steadily increasing middle-class practice producing 1 year £2,400. Small panel. Fees 7/6 to 2/11. Choice of houses. Premium £2,000.
- 28 **DEATH VACANCY**—FAVOURITE SOUTH WEST COAST TOWN, PARTNERSHIP WITH SURGICAL SCOPE—A one-third or one-half share is for disposal (owing to recent death of senior of two partners) good-class non-panel Practice stated to average £3 600 p.a. for past 5 years. Fees 7/6 upwards. Suitable house, with ample accommodation can be rented or purchased. Premium for share 2 years purchase. Ingoing partner must be experienced, over 35 and able to undertake major surgery.
- 29 **LONDON**—WESTERN DISTRICT—Well-established very sound mixed class PRACTICE. Panel of 1 630. P.M.S. 200. Receipts approximately £1 700 p.a. Including large proportion ready cash. Excellent professional accommodation. Suitable bachelor or family of not more than three.
- 30 **RIVERSIDE TOWN**—Well-established middle-class PRACTICE producing for last 12 months approximately £940. Selected panel of 400 to 450 patients. Visits from 5/11. Very nice house in good repair, with ample accommodation. Garden. Garage. Price for freehold £2,000. Premium £1 250.
- 31 **MIDLANDS PARTNERSHIP**—ONE HALF SHARE in mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1,369 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 2 years purchase.
- 32 **LONDON**—SOUTH EAST—Well established middle class increasing PRACTICE producing for last 12 months £1,270. Panel of 900. Fees 2/ to 7/6. Scope for development as building is in progress. Good house in excellent condition, containing 2 reception consulting, 4 to 6 bedrooms dressing room, etc. Price £500. Premium £2,400.
- 33 **MIDLANDS**—PARTNERSHIP—A SHARE representing approximately £1,300 p.a., with increase later is offered in exceptionally sound good mixed class practice averaging about £9,000 p.a. with substantial panel and very good appointments. Excellent scope for major surgery. Suitable house available. Premium 2 years purchase.
- 34 **YORKSHIRE**—GOOD TOWN WITHIN EASY REACH OF COAST—A ONE FOURTH SHARE, with increase later is offered in very old-established middle-class practice producing for last 12 months nearly £5,000. Substantial panel. Fees from 3/6. Suitable house with 2 reception 4 bedrooms, etc. Garage. Stabling and garden. Electric light gas. Can be rented at £65 p.a. or freehold purchased. Premium 2 years purchase.
- 35 **MIDLANDS**—COUNTY TOWN PARTNERSHIP—A ONE-QUARTER SHARE (with increase later) is for disposal in mixed-class practice averaging over £2,500 p.a., including panel of 2,800. Fees from 3/6. Suitable house can be obtained. Preliminary assistantship if wished.
- 36 **SOUTH COAST**—PARTNERSHIP—ONE THIRD SHARE is offered in old-established non-dispensing practice in favourite town producing 1 year £3 461. Selected panel of 400. Fees 3/6 to 2/11. Suitable freehold house for sale. Ingoing partner must be well qualified and accustomed to house for sale. Ingoing partner must be well qualified and accustomed to better-class work. There are two hospitals and one partner is on the staff.

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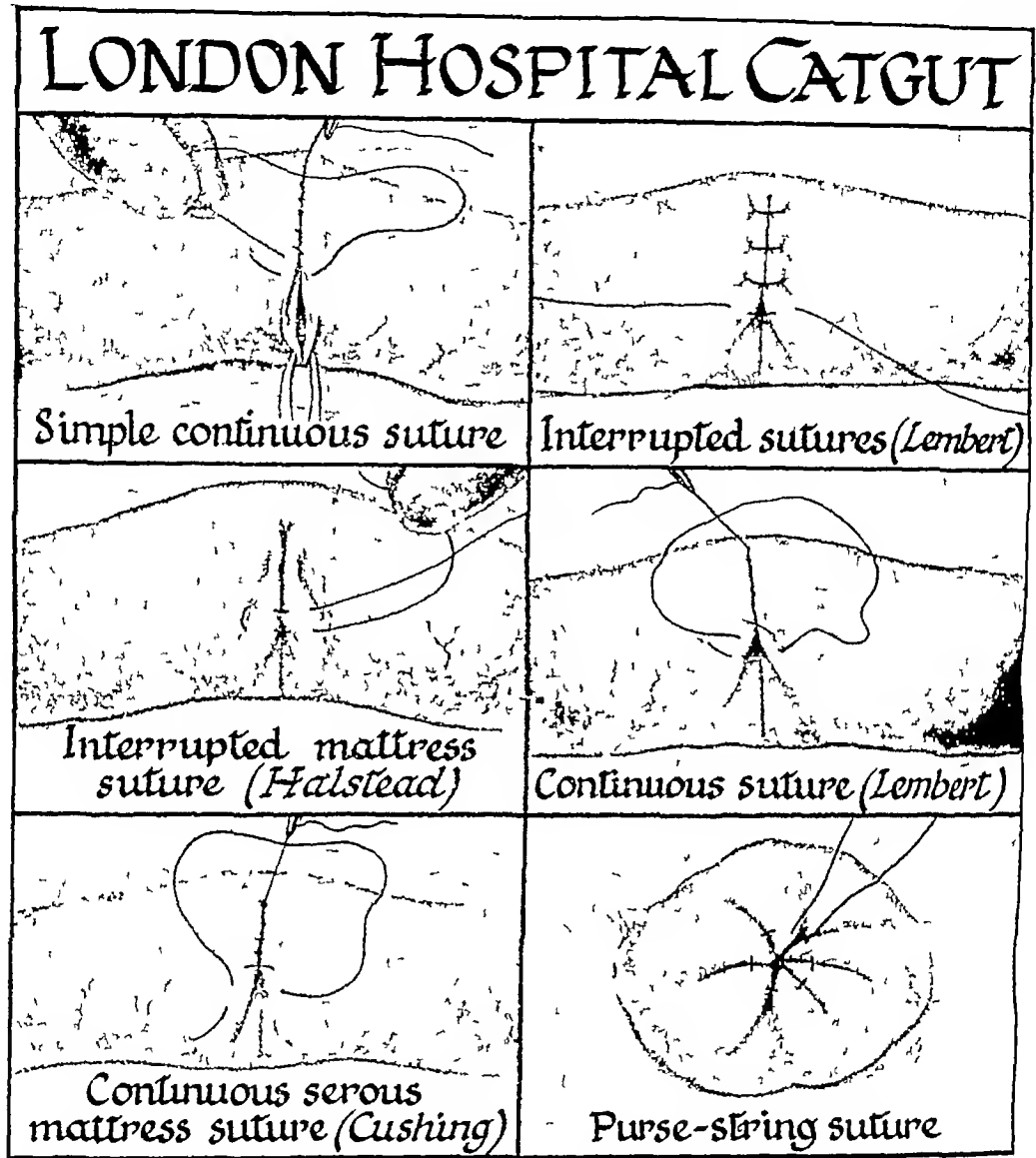


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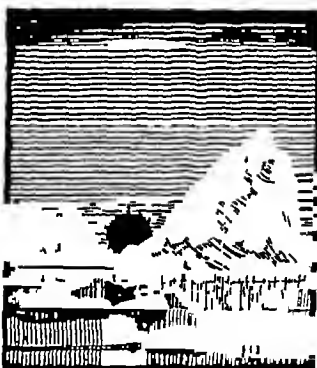
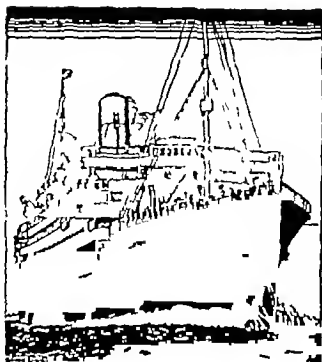
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WITH SUPPLEMENT AND EPITOME

LONDON
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TAVISTOCK SQUARE

BRITISH MEDICAL ASSOCIATION 105TH ANNUAL MEETING, BELFAST

1937



The Council believes that many Members and their friends will desire to attend the meeting in Belfast, but is informed that the hotel and lodging accommodation is likely to be taxed to the utmost

To supplement the limited accommodation in a unique and attractive manner, however, arrangements have been made, with the approval of the Council, for provision of hotel accommodation on board

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will cruise in the Norwegian Fjords, visiting Trondhjem, Merok, Hellesylt, Oie and other places of interest and beauty. The Liner will return to Southampton on the 3rd August.

It has now been arranged to effect the booking of Members or their friends for the cruise only commencing July 24th, from Belfast, at 2/3rds of the schedule rate. May we point out that the cruise is available for friends of medical men even if the latter do not participate in the cruise.

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Passages may be booked to Belfast only or for the complete cruise which continues after the Meeting to the Norwegian Fjords. Hotel accommodation on board can be reserved whilst the liner is in Belfast Lough. These arrangements have been made by Messrs. Pickfords Travel Service in conjunction with Royal Mail Lines Ltd and Members of the Association who propose to attend the Belfast Meeting are asked to make an early application.

JULY 17TH

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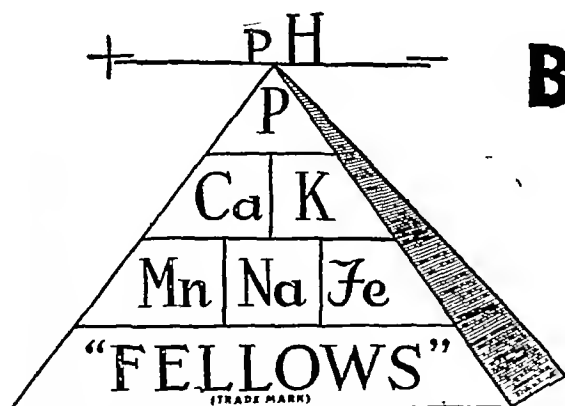
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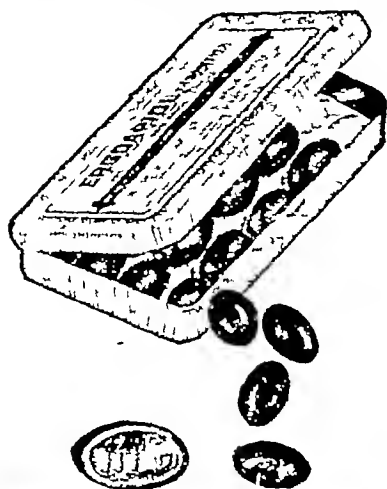
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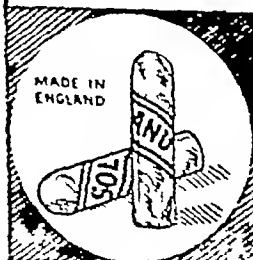
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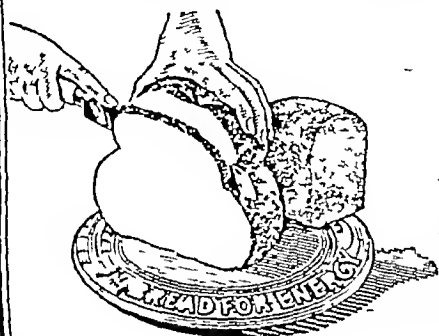
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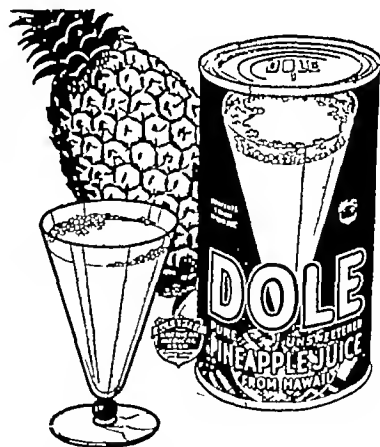
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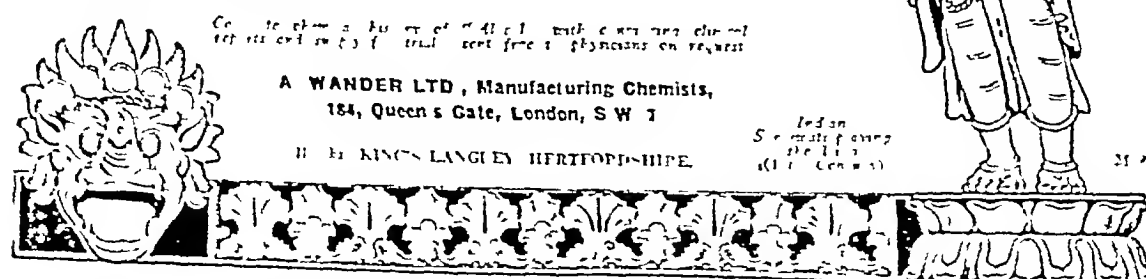
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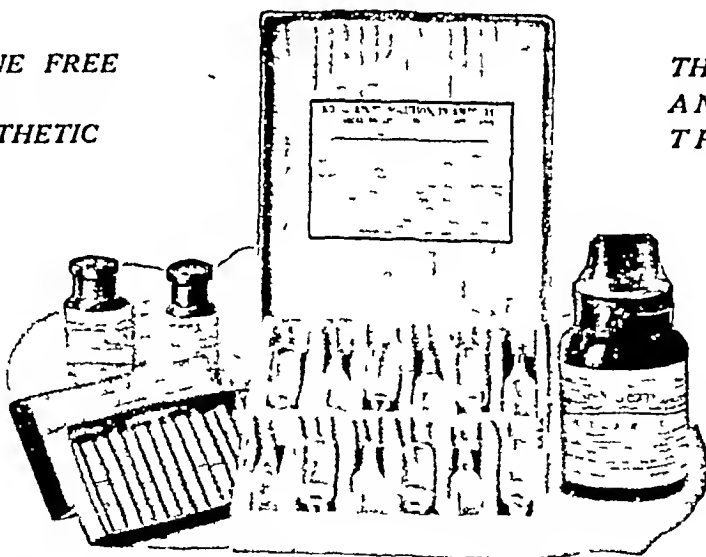
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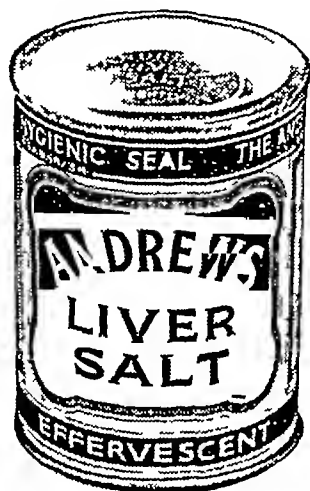
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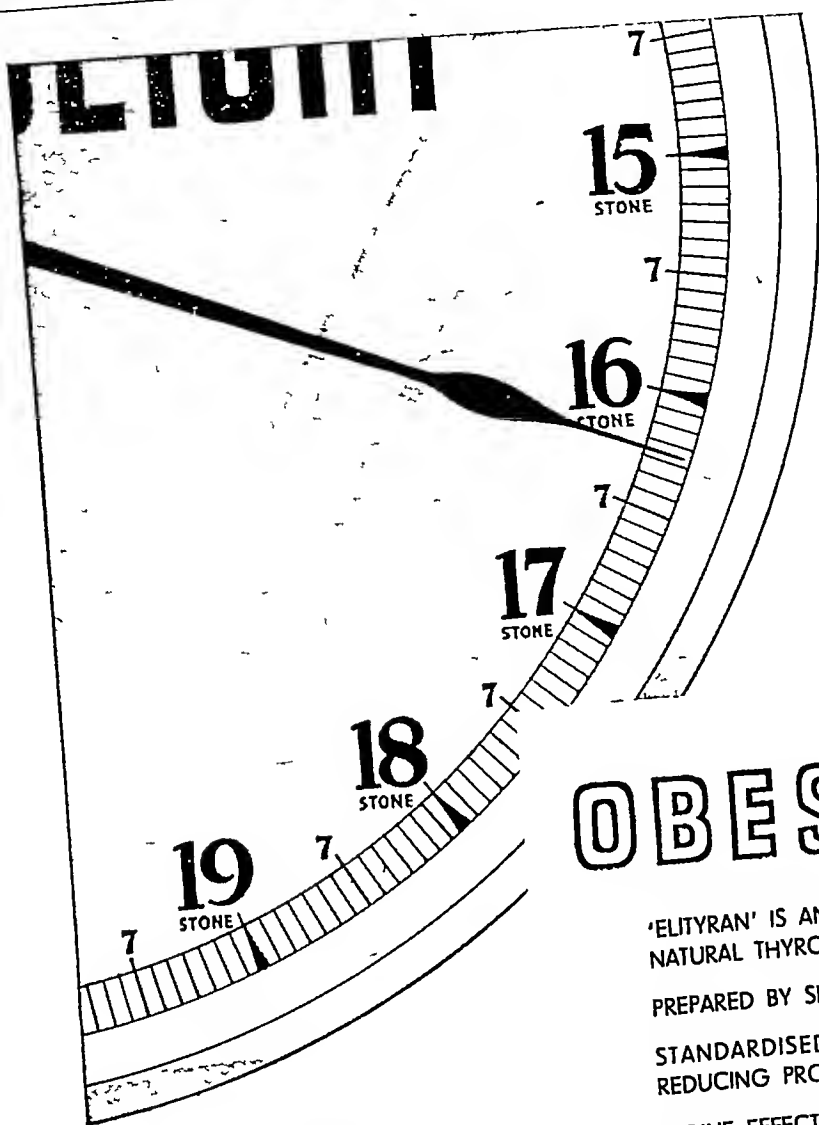


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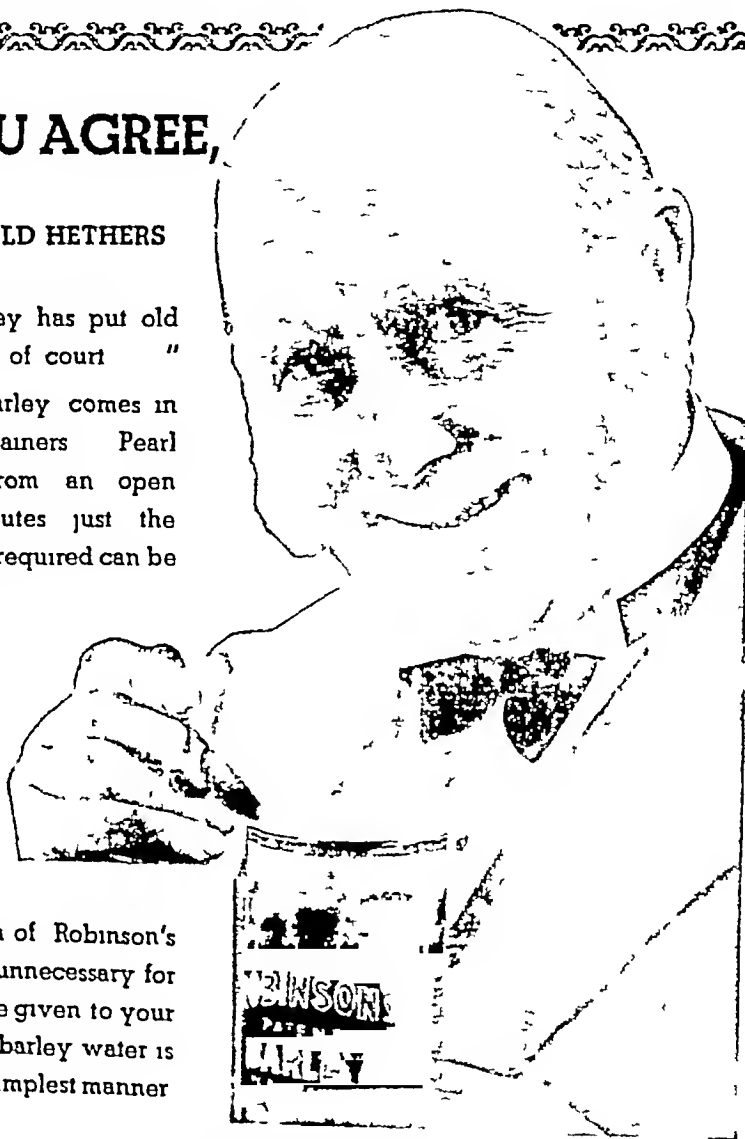
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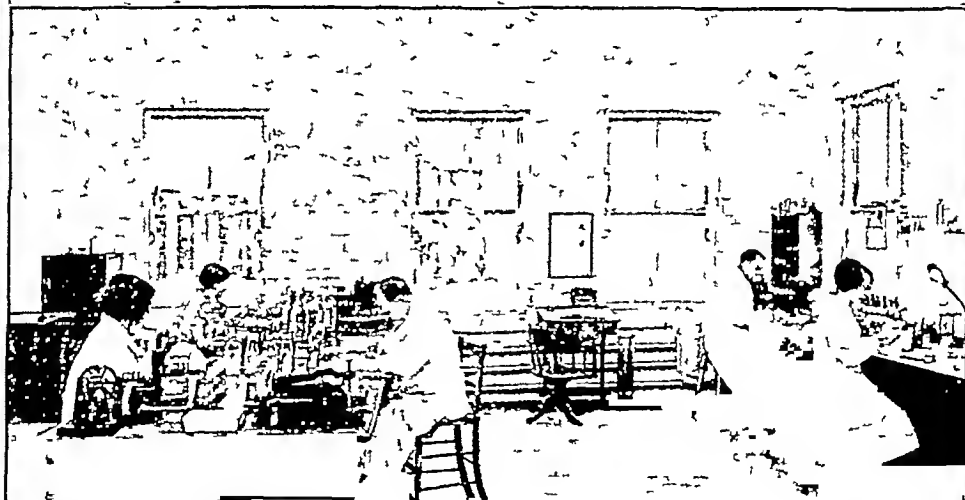
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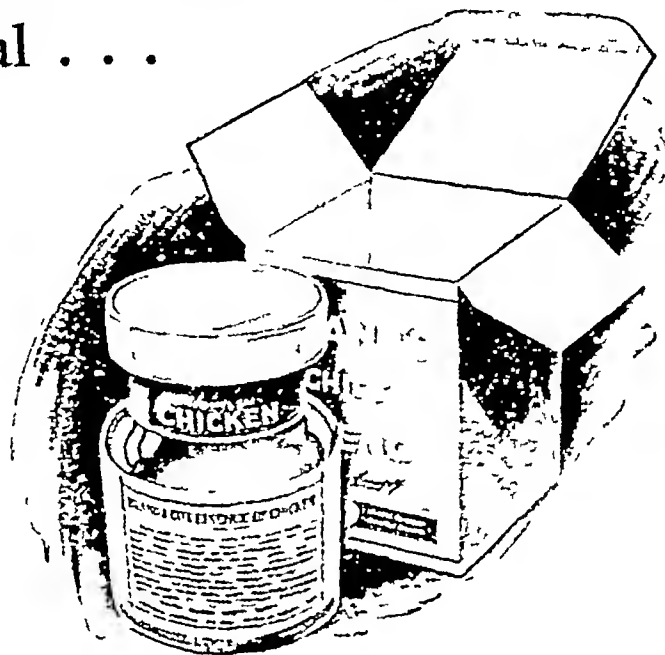
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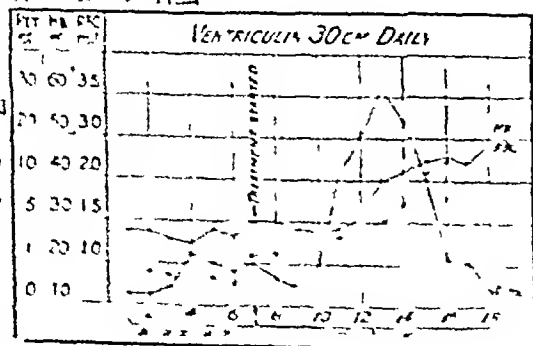
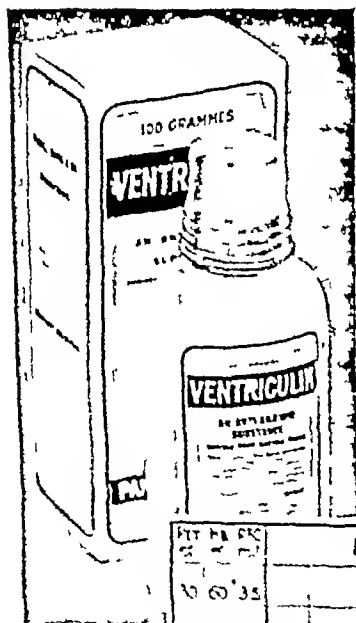
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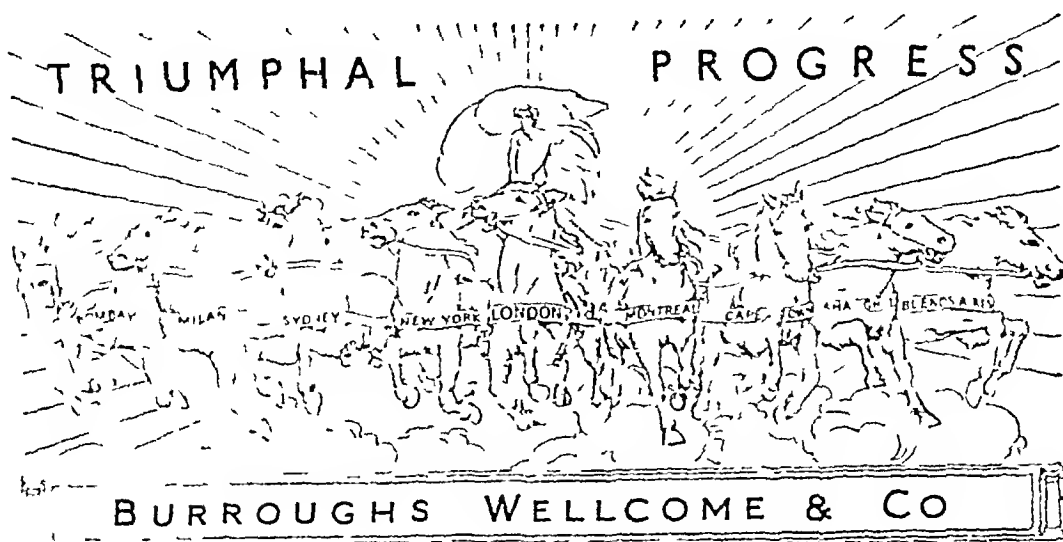
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VALUE OF A SPECIFIC SERUM IN THE TREATMENT OF TYPHOID FEVER

A REPORT ON SEVENTY-THREE CASES

BY

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In the past typhoid fever therapy has been largely confined to diet, hydrotherapy, and the treatment of symptoms, and few if any, of the infectious fevers due to a known organism occurring in this country have been less amenable to specific measures. Anti typhoid sera have been available for a considerable time, but these have not been subjected to potency tests by animal experiment, nor have they been standardized by titration, except for the H-antibody which is of no value since it has neither anti bacterial nor antitoxic effect. It is therefore not surprising that the clinical results following the use of such sera have been disappointing. Attempts at specific therapy with typhoid vaccine have also not given satisfaction and it is doubtful if good results if they really do occur with this method are actually due to a specific action. In any case treatment with vaccines has a limited application and in a severe attack of the disease, where the need is most urgent their use is dangerous.

Within the last year or two however following upon the work of Felix a serum prepared at the Lister Institute has been available the potency of which has been demonstrated in animal experiment in which it has been shown capable of protecting against the effects of injections of live *B typhosus* and also against the toxic action of massive doses of dead organisms (Felix and Pitt, 1934). Felix believes that virulent (Vi) strains of the organism are characterized by a special Vi antigen which renders the O antigen resistant to the O antibody, to be effective against a virulent strain the immune serum must therefore contain Vi antibody. On the other hand as Felix and Pitt (1934) have shown in animal experiments, the Vi antibody is mainly bactericidal and has no appreciable antitoxic action. From this it is clear that therapeutic anti typhoid serum should contain an adequate amount of O or antitoxic immune bodies in order to avoid an adverse effect produced by toxins liberated as a result of the bactericidal action of the Vi antibody. In addition to Vi antibody the Lister Institute serum contains O antibody which is an indicator of the potency of the serum in antitoxic activity. Estimations of the Vi titre in the sera of untreated patients show this to be low until convalescence (Felix, Krikorian, and Reider 1935). The necessity for a balance between bactericidal and antitoxic activities will be referred to again in discussing some

favourable serum effects which appeared to be delayed. It is possible that further experience will show the desirability of using the Vi and O antibodies separately, the dosage of each being controlled by serial agglutination tests.

At the present time the results in three series of cases of typhoid fever treated with Lister Institute serum have been published. Felix (1935) reported forty-three cases together with seventeen controls who received injections of normal horse serum. At first the immune and the normal serum were given to alternate patients, the medical attendants being unaware as to which was the specific preparation. Before long however, they became so convinced that a beneficial action followed the use of one of the sera (which was in fact the specific) that they refused to continue with the other, and no further controls were therefore obtained. The anti-typhoid serum used was unconcentrated and had maximum agglutination titres for Vi and O antibodies of 400 and 40,000 respectively, it was given chiefly by the intramuscular route, the usual dose being 50 c cm, but this was repeated daily in severe cases to a total of three doses. Of the forty-three cases favourable effects were noted on the toxæmia in twenty-four and on the temperature in twenty-three. Twelve patients were classed as extremely severe cases, and of these five died. C J McSweeney (1935) recorded the results in eight patients treated at Dublin, and Robertson and Yu (1936) in fifty-six patients treated in China, the serum used was either that obtained from the Lister Institute or, in the Chinese cases, was locally prepared by a similar method.

All these observers agreed in concluding that the serum was held to have a favourable effect on both the toxæmia and the temperature but assessment of its value on the basis of mortality rate was impossible since there were no controls or these were inadequate. Similarly the mortality in treated series as compared with that in other outbreaks where no serum has been used is of no value as a criterion of its efficiency because of the well-known variation in the severity of the disease from one outbreak to another. To control the results adequately it would be necessary to observe the effects in a large series of cases when serum was strictly reserved for alternate patients, all of whom should preferably be at about the

TABLE I
(IM=Intramuscularly IV=Intravenously (d)=Delayed)

Case No	Age & Sex	Serum			Effect on toxæmia	Effect on temperature	Severity	Remarks		Case No	Age & Sex	Serum			Effect on toxæmia	Effect on temperature	Severity	Remarks
		Day given	Dose (c cm)	Route								Day given	Dose (c cm)	Route				
1	2½ M	16th 17th	7 7	IM IM	— +	— + (d)	Severe			34	16 F	12th 18th	13 10	IM IM	— —	— —	Very severe	Multiple abscesses. Severe respiratory symptoms
2	4 F	13th	13	IM	+	—	Severe			36	16 M	16th	22	IM	+	—	Moderate	
3	5 M	23rd	11	IM	+	—	Moderate			37	16 F	14th 15th 21st	13 7 7	IM IM IM	++ ++	++ ++	Severe	
4	5 M	13th	10	IM	+	+	Severe			38	16 F	33rd 35th	33 20	IV IM	+	—	Very severe	
5	5 M	34th 40th	13 11	IM IM	— +	— +	Very severe			39	17 F	22nd 25th	33 33	IM IM	+	—	Mild	
6	6 M	12th	10	IM	+	—	Very severe			40	18 M	21st 22nd 28th	13 7 7	IM IM IM	++ ++	— +	Severe	
7	7 F	35th 37th 40th	13 17 20	IM IM IM	++ ++	++ ++	Very severe	Femoral thrombosis and pulmonary embolus occurred during convalescence died		41	18 F	34th 35th 36th 41st	13 33 13 33	IM IM IM IM	— — — —	— — — —	Very severe	Septic complications anaemia blood transfusion. Died
8	7 M	9th 17th 18th	10 20 20	IM IV IV	— +	— +	Very severe			42	18 F	11th	13	IM	+	+	Very severe	
9	7 F	23rd 24th 26th	10 10 10	IV IV IV	++ ++	++ ++	Severe			43	19 F	26th 31st 32nd 33rd	33 33 33 33	IV IV IV IV	++ ++	++ ++	Very severe	Died
10	7 F	29th 30th	15 20	IM IM	— +	— + (d)	Mild	Serum given during relapse		44	19 M	18th	17	IM	+	—	Moderate	
11	8 F	17th	10	IM	—	—	Mild			45	21 M	11th 13th	13 17	IM IM	no toxæmia	++ (d)	Mild	
12	9 F	41st	12	IM	—	—	Moderate	Serum given in relapse		46	23 F	37th 38th	33 33	IM IM	+	+	Severe	Serum given during relapse
13	9 M	22nd	11	IM	+	+	Moderate			47	24 F	7th 10th 11th	33 33 33	IM IM IM	— — —	— — —	Moderate	
14	9 M	11th 13th 14th	11 13 13	IM IM IM	— +	— +	Severe			48	25 F	18th 22nd	33 33	IM IM	+	++ (d)	Severe	
15	9 M	19th 20th 27th	13 7 7	IM IM IM	— — —	— — —	Severe			49	26 F	16th 17th 18th	15 25 20	IM IV IV	++ ++	++ ++	Moderate	
16	9 M	13th	13	IM	+	+	Severe			50	26 F	33rd	16	IM	+	+	Moderate	
17	10 F	31st 32nd	13 10	IM IM	++ ++	++ ++	Moderate			51	27 F	20th 21st 22nd	20 20 17	IV IV IV	++ ++	++ ++	Very severe	
18	10 F	28th 34th	20 33	IM IM	— +	— +	Severe			52	27 F	39th 42nd	33 33	IM IM	— +	— +	Severe	
19	10 M	24th	11	IM	+	+	Very severe			53	29 F	27th 28th 33rd	33 33 33	IM IM IM	— — + (d)	— — + (d)	Severe	Intestinal hæmorrhage, blood transfusion
20	10 F	35th 36th 38th	13 13 13	IM IM IM	++ ++	++ ++	Very severe			54	31 F	18th 19th	20 20	IV IV	++ ++	— —	Very severe	
21	11 M	20th	11	IM	—	—	Very severe			55	31 F	35th	20	IV	+	—	Severe	
22	11 F	26th 27th 28th	30 33 13	IM IM IM	++ ++	++ ++	Very severe	Brachial neuritis in convalescence—? serum effect		56	32 F	10th	16	IM	+	+	Mild	
23	12 M	31st	15	IM	+	+	Very severe	Serum given during recrudescence		57	32 F	39th 40th 73rd	20 33 33	IM IM IM	++ ++	++ ++	Severe	Third dose of serum given during relapse
24	12 M	55th	13	IM	+	+	Very severe	Perforation on 31st day serum given during relapse		58	33 F	74th 75th 76th	26 33 33	IM IM IM	— — —	— — —	Very severe	
25	12 M	20th 38th 40th 42nd	16 13 13 13	IM IM IM IM	— ++ ++ ++	— ++ ++ ++	Very severe			59	33 F	21st	13	IM	+	+	Very severe	
26	13 F	7th	20	IM	+	+	Mild			60	34 F	39th 40th 41st 59th	13 33 10 10	IM IM IM IM	++ ++	++ ++	Severe	Intestinal hæmorrhage three blood transfusions given
27	14 F	11th 13th 14th	13 7 15	IM IM IM	++ ++	++ ++	Very severe			61	36 F	9th	13	IM	+	+	Severe	
28	14 M	11th	13	IM	—	—	Severe			62	37 F	2nd 3rd	33 33	IM IV	— —	— —	Severe	
29	14 M	30th 34th	13 15	IM IM	— +	— +	Severe			63	37 F	32nd 42nd	22 20	IM IV	+	—	Very severe	Anaphylactic shock after second transfusion
30	14 F	39th	20	IM	+	+	Severe			64	37 F	37th 45th	33 33	IM IM	— —	— —	Severe	
31	14 F	25th	20	IM	—	—	Very severe	Blood transfusion										
32	15 M	10th	13	IM	—	—	Very severe	Died										
33	15 F	29th	13	IM	+	+	Severe											
34	15 M	2nd 24th	20 20	IM IM	— +	— + (d)	Severe											

TABLE I—continued

Case No.	Age & Sex	Serum			Effect on toxæmia	Effect on temperature	Severity	Remarks
		Day given	Dose (c cm)	Route				
65	38 F	29th 30th	20 23	IM IV	+	+	Very severe	
66	44 F	45th 47th	33 33	IM IM	—	— +(d)	Very severe	
67	46 F	6th 7th 12th	15 20 26	IM IM IM	+	— — —	Moderate	
68	49 F	29th	33	IM	no toxæmia	—	Moderate	Intestinal hæmorrhage blood transfusion
69	49 F	39th 40th	33 13	IM IM	— +	— +	Severe	
70	67 F	47th	15	IM	no toxæmia	+(d)	Mild	Complicated by subacute cholecystitis
71	67 M	12th 15th	13 17	IM IM	— —	— —	Moderate	History of coronary occlusion one year previously
72	70 F	25th 26th	33 20	IM IM	— —	— —	Very severe	Complicated by uræmia and thrombophlebitis Died
73	74 M	34th 35th	33 33	IM IM	— —	— —	Very severe	Thrombophlebitis convulsion died

same stage of the disease. This ideal has been closely approached in investigations on anti pneumococcal serum, but up to the present it is far from being realized in clinical experiments with anti typhoid serum and because of the insidious onset of the fever it is hardly likely to be attained.

Results in the Present Investigation

A local outbreak in 1936, the result of a milk-borne infection which involved some 500 persons, provided an opportunity for the use of the new anti typhoid serum. Of approximately 500 patients admitted to the local borough isolation hospitals seventy three received serum, and with a few exceptions these were the more severe cases. Unfortunately the circumstances were not such as were likely to secure the optimum results: the majority received serum late in the course of the disease in a considerable proportion of the cases the dosage was too low (partly because of difficulty in obtaining adequate supplies) and in a few simultaneous blood transfusion or intravenous saline infusion made it difficult to assess the results. There were no controls the treatment being reserved largely for the more severe cases. The details are given in Table I. In all there were fifty-five classified as severe or very severe of which twenty seven were children aged 15 or under the total number of children was thirty four.

In assessing the results the stage at which treatment was started is important since in the later stages natural improvement is more likely and might be wrongly attributed to the remedy though this source of error will diminish in proportion to the severity of the case. During the first fourteen days of the illness twenty patients were treated (reckoning the onset from the day of taking to bed) thirteen during the third week and forty later than this. The dosage is given in Table I: it averaged 24 c cm in children and 47 c cm in adults in many instances it was probably too low as the amount for adult patients recommended by the Lister Institute is three doses of 5 c cm of the concentrated serum. A preliminary de-

sensitizing dose of 0.5 c cm was given intramuscularly. The titres of the batches of serum used estimated by agglutination were stated to be 1 in 600–700 against strain Watson and 1 in 60 000 against strain 0901, for Vi and O antibodies respectively.*

The results were considered in relation to effects on temperature and toxæmia separately, the latter was occasionally benefited apart from the temperature, though the reverse never occurred. Temperature, being an entirely objective observation, may be regarded as the more reliable criterion of effect, yet it is not in fact a simple matter to define exactly what is meant by a favourable effect. We have taken as an arbitrary standard the lowering of a previously high constant temperature within forty eight hours of the injection of serum the fall continuing for at least seven days, in many cases it reached normal and remained down permanently. Doubtful effects were classified as negative—for example, in the cases in which the temperature was falling just before the serum was given. When the result was favourable the fall in temperature was combined as a rule with an increase in the daily remission—that is the chart showed a curve similar to that observed during the phase of spontaneous defervescence in typhoid. Effects on toxæmia, the signs of which do not require definition were accepted only when well marked and if evident within forty-eight hours.

Of the seventy three cases there was a favourable action as defined above, on toxæmia in fifty-four patients (in thirty eight of these the effect being noted after the initial dose of serum), and on temperature in forty (in twenty eight after the first dose). When the cases are classified according to the period of the disease at which treatment was started the results were as follows: first fourteen days, favourable effects on toxæmia in eleven and on temperature in eight of twenty treated; third week, eleven and five respectively out of thirteen; later than the third week, thirty two and twenty seven respectively out of forty. Three patients showed no symptoms of toxæmia (Table II).

TABLE II—Serum Effects Classified According to the Period of Disease Treated

Period of disease treated	Number treated	Favourable effect on toxæmia	Favourable effect on temperature
First 14 days	20	11	8
Third week	13	11	5
Later than third week	40	32	27
Totals	73	54	40

In a further eight patients improvement was noted within two to seven days after treatment, and we have reason to think that the beneficial effects of serum may sometimes be delayed for this period. Seven of the serum-treated patients died, in two of these (Nos 38 and 41) there was sepsis, three (Nos 7, 72, and 73) had thrombophlebitis: two were over 70 (Nos 72 and 73) and three were moribund when treatment was started (Nos 38, 43, and 73). In No 32 the dosage was wholly inadequate. Case No 73, a man aged 74 was admitted to hospital on the thirty-fourth day of the disease and had been about until that time.

A few cases may be mentioned individually as being of special interest.

No 63 had a prolonged and severe illness with high temperature delusions, and retention of urine with cystitis. On

* The serum we understand now supplied by the Lister Institute is of about double this strength.

the thirty second day 22 ccm of serum were given intramuscularly but this was not followed by any definite effect. Ten days later after desensitization, 20 ccm of serum were given intravenously a severe anaphylactic reaction followed but immediately after this general improvement set in. It is possible that this favourable effect was non specific, a result of anaphylactic shock.

Case No 43 a girl of 19, when moribund, was given gum-saline and serum intravenously and intramuscularly to a total dosage of 132 ccm in a week. Delirium disappeared the patient became quiet and mentally clear, and the temperature fell. She was in an exhausted condition, however, and died six days later. Case No 62, in which serum was given very early and in adequate doses, was fairly severe, there was no immediate effect on temperature or toxæmia but seven days after the initial injection it began to fall and became more remittent, finally reaching normal on the nineteenth day of her illness.

Case No 22 a girl aged 11 was severely toxic, with abdominal distension vomiting, delirium and lethargy, showing all the features of the typical typhoid state and later there was coma with incontinence of urine the pulse was 140, being irregular and thready. On the twenty sixth day when her condition appeared desperate, 30 ccm of serum were given intramuscularly and further doses of 33 and 13 ccm respectively on the following two days. Within twenty four hours there was a marked general improvement, the patient was no longer comatose the delirium ceased, and the temperature fell by lysis, reaching normal on the thirty third day. Convalescence was uneventful with the exception of a brachial neuritis which is to be mentioned later. Case No 38 a girl, aged 16 was given 33 ccm of serum intravenously on the thirty third day and 20 ccm intramuscularly on the thirty fifth day, at this time toxæmia was severe and she was in a semi-conscious, delirious condition. After the injections the temperature remained high but the restlessness and delirium cleared for forty-eight hours, a blood transfusion the day before the first dose of serum was given had had no effect on these symptoms. Unfortunately soon after the beneficial effects were noted subcutaneous abscesses appeared and the patient died.

Serum Complications

A serum rash was observed in twenty-two of the seventy-three cases. Case No 64, a female aged 37, who had toxic goitre, had an attack of tachycardia—pulse 160—on the day following the first injection of 33 ccm intramuscularly, but this soon subsided, the second injection of 33 ccm eight days later caused no by-effects, and the patient's general condition took a turn for the better. The observation illustrates how, in the presence of toxic goitre, a reaction to serum may be excessive, just as it is to infection or trauma. Case No 22, a girl of 11, who had received a total of 76 ccm serum in three days, which is a large dose for a child developed a brachial neuritis affecting the fifth and sixth cervical roots. Owing to the patient's exhausted condition and the absence of all subjective symptoms the exact time of onset is uncertain, but it was first noticed about a fortnight after the serum was given. On stimulation electrically the reactions of degeneration were observed in the deltoid and inner head of the biceps. The condition is slowly improving but after four months there is still some weakness in the affected arm. Neurological complications of serum treatment are rare, they have been reviewed by I. M. Allen (1931) who described four types: neuritic radicular, polyneuritic, and cerebral. The radicular type, which is most common and usually affects the brachial plexus is almost indistinguishable from the toxic brachial neuritis which occasionally follows typhoid fever. There were no other signs of serum sickness, but these are not always observed in neurological serum complications. It is, however, im-

possible to decide whether the paralysis should be regarded as a serum reaction or as a toxic effect of the disease.

A severe anaphylactic reaction was seen once only (Case No 63). As already noted after the reaction an improvement in this patient's condition occurred. In two children (Cases Nos 6 and 14) a desensitizing dose of 0.5 ccm serum produced severe local and general reactions and further doses were withheld. Both of these children had been given serum a few days previously without reaction.

Conclusion and Summary

Previous reports on the therapeutic effect of Felix anti typhoid serum have all been favourable, and similarly the results of the present investigation on seventy three patients are thought to be encouraging. The serum is known to be potent in animals and while the result of the injection of *B. typhosus* into a laboratory animal is a very different matter from the naturally occurring disease in man, the demonstration of such potency in a serum would appear desirable prior to its clinical use. Some of the difficulties in assessing the value of serum in typhoid have been mentioned, and although the present and previous reports suggest that it is a remedy of definite promise, its exact worth is to be proved only by more extended use, and, where circumstances permit, with adequate controls. An adequate control could be provided by withholding all serum from alternate patients. There appears to be no need to give the controls normal horse serum, as there is already sufficient evidence that horse serum *per se* has no beneficial effect.

In a considerable proportion (73 per cent) of cases we noted improvement within forty eight hours of injection of the serum. In a further 10 per cent some benefit occurred after a few days interval, and in these it is possible that the action of the serum was delayed. Theoretically this might occur when the antitoxic lagged behind the bactericidal action, the first effect being predominantly a destruction of organisms with liberation of toxin in amounts too great to be dealt with immediately by the available antitoxin.

The mortality in the treated patients was 9.5 per cent, which may prove to be somewhat higher than in the others (the rate for the whole epidemic is not yet available), but as the former group was selected on the basis of greater severity no comparison is possible. Of thirty three patients treated during the first three weeks only one died, the dose of serum in this case (13 ccm) was inadequate.

For sporadic cases or small outbreaks, where the numbers do not admit of proper controls we believe the evidence so far available warrants the administration of serum at the earliest possible moment, and in full doses irrespective of the severity of the disease.

We have to acknowledge our thanks to the medical officers of health for Poole and Bournemouth and to the honorary physicians of the Royal Victoria and West Hanley Hospital who kindly allowed us to see patients under their direct care and to make use of their case notes.

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OBSERVATIONS ON BENZEDRINE

BY

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Benzedrine was first introduced into therapeutics by Prinzmetal and Bloomberg (1935) for the treatment of narcolepsy. They found it more efficacious than ephedrine in bringing about symptomatic relief in this condition, and their claim has subsequently been confirmed. When they began their work little was known of the effects of the drug on man, though some physiological investigations had already been made on animals (Alles, 1933, Prinzmetal, 1933). In the same year Peoples and Guttman made an independent study of its pharmacological actions at the Maudsley Hospital. Certain hitherto unrecorded psychological effects resulting from the administration of the drug to man were observed. In a preliminary report (Peoples and Guttman, 1936) on these findings it was suggested that benzedrine might have therapeutic applications other than the treatment of narcolepsy. Numerous people have since experimented with the drug and a few have already indicated their findings, some workers confining their investigations to its use in depression, and others dealing with its wider psychophysiological actions (Guttman 1936, Myerson 1936, 1937, Myerson and Rivo 1936, Nathanson 1937, Solomon and Prinzmetal 1937) one paper has specially stressed possible dangers and contraindications (Anderson and Scott 1936).

It is the purpose of this paper to report further personal observations of an experimental and therapeutic nature which have been collected since the preliminary communication on this subject (Peoples and Guttman, 1936). Benzedrine has now been given to over 250 in-patients out-patients and normal subjects at this hospital, in a proportion of these only the subjective and objective results of administration have been noted, but in more than a hundred cases systematic experiments were carried out.

Benzedrine (β phenylisopropylamine) is an adrenaline-like drug with an action on the vegetative nervous system. It paralyses intestinal activity, raises the blood pressure and produces other vasomotor effects to be described in detail later. It is also used in the form of an inhalant to bring about constriction of the nasal mucous membrane. It interferes with sleep and may cause pronounced psychological changes. Blood sugar levels are not affected (Peoples and Guttman 1936) and work done at the Central Pathological Laboratory of the L.C.C. Mental Service under Dr. Golla indicates that it does not produce any significant alteration in the basal metabolic rate or impedance angle. An inhibiting action on the sphincters of the bladder and rectum and an increase in the number of circulating red cells have also been recorded after its administration (Myerson, 1937, Myerson and Rivo 1936, Nathanson 1937).

Our own investigations have been mostly confined to the action of benzedrine on the cardiovascular system and the psychological changes observed. Small doses were generally employed ranging from 10 to 30 mg., larger

amounts only being used under strict supervision for experimental purposes. It was given by the mouth in the form of tablets.

Blood Pressure and Other Cardiovascular Effects

The influence of small doses on the blood pressure is limited. Fluctuations of 10 to 30 mm., however, were sometimes observed. This degree of alteration falls within the limits of experimental error and normal physiological variation but it was attributed to benzedrine when it was repeatedly observed in the same patient under exactly similar experimental conditions. Furthermore, the degree to which the blood pressure altered with the standard dose seemed almost constant for any individual. As a general rule benzedrine was given only to those who showed no cardiovascular disease, but a few cases who had extrasystoles, apparently of a functional type, were included in our experiments. We witnessed none of the severer complications reported by Anderson and Scott, but the more vasolabile subjects sometimes complained of dizziness, shivering feelings, palpitations, tremor, or anorexia. These symptoms were more frequent during the first hour after taking the drug coinciding with the time taken for its full effect to develop. The speed of absorption seems to influence the occurrence of these reactions so that it is inadvisable to give the tablets on an empty stomach. Other autonomic disturbances rather than the actual rise in blood pressure appeared mainly responsible for these symptoms and sometimes they were precipitated or increased by physical effort and emotional upset.

Psychological Effects

Benzedrine produces a general psychological stimulation. Subjectively this is experienced as increased confidence, initiative and ease in making decisions sometimes combined with a feeling of restlessness. There is also a pronounced impulse to talk more than usual. The restlessness may be pleasant or unpleasant, depending on the degree to which it is accompanied by the somatic symptoms described above. In the absence of these a pleasant sensation is reported which often amounts to a real degree of euphoria. Objectively, it is the increased talkativeness and activity which most impress the outside observer. Thinking processes appear to be speeded up without impairing attention, concentration, or judgement and the features of total personality make up that seem to benefit most are retardation, indecision, mild depression, and hesitation. It has already been shown that in certain cases intelligence test scores are improved (Sargant and Blackburn 1936). Medical colleagues and others who have themselves taken benzedrine have found it of definite value in such tasks as lecturing or taking an examination. It also helps to remove mental fatigue brought on by excessive work or worry. Important interviews of various kinds have been tackled more confidently than usual under benzedrine especially those requiring quick thought and ability to talk convincingly and fluently.

When the dose is sufficient to cause physical or psychological changes disturbances of sleep are rarely absent. There is difficulty in getting to sleep and sometimes patients wake up during the night or too early in the morning. This sleeplessness is not always unpleasant. It is reported by some as being contentedly in bed in contrast with the distressing restlessness of the insomnia in many nervous illnesses. The effects of the drug often persist the following morning so that the subject gets up

feeling surprisingly fresh and active in spite of the comparative lack of sleep. No changes in the blood pressure have been found to remain the following day.

Normal Subjects—In different subjects there is a wide variation in the response to benzedrine. It has been found almost impossible to correlate exactly an individual's response to the drug with his personality make up. This can only accurately be determined by trial. However, as a general rule it may be said that in the doses used benzedrine tends to exaggerate some of the innate characteristics of the personality besides producing the effects described above. For instance, one can assume that some of Anderson and Scott's subjects who complained of "a funny feeling not quite amounting to pain" seven hours after taking benzedrine must be somewhat hypochondriacal as, indeed, was expressly stated in one of their case reports. We ourselves are diffident of giving the drug to people who have hypochondriacal tendencies. Mildly obsessional personalities may also be upset by it, but in this group there were some who responded extraordinarily well, especially hesitant individuals who show a tendency to obsessional doubt and difficulty in making up their minds about any small or unimportant matter. Persons with cyclothymic tendencies had by far the most constant and beneficial reaction from the drug, and it usually gave them a characteristic euphoria.

Depressive Illnesses—Mild depression accompanied by retardation is the most favourable of all psychological disorders for benzedrine therapy. It has been found that these patients may be carried over periods of temporary disability by regular medication. In several cases the possibility of benefit being due to suggestion was ruled out by the occasional substitution of "inert" tablets which never produced the same effects. Severe depressions and depressive stupor do not react to the drug in the same way, small doses have little effect and heroic doses appear to produce anxiety symptoms. Other workers, in personal communications to us, have reported 'dramatic' effects with 40-mg doses in severe depressions but it has been our experience that such improvement is transient and resists repeated medication. At the end of a depression, however, its use is more promising. It may enable a patient to start work or take the initial steps to social readjustment earlier than without it.

At the beginning of an endogenous depression it may also be of use by delaying for a time the onset of the more severe stages of the illness. For instance it enabled one patient who felt he was developing one of his recurrent depressive attacks to carry on important work for an extra week and to make business arrangements for the period of his approaching illness. By the next week, however the endogenous retardation was too severe to yield to the drug. It is interesting to note that Krapf (1936) observed a marked variability of the blood pressure at the beginning and end of endogenous depressions while during the main period of the illness the blood pressure is relatively stable. Thus the periods in which benzedrine is most efficient appear to coincide with times at which the blood pressure is most variable.

Anxiety States—Anxiety is common in many psychiatric syndromes and when the somatic symptoms of anxiety such as palpitation tremor etc., are prominent benzedrine is usually contraindicated as these symptoms are often exaggerated by the drug. A few patients however reported that they did not worry so much about anxiety symptoms when taking benzedrine and some cases clinically labelled as anxiety neurosis considerably improved. This finding is probably due to the beneficial

effect of benzedrine on symptoms of indecision or depression complicating the picture.

Schizophrenic Illness—Because of the variety of clinical manifestations met with in schizophrenia it is difficult to make any general statement as to the effect of the drug. Nevertheless certain patients may benefit—namely, those in whom there is a lack of initiative. These welcome the stimulation produced by benzedrine, and objective improvement in their activity also occurs. One of our patients, an artist who had given up drawing during his illness, started again when given benzedrine but he only drew on his benzedrine days and not on the control days. Another patient convalescing from a schizophrenic illness reported a similar relief from his persistent feeling of fatigue and resumed playing the piano. It was impossible however, to interrupt a schizophrenic stupor with the drug, and it definitely made some hallucinated and deluded patients worse. We found it particularly dangerous to give benzedrine to those in whom a superficial depression masked the underlying schizophrenic illness. It caused a severe exacerbation in the symptoms of one such patient, who would almost certainly have attempted suicide while under its influence had she not been subject to hospital supervision.

Narcolepsy—The claims of Prinzmetal and Bloomberg (1935) have been confirmed by our observation and those of others. One patient with idiopathic narcolepsy has taken 10 to 20 mg a day for over a year with constant relief from her symptoms, which for many years had resisted other forms of treatment. We observed a similar effect in a patient in whom the narcoleptic attack appeared symptomatic of cerebral arteriosclerosis, and the narcoleptic attacks in the post-encephalitic syndrome are also lessened by the drug.

Relation of Psychological Effects and Blood pressure Alterations

Experimental observations on individual cases have shown that the rise in blood pressure and the psychological phenomena observed do not necessarily coincide in any individual. Patients with little alteration in blood pressure may exhibit profound psychological stimulation and vice versa. This experimental finding in individual cases was borne out by recording the blood pressures of forty-eight subjects during intelligence tests under benzedrine. Ten of them increased their test scores by ten points or more but it was found that only one of these showed a concomitant rise in blood pressure of over 20 mm. The cases with rises of 20 mm or more, with this one exception failed to attain the same degree of improvement in their test scores. We also saw a paradoxical fall in the blood pressure after giving 10 mg of benzedrine to certain cases of anxious depression. We assume that in these cases the psychological effect of the drug was sufficient to influence the emotional tension (with its accompanying increase of blood pressure) while the dose was too small to have a physiological effect on the blood pressure itself.

Practical Considerations

We have found that benzedrine gives the best results when used in doses of 10 to 30 mg. Larger amounts often produce so much palpitation tremor, and rise in blood pressure that the concomitant psychological effects are apt to be destroyed. The smallest dose that will bring about the required psychological stimulation should always be used and this is determined by starting with a dose of 10 mg and then increasing it if necessary. The drug

should be given before midday if sleeplessness is to be avoided, on the average the effect tends to remain at a maximum for about five hours and takes an hour or more to develop fully. The psychological stimulation is not always maintained on continuous daily administration. Some patients complain that it loses its euphorizing effect after a few days, while the disagreeable features become more predominant.

The possibility of addiction needs to be guarded against, and the case of a person who had been purchasing benzedrine at chemists shops without medical supervision has already come to our notice, though none of our own patients have so far shown a tendency to addiction. The preponderance of disquieting somatic symptoms over the feeling of euphoria when large doses are taken, and the sleeplessness make us think that addiction will be rare. At present however, benzedrine may be purchased at any chemist's shop without prescription and this seems inadvisable with a drug all the properties of which have yet to be fully investigated. It must also be emphasized that the therapeutic indications for its use apart from the treatment of narcolepsy have not been exactly formulated. It is to be hoped that this drug will not be discredited by misuse.

We wish to thank Professor E. Mapother for his kind permission to use the clinical material of the Maudsley Hospital and Dr F. Pilkington for help in the preparation of this paper.

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M. Dechaume (*Presse med* March 24 1937 p 451) reports a case in which intense pain followed the removal of a wisdom tooth from the lower jaw on the left side. Extraction was carried out under local anaesthesia, and during the process severe pain radiating to the ear was felt and the operation could not be completed until the nerve trunk had been injected. A small filament resembling a nerve came out of the socket and this was cut off slight pain being felt in the chin during the process. This was followed by intolerable pain in the left half of the face. Three days later an injection of novocain without adrenaline was given around the facial artery so as to paralyse the sympathetic nerves and this relieved the pain. The following day severe pain recurred but became less intense after a second injection. On examination the socket was found to contain pus and as an antiseptic could not be used on account of the pain a plug of gauze soaked in novocain was applied for several seconds. During the next week symptoms subsided with the exception of anaesthesia in the left half of the lower lip and chin. It is pointed out that although it was unusual that a nerve should have been torn during the removal of the wisdom tooth this could not have been foreseen. Injection of the sympathetic for relief of pain has been tried successfully in other instances. The injection causes a vasodilatation and increases the blood supply to the part but the effect is transitory and the treatment must be repeated.

TECHNIQUE IN OPERATIONS ON THE KNEE-JOINT*

BY

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The knee joint has been derived from the fusion of three articulations, and this makes it the most complex as well as the largest joint in the body. It is only comparatively recently that this field has been made safe for surgery, and the layman still has a fear that the removal of a semilunar cartilage may leave him with a stiff knee. Such an event is now a rare calamity, but it has occurred and still occasionally does so. Knee joint surgery is recognized to demand the most careful technique, and I am going to describe a scrupulously careful procedure which stops short of fustiness. At the same time we shall have an opportunity of seeing that technique in these cases must include the care of a patient both before and after the operation.

The chief boggy is sepsis and it can only arise in one of two ways—namely, by infection from without—that is, errors in aseptic technique—and by infection from within—that is from a focus of infection elsewhere in the body. We must note that either of these events is greatly facilitated by the presence of blood in the joint. Blood is an excellent culture medium for organisms and both a haematoma and a haemarthrosis are readily infected from without or from within. We all know that a haematoma in an operation wound prolongs convalescence for only a few days if it is at once evacuated, but becomes a much more serious trouble if it lies hidden until infection has occurred. A haemarthrosis differs from a haematoma only in its size and the character of its limiting membrane. A dry joint is probably quite able to cope with occasional organisms, which rapidly, however, become a massive infection when incubated at body temperature in a large blood filled synovial cavity.

Preliminary Examination

Preliminary examination of all patients with cartilage injuries should include examination of the teeth. It is certainly dangerous to open a knee joint while dental sepsis remains untreated. If any extractions or fillings are necessary it is wise to allow at least three weeks to elapse before opening the knee joint. Equally, any other infection such as tonsillitis, boils or an infected antrum demands postponement of the operation until the potential danger has been removed.

Preparatory Dressings

The skin is one of the chief dangers; the preparatory dressing is an important prelude to the operation and a couple of days is not too long to devote to it. No procedure can make the skin completely sterile because antiseptics can only act superficially. We must do the best we can and then proceed on the assumption that we have only been partly successful. The whole limb from the toes to the groin is first shaved and then washed with soap and water. Methylated spirit compresses are applied to this area for twenty-four hours and a solution of iodine in spirit is next painted on the skin. The whole limb is then covered with sterile towels which are

* Based on a lecture delivered at the Hospital for Sick Children Great Ormond Street.

bandaged firmly in position and left alone until the surgeon directs their removal at the beginning of the operation

Operation

It is the surgeon's duty to develop a safe technique, but he is equally concerned with that of his assistants, who are probably less familiar with the requirements of the situation but are none the less capable of ruining an operation. We shall assume that there are two assistants—namely, the surgeon's immediate assistant and the theatre nurse, who is dealing with swabs, instruments, and sutures

The Theatre Nurse

Anyone who undertakes to thread needles or hand ligatures ought to be able to do this without touching the needle or suture material with the gloved hands. There is no particular difficulty about it when once the necessity is realized, and anyone can do this with a little practice. The dangerous politeness of holding an instrument by its point and passing it handle first to the surgeon is forbidden, and instruments are passed with forceps. The fingers must not touch that part of any instrument which is now or in the future going into the wound. The passing of swabs must also be done with instruments, for it is futile for the surgeon to be careful if the nurse is careless or untaught, and vice versa. The strength of the aseptic chain is that of its weakest link

The Assistant

What has already been said about sutures and instruments applies equally to the assistant, with the added special warning that double-ended retractors are dangerous in most people's hands. All swabbing must of course be done with forceps and no swab should be used twice. The wound must not be rubbed, but firmly dabbed and wiped from within outwards never from without inwards. Some assistants love to swab a dry wound just to look busy and co-operative; they insult the tissues and their own intelligence. Better a lazy than an over-zealous assistant in knee joint operations

The Surgeon

The anaesthetized patient is laid on the operating table in the dorsal position with the line of the knee joint half an inch below the hinge of the table's foot piece. A nurse uncovers the big toe, which the assistant grasps with a swab. He elevates the whole limb whilst the preparatory dressing towels are removed. A large towel is slid under the limb and another is placed across the abdomen while a third and smaller towel covers the foot and leg below the knee-joint and is secured with a sterile bandage. This method of fixation is much better than any number or any make of towel clips

An Esmarch rubber bandage is then applied spirally from the toes to the upper third of the thigh where it is secured with three superimposed tight turns and three looser ones. The lower part of the tourniquet is then removed, the operation area painted with iodine, and a small towel placed over the thigh immediately above the patella. The operating table is now pumped up to its full height, the foot piece is lowered or removed, and the surgeon takes his seat on a stool of such a height that the patient's foot is resting on the operator's knee. Some surgeons operate with the knee on an adjustable wooden frame but my own preference is for the leg hanging over the end of the operating table so that movements of rotation are easily carried out during the operation and

a direct view of the joint is obtained. In this position however, it is particularly dangerous to cough or even talk into the wound. Probably the ordinary type of mask is unreliable, and anyone who opens a knee joint while suffering from a cold, influenza, or sinusitis takes risks

Operations on the knee-joint are by no means easy, and the difficulties are largely those of space and light. The latter is greatly improved by the use of a head light even in an undarkened theatre, and it is worth anybody's while to acquire a certain dexterity with this unorthodox paediatric adjunct. The surgeon must of course observe the same rules as he imposes upon his assistants in the matter of handling swabs, instruments, and sutures

The incision is made straight down through the skin and fat until the capsule of the joint is reached. At this stage many surgeons apply skin towels to the edge of the wound, but I look upon this as a piece of self-deception. It is difficult to get them to lie close on a curved wound, and they are inevitably contaminated by subepithelial organisms which they smear into the deeper tissues. Most skin towel clips are ineffective and only succeed in occupying some of the available space through which the surgeon gains access to the joint, so that they compel a longer incision than is really necessary. If the skin towels are waterproof some of these objections have less weight, but I still believe the operation is safer with out them if the following procedure (Dunn) is adopted

The cut edge of skin and fat is sterilized by lightly swabbing with iodine solution, the knife is then discarded or sterilized and the joint capsule incised for the same length as the skin incision

Procedure inside the joint will be determined by what the surgeon finds, but there are two instruments which are particularly useful, though neither of them was designed for knee operations. The first is a very sharply curved Lane's cleft palate elevator, which is better than a sharp hook or aneurysm needle for dragging forward the crescentic edge of a semilunar cartilage before severing its anterior attachment. The second is Denis Browne's gland holding forceps, which, owing to its rat bite grip allows the necessary hard pull on the freed anterior portion of a cartilage during the removal of its posterior part. I use an ordinary narrow-bladed scalpel for removing the cartilage though there are two or three specially designed patterns on the market

The procedure to remove a damaged cartilage is as follows

Hook forward the anterior horn and divide its attachments. Seize the part so divided together with any split fragment such as a bucket handled cartilage and pull it towards the centre of the joint while you cut along the periphery of the cartilage for half its circumference. Now take a new and deeper grip on the cartilage, rotate the foot away from it, and pull quite hard on the cartilage while the point of the knife stabs and snicks the remaining peripheral attachment as far back as can be reached

If the posterior horn is attached normally you should now cut across the cartilage and leave the posterior one fifth behind, but if trauma has detached it you will find (as Naughton Dunn points out) that it plops forward and you can then easily remove the whole structure intact. It seems reasonably certain that a small posterior normal fragment can be left behind with impunity but of course there will be trouble if a detached posterior horn is not removed. In my view a posterior incision is rarely necessary and should be reserved for examples of what might be called "failed anterior approach". I have yet to meet

one in my own operated cases which makes me think that complete transverse tears through the posterior part of the cartilage must be uncommon

The under surface of the patella and as much as possible of the opposite semilunar cartilage should be examined as far as the incision allows before closing the joint

The capsule is sutured with a continuous catgut stitch in two layers. Iodine is again applied to the edges of the wound which are approximated with a continuous suture of silkworm gut

Dressing

This is a most important part of the treatment of these cases. The tourniquet is still in position and the joint cavity free from blood. A slack dressing will allow effusion when the tourniquet is removed whilst a very tight bandage will obstruct the circulation and cause oedema below the knee. The best and safest dressing is the following (Bantart)

A generous amount of gauze and wool is applied to the knee joint whilst the rest of the limb from toes to tourniquet is wrapped in cotton wool to the thickness of an inch or more. A series of 6 inch bandages is then applied really tightly from below upwards, so that a steady elastic pressure is maintained not only on the knee joint itself but also upon the area of the limb below and above it. The tourniquet is finally removed and a layer of wool and a firm bandage takes its place. Providing there are no constitutional disturbances this wool compress is left untouched until the stitches are removed on the eighth day and the patient next day starts walking and begins a course of faradism to his quadriceps. I firmly believe that this simple method of treating operated knees is a most trustworthy safeguard against the troublesome and indeed dangerous haemarthrosis which occasionally follows other methods.

Post-operative Care

No splint is necessary and the patient moves his limb as much as he cares to do. Active contraction of the quadriceps muscle with the knee straight may be practised in bed after the second day and walking, rowing, and cycling exercises are encouraged as soon as the stitches are removed.

Complications

1 *Haematoma* occasionally occurs between the skin and the sutured capsule. If the temperature is raised above 100° F. on the second or third day the dressing should be at once removed and the wound inspected and palpated. If its edges are bluish red and the operation area is indurated but the joint itself normal a probe must be inserted between two stitches the blood evacuated and the wool compress replaced. This generally closes the incident.

2 *Haemarthrosis*—The patient is never really comfortable after operation and his temperature rises with his pain until it may reach 103° F. in a day or two. The knee joint is so distended and painful that morphine may be required. Aspiration at once relieves the patient's pain and the surgeon's anxiety but gradual subsidence is usual even if nothing is done though perhaps this inactivity risks infection from the blood stream.

3 *Stitch abscess* occasionally occurs two or three weeks after the operation but clears up rapidly on removal or discharge of a small piece of catgut. Usually it is quite superficial and does not delay convalescence.

4 *Passive effusion* into the knee-joint commonly appears when the patient begins to get up. It is generally attributed to quadriceps insufficiency, and is best treated by daily faradism to the quadriceps with a wool pressure bandage over the joint. The effusion is serous and does no harm if it is actively treated from the outset.

General Convalescence

It is often six or eight weeks before full free, and painless movement is regained after a straightforward operation for a cartilage injury, but exercise and some forms of sport are possible a good deal earlier and the patient can usually resume his ordinary life two or three weeks after operation.

The results of these operations are most gratifying to both patient and surgeon but diagnosis must be exact and anyone who undertakes knee joint surgery ought to be able to feel that his technique is as safe as he can make it.

TREATMENT OF SOME ERRORS OF METABOLISM AT BRITISH SPAS*

BY

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After a number of years' practice at a spa one comes to definite conclusions as to the type of case which does best and which obtains the most relief from a cure there. My own experience leads me to believe that the most suitable are those due to some error of metabolism in which the liver is the chief offender among these may be mentioned congestion of the liver disease of the gall-bladder, gout, gouty glycosuria, so-called gouty eczema, some forms of obesity, and certain chronic rheumatic states.

In using the term "spa treatment" I refer to definite balneological treatment—that is treatment with waters and baths—and not to other forms of physiotherapy such as diathermy, ultra violet rays, massage, etc.

During recent years the medical profession would appear to consider that spas are useful only in the treatment of chronic rheumatic diseases and it is by no means unanimous even on this point as at the discussion on the treatment of chronic rheumatic diseases at the Oxford meeting Dr H. L. Tidy (1936) confessed scepticism regarding the advantages of spa treatment over hydrological treatment away from a spa. The profession seems to have forgotten that the spa is primarily and particularly useful in the treatment of disturbances of metabolism.

I had not been long in spa practice before I noticed that patients with disturbances of liver function, simple congestion, enlargement due to long residence in the Tropics or associated with gastro-intestinal catarrh all did well. Cases of plethoric gout and glycosuria associated with gout improved enormously under the administration of mineral waters and baths. Further it was observed that patients coming for treatment for sciatica or other rheumatic conditions often gave the information that they had been under treatment at a spa a number of years previously for an attack of gall stones or gall bladder disease from which they had since been quite free also that certain cases of rheumatism cleared up with waters.

* An elaboration of part of a lecture on spa treatment read before the Anshire Division of the British Medical Association December 1936.

alone and without any treatment other than mineral water baths—that is, cases due to metabolic disturbances.

We have in Great Britain a number of spas which are particularly suited for the treatment of these metabolic errors—Cheltenham and Leamington with their sulphated waters and the sulphur-saline group of Harrogate, Llan drindod and Strathpeffer. Unfortunately the exact physiological actions of these waters (with the exception of the Old Sulphur Well at Harrogate) have never been worked out and the evidence of their usefulness is entirely clinical. We know from such clinical evidence that the waters of Cheltenham and Leamington in full doses are purgative in action and stimulate peristalsis, that they are useful in the reduction of fat and abdominal plethora, also in catarrhal jaundice and hepatic congestion, uric acid, gravel, gout, and gouty glycosuria. The sulphur-saline waters contain large quantities of sodium chloride, are purgative in action, and effect a marked increase in the output of bile. Laborious investigations on the Old Sulphur Well at Harrogate were carried out first by William Bain and secondly by David Brown and Woodmansey. The physiological and clinical evidence shows that this water is especially useful in abdominal plethora, hepatic congestion, certain forms of toxæmia, gout, sequelae of malaria, metallic poisons such as lead and mercury, some forms of skin disease and also of rheumatic disease. Harrogate possesses half a dozen other sulphur wells which are used for internal treatment, and which vary in the strength of their chloride and sulphur contents. The waters of Strathpeffer stand in a separate category: the chloride content is small, and the purgative effect is produced by the presence of magnesium salts in fairly large quantities. The sulphur content is mainly in the form of H_2S .

Congestion of the Liver

The liver helps to prepare all three food materials—proteins, fats, and carbohydrates—for utilization by the tissues, and acts as a clearing station between the portal and systemic circulation. This much abused organ is slow to respond to continual insults and when gastric symptoms reveal dietetic failings, the liver, less obvious in its response, is nevertheless the sufferer. The excessive flow of abnormal intestinal toxins, by placing an unnatural strain on the function of the liver cells, leads to congestion producing tenderness on palpation and a sense of weight in the hypochondrium, and the urine contains large quantities of abnormal constituents.

Congestion of the liver due to overeating, alcoholism, insufficient exercise or stasis in the circulation, sedentary occupation, habitual constipation, or induced by diseases of the heart, lungs or uterus improves much by a course of any of these waters. In the Tropics prolonged exposure to high degrees of temperature combined with over full and over rich feeding, alcohol and deficiency of muscular exercise tends to produce a hyperæmia which passes into congestion with blood stasis and sometimes frothy diarrhoea. Such patients do remarkably well with any of the above mineral waters.

The benefits derived from the internal use of these waters is materially assisted by the external use of packs—mustard and mud—applied over the liver and followed by a needle bath along with such hydrological treatment as massage-douches and immersion baths. Early cases of cirrhosis of the liver, even when associated with ascites, do well under such treatment and improvement is maintained provided there is complete abstinence from alcohol. Where anaemia is associated with these conditions the

course of sulphur or sulphated water can be followed up by one of the mild iron waters that are to be found at many of these spas, such as the Kissingen and Crescent saline springs at Harrogate.

Diseases of the Gall bladder

In most instances the treatment of this condition is symptomatic, and no attempt is made to strike at the underlying causes. Usually once the case is diagnosed by x rays as one of gall stones the surgeon is called in. Gall-bladder disease is practically always a secondary condition. Rehfuess and Nelson (1935) consider that there are three fundamental factors in its causation—(1) the metabolic, (2) the problem of infection, (3) the question of stasis.

1 *The metabolic factor* involves several organs, the liver, which manufactures bile, the gall bladder itself which collects the bile and acts as a reservoir and appears also to concentrate the bile as the bile leaving the gall bladder is more concentrated than the hepatic bile, the nervous mechanism, which concerns the expulsion of bile into the intestinal canal, which is itself drained by the portal system. Analysis of hepatic and gall bladder bile shows that the cholesterol content of the latter is much greater than can be accounted for by the concentration which takes place in the gall bladder. Considerable importance attaches to the bile salts which are elaborated by the liver cell, the cholates which in some way tend to hold cholesterol in solution. The bile acids are divided into two groups—glycocholic acid and taurocholic acid, the former on decomposition yielding glycol and choline, the latter having particular influence on fat metabolism. Fats act as a strong stimulant for the contraction of the gall bladder, and therefore a low fat diet will act as a splint to the gall-bladder by helping to prevent contraction and a low cholesterol dietary should be beneficial in reducing bile cholesterol. To-day we distinguish choleric drugs which appear to affect the liver cell, and chologogues which affect gall bladder function.

The portal system draining the whole intestinal canal is another metabolic factor of great importance. The majority of gall bladder cases have a history of constipation with resulting toxæmia and a heavier burden on the liver cell.

2 *The Infection Factor*—Most pathologists now accept the view that infection is by the systemic circulation and it is not probable that it creeps up the common duct from the duodenum. Foci of infection in the teeth, tonsils, sinuses, and bowel, as in arthritis, are presumed to play a large part.

3 *Stasis*—This question is still *sub judice*. German workers at one time laid great stress on this factor. Visceroptosis and the asthenic habitus may have some part in its production.

Treatment of Gall bladder Cases

Much will depend on whether the case is one of cholecystitis (i) associated with gall stones, (ii) without gall stones or (iii) jaundice in the non-calculous cholecystitis. Diagnosis of these three varieties is essential—a radiograph is of primary importance and where there is jaundice the employment of the van den Bergh test is essential. When the condition is associated with the presence of gall stones the question at once arises whether operation is necessary and when it should be carried out.

Wilkie (1934) recently laid it down that in well-established cases of infection of the biliary passages with gall stones surgery was the rational treatment, but if surgery

was to be undertaken the preliminary preparation of the patient was as necessary as the operation. For many the operation was a great ordeal, and he referred to the diminished mortality in cholecystectomy due to doubt to increasing surgical experience but in the main to the increased attention to the pre-operative regime. When cholaemia supervened benefit had been found by the application of heat through the lower part of the chest, and we must get away from the idea that we are not dealing with obstruction due to stone, or irritation due to stone but with a disordered physiology which affected the liver. If these remarks apply to gall bladder disease with the presence of calculi they apply even more to cholecystitis without calculi, and also to non-obstructive jaundice.

Non surgical treatment is of three kinds (a) dietetic, (b) medicinal (c) balneological.

(a) *Dietetic*—The dietary in the pre-operative case of gall stones is of great importance. Two points must be observed (i) to keep the gall bladder at rest, (ii) to try to diminish the cholesterol content of the bile. Therefore fats and fatty foods should be avoided. Butter, fats, all fried foods duck, goose, pork, cheese, and fatty fish such as salmon, mackerel and herring should be removed from the dietary, also eggs as being rich in cholesterol. Milk as ordinary butter milk and skimmed milk, may be taken and vegetables lean meats, poultry, and non fatty fish all either grilled or roasted but never fried. Where there is no evidence of calculi it may be necessary to assist the gall bladder to contract and a diet containing fats may be ordered.

(b) *Medicinal*—It has already been shown that there are two varieties of drugs—the cholagogue which act on the bile forming function of the liver, and the chologogues which act on the gall bladder function. There is however no absolute distinction because many chologogue drugs have a cholagogue action. Sodium sulphate is one of the oldest of the chologogues employed and is the chief constituent of the springs at Cheltenham, Leamington and Carlsbad. It has been shown that its administration is followed by a distinct fall in blood cholesterol. There are numerous vegetable chologogues such as podophyllin, euonymin, aloes, iridin etc. Ox bile however is probably the best chologogue known and the preparations decholin, colalin or panbiline prepared from the active constituents of bile may be employed. Decholin is reputed to have an effect on the liver cells as well as on the gall bladder. William Bain (1935) working on a human subject with a biliary fistula showed that the ingestion of the Old Sulphur Spring water at Harrogate promoted an increase in the flow of bile in both total quantity and total solids and no other drug or mineral water such as euonymin, iridin etc. gave such a striking increase. Bain also claimed that this effect was in part due to stimulation of the hepatic cells. Brown and Woodmansey (1929) investigated the effects of this water on the general metabolism using human subjects; they found that during the period when the water was being taken there was an increase in the amount of total solids excreted by the kidneys and sweat glands. A marked increase in the excretion of sulphur by way of kidneys, bowel and sweat glands was recorded. This increase was greatly in excess of the amount contained in the water ingested. They also reported an increase in the excretion of total nitrogen, creatinin, uric acid, urea and hypoxanthin as well as the elements calcium, potassium, and manganese. The ions of barium and sodium were found to be retained in the body. They therefore conclude that the drinking

of strong sulphur water causes an increase in general metabolism. They also found that this water has strong bactericidal properties. Bain made further experiments with the Harrogate springs on the isolated heart and on the intact animal and found that blood pressure and cardiac systole are both gently increased with the strong sulphur water. These physiological findings support the clinical evidences with which we have been familiar for many years.

(c) *Physical and Balneological*—At eliminative spas such as Cheltenham, Leamington, and the sulphur saline spas, the accompanying constipation may be benefited by intestinal lavage reinforcing the mineral waters taken by mouth. Heat in the form of mustard or mud packs combined with needle baths, massage, douches or hot immersion mineral water baths are all aids which are at hand and should not be neglected.

Gout and its Treatment

Clinical evidence has taught us that certain manifestations of disease such as occur in eczema, phlebitis, or bronchitis, are of a gouty nature. Gout may be regarded as an inborn error of metabolism though it is quite possible that foci of infection may be the causal agent in precipitating an attack. Acute gout is not as evident as it was thirty years ago but there are indications that it is on the increase again, though probably in a less acute form. The young physician of to-day is apt to look on this disease as a pathological rarity but I am confident that many cases of the milder types are overlooked and are diagnosed as rheumatism, arthritis or cellulitis. A history of mild attacks in a single joint, the presence of tophi, a history of hereditary biochemical findings—that is raised blood uric acid over 3.5 per cent—hypercholesterol aemia, x-ray findings—that is punched-out areas of rarefaction in articular ends of bones—point collectively to a case being one of gout.

The spa treatment of gout comes under two categories—treatment of a recent acute or subacute attack on the one hand, and prophylactic measures against recurrence. In treating acute gout spa treatment is harmful while any inflammatory signs are still present. This is one of the pitfalls of spa practice, as too energetic treatment is apt to cause a recrudescence of the disease, no matter whether the water of Bath, Buxton, or sulphur spa is employed. A few days rest in bed on arrival at the spa with the internal administration of colchicum and calomel will usually prevent a relapse. The internal administration of mineral waters such as those of Bath and Buxton and the mild sulphur, can then be employed along with local applications of peat and mud or hot air. Caution must be observed with baths which involve massage or other physical measures and ordinary exercise must be curtailed. No definite rule can be laid down—the physician has to feel his way with each individual case. Cases of gouty glycosuria usually clear up after three or four days' treatment and cases of gouty eczema often do so on the sulphur water alone without the aid of alkaline sulphur baths.

Diet is important in all cases. Lockie and Hubbard (1935) have found that diets high in fat and low in carbohydrates and protein tend to precipitate an attack with an increase of hyperuricaemia. These findings have not so far been confirmed in this country but they should be borne in mind. When spa treatment is used as a prophylactic measure one must still be on one's guard against precipitating an attack otherwise more active measures may be employed.

R G Gordon (1936) in a recent paper drew attention to the metabolic factor in chronic rheumatism with special reference to fibrositis, and observed that the pendulum had swung too far, and that we must consider some cases of chronic rheumatism to have a gouty basis, quite apart from the question of the presence of a focus of infection. This same viewpoint I raised at the discussion on chronic rheumatic diseases at the Oxford meeting of the British Medical Association last year. Further, I pointed out that there were cases where there might be no evidence of an infective focus. For instance, patients tell you that they get pains and aches in their muscles (a sprained feeling) after drinking beer or Burgundy, after eating strawberries, asparagus, etc., or after taking a purge and patients suffering from glycosuria often complain of such symptoms. Another group of patients will tell you that when they get out of bed in the morning their feet feel tender, their hands are stiff, and their grip is weak. By the time they have completed dressing this discomfort has passed off. On examination there may be no physical signs beyond perhaps some tenderness on squeezing the metacarpophalangeal joints as in a vigorous handshake. Such cases improve much by the use of sulphated or sulphide waters, and by trying to correct the errors of metabolism, quite apart from general physical treatment.

Post malarial Cachexia

The waters of these spas are also distinctly useful in the cachexia following malaria. Enlargement of spleen and liver derives much benefit from a course of these waters, combined with baths, exercise, change of air, etc. In the winter and early spring Cheltenham and Leamington are more suitable, while in the summer months the more bracing climate of Harrogate and Strathpeffer works wonders. In fact, I know of no type of case which shows greater and more rapid improvement with a course of these waters. Many residents in the Tropics, from India, Malay West Coast of Africa, etc., make it a practice to have a "cure" during their periodic leaves home, mainly as a prophylactic measure.

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A comprehensive survey of obesity and emaciation due to pathological causes by Professor Francesco Galdi of Pisa and three of his colleagues is published in the proceedings of the forty second congress of La Società Italiana di Medicina Interna held in Rome in October 1936. The authors comment on the extensive literature, especially from German and American sources dealing with obesity, and the comparative neglect of pathological loss of flesh. The relation of metabolism of the nervous system, and of the endocrine glands to these conditions is fully discussed, and some sixty pages are devoted to more detailed separate analyses of the metabolism of proteins carbohydrates and fats. Following a description of the pathological anatomy of both conditions the several forms of obesity and emaciation are considered in their clinical aspects.

POST-SCARLATINAL NEPHRITIS

A STUDY IN PREVENTION

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By giving large amounts of alkalis in the course of an attack of scarlet fever Carter and Osman (1927) showed that a considerable reduction in the incidence of nephritis occurred in cases so treated compared with a control series. Peters (1932) brought forward evidence showing that the administration of thyroid and iodine for the first fortnight of an attack of scarlet fever was followed by a considerable fall in the incidence of nephritis.

Below is given a table showing the incidence of post scarlatinal nephritis in five-year periods during the past twenty five years in Ham Green Hospital.

TABLE I

Period	Total Cases of Scarlet Fever	Cases of Nephritis	Percentage Incidence of Nephritis
1910-14	2,771	53	1.92
1915-19	1,329	25	1.88
1920-24	2,496	63	2.5
1925-29	3,148	28	0.88
1930-34	2,427	9	0.37
1935-36	1,350	43	3.2

Thyroid and iodine were given during the period of 1930-4. Comparing the different incidence in the two periods of lowest prevalence it will be found that the difference is 2.3 times the standard deviation. The difference is very much higher if the whole twenty five year period is taken into consideration. On these grounds we were disposed to think that our method was proving effective, especially as 1930-4 figures include two cases which were admitted with nephritis already present in whom preventive methods had not been applied.

In the winter of 1934-5 a more severe type of scarlet fever appeared. It was characterized by a great increase of secondary attacks whilst in hospital by several second attacks in patients within a few weeks of discharge, by the increase of our return case rate to three times its normal number by an increase of all the more severe complications, and by the occurrence of attacks of scarlet fever in six Dick-negative reactors among the staff an event which had not occurred for many years.

In spite of administering thyroid and iodine, cases of nephritis cropped up with distressing frequency. We therefore investigated our method afresh using alternate cases as test and control. Table II shows the result of this investigation. By the term albuminuria is meant symptomless albuminuria for three consecutive days or longer. 'Nephritis' includes cases with signs or symptoms of renal failure. The observation of the sedimentation rate of the red blood corpuscles by Cookson (1926) working in this hospital suggests that there is a sharp line of demarcation between the two conditions.

TABLE II—*Series of Scarlet Fever Cases Treated with Thyroid and Iodine and Controls*

		Albuminuria	Nephritis
Test cases	165	34 (21%)	11 (6.6%)
Controls	162	26 (16%)	9 (5.5%)

It was evident that our method was having no beneficial effect in this type of scarlet fever. We therefore submitted another series of alternate cases and controls to Osman's method giving the alkaline mixture to the test cases in the doses he recommended continuously throughout the period of their stay in hospital, while the controls received alkalis for the first two days of their stay in hospital only. The results are shown in Table III.

TABLE III—*Series of Scarlet Fever Cases Treated with Alkalis (Osman's Method) and Controls*

		Albuminuria	Nephritis
Test cases	124	15 (12.1%)	5 (4.0%)
Controls	134	25 (18.6%)	6 (4.5%)

In this series it was also evident that no statistically significant improvement was being effected by Osman's method. On referring to Table I it will be seen that the incidence of nephritis was higher during 1935-6 than during any other period in the last twenty-seven years in Bristol.

Conclusion

It would appear that the various strains of streptococci causing the symptoms of scarlet fever vary greatly in their power of producing renal complications and that methods which seem to be effective in a controlled series of cases in preventing the complication of nephritis caused by certain strains may fail completely against other strains. A reliable means of preventing this serious complication which is effective against all strains of streptococci is still to be found.

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R. B. Engelstad (*J Radiol Électrol* February 1937, p. 53) reports the results of radium therapy in fifty six cases of cancer of the buccal cavity. These included cancer of tongue, of the mouth proper and cancer of the gums. The treatment consisted of telradium therapy alone, or telradium therapy plus radium implantation plus electro-coagulation or of telradium therapy plus surgical operation. The curvical metastases were treated either by telradium therapy or by telradium therapy plus operation. The source of radiation for the telradium therapy consisted of a radium unit containing 2600 mg of radium element. The distance between the source of radium and the skin varied between 5.7 and 12.5 cm. Several fields were irradiated depending on the size and situation of the tumour. One field was treated each time and the dose varied between 3 and 6 Dominici units ($\frac{1}{4}$ to 2 hours) and a total of 50 Dominici units was applied. Skin and other reactions all cleared up in two to three weeks. The results of the treatment of the fifty six cases were as follows: 14 to 4 years cure twenty nine patients (53 per cent); cure after recurrence three patients; cured for the time being thirty two cases; alive but not cured four cases; dead twenty cases (36 per cent.).

CARCINOMA OF BREAST WITH WIDE-SPREAD METASTASES TWO CASES OF RECOVERY

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I venture to report these two cases in view of the extremely satisfactory results which followed treatment. Both were cases of mammary carcinoma in which wide-spread metastases had occurred, and both patients are now between one and two years after cessation of treatment, in good health and free from any sign of carcinoma. One of them had had no operation, as she did not present herself to a doctor until the disease was too far advanced for surgery, the other had had a radical amputation of the breast eighteen months before the presence of secondaries was discovered and treatment begun.

Case I

An unmarried lady of middle age was sent to me in August, 1934. There was in her right breast, adherent to the skin, a carcinomatous lump, which was broken and discharging slightly. There were secondary glands in the axilla and above the clavicle and also secondary deposits in several bones of the thorax and shoulder-girdle. Her general condition was very poor. I thought she was not fit for intensive x-ray therapy, and suggested that she should submit to a course of treatment by Todd's method. She agreed to this, and after some delay treatment was begun early in November. At that time she was entirely confined to bed and had to be brought by ambulance and stretcher for all x-ray treatment. She was wasted and had much pain, for which morphine had been necessary. She took food badly and was often sick.

On beginning treatment all morphine was stopped. She was given a weekly intravenous injection of compound colloid of selenium and sulphur, followed two days later by a mild dose of high-voltage x rays, a dressing of Paré's ointment (lead amalgam) was applied to the breast. It was found impossible to give her the calcium mixture recommended by Todd, she could not tolerate it and she only took radiostoleum and thyroid extract intermittently. Her veins were very small and there was considerable difficulty with the injections, which led to some delays and irregularity in the course of the treatment. Eventually the injections had to be stopped altogether—sooner than would have been the case under more favourable circumstances. The breast began slowly to improve not very long after starting treatment but otherwise there was no change, except some relief from pain.

In the early part of 1935 there was complaint of fresh pain in the lower part of the back and pelvic region, and radiographs revealed extensive secondary deposits in the spine and pelvic bones. The outlook appeared very gloomy but nevertheless treatment was continued. The one bright spot was the condition of the breast which by this time had vastly improved. I must pay tribute to the patient's perseverance and great tenacity of purpose. General improvement became evident at last in April 1935. Pain was much less and the sickness stopped. The appetite improved and before long the patient was eating more than she had done for years. In the middle of May she could sit up out of bed and on June 1 was just able to take a walk in the garden. No treatment was given between the end of July and the middle of October.

Her general condition was then quite good and she had put on a lot of weight the breast was quite healed and little or nothing could be felt of any glands. Pain was practically non-existent, and she was getting about freely. Radiographs, however, still showed extensive patches of rarefaction in the bones affected though there was some indication of fresh mineralization. I did not think it wise to attempt a further course of intravenous injections on account of the great difficulty experienced before, but I gave another course of high voltage x rays in moderate doses, covering the whole trunk and extending over a period of two months. At the same time she was able to take continuously a calcium mixture, radiostoleum, and small doses of thyroid extract.

There has been no treatment since December, 1935. The breast was then quite normal, apart from pigmentation of the skin near the nipple, glands were scarcely recognizable; and the patient's general health was good. She had put on 3 st in weight, and there was no evidence of any active disease, though mineralization of the old centres of disease in the bones was not yet complete. In spite of a severe attack of shingles, with varicella, in the spring of 1936 which kept her in bed for many weeks, there has been no recurrence of the carcinoma. I have seen her recently and found her in good health though complaining of being 'too fat'. There is no sign of any disease, and the bones have almost entirely recovered their density.

Details of Treatment

It may be well to give a summary of the treatment employed, with details of dosage and times of administration.

Between November 4 1934 and April 2 1935 intravenous injections of colloidal selenium and sulphur were given ('SSe' prepared by British Drug Houses). The initial dose was 2 ccm and throughout the course no single dose was more than 4 ccm. The injections were given every week except for an interval of three weeks between November 25 and December 17 one of a fortnight between January 29 and February 12, and one of three weeks between March 12 and April 2.

Two days after each injection x ray treatment was given. Usually two areas were irradiated at each sitting but some times only one. The dosage employed was somewhat variable but was always between 75 and 100 r to each area. The focal skin distance was 50 cm the kilovoltage 180 and the rays were filtered through 0.5 mm of zinc and 1 mm of aluminium. During April and the latter part of March when only one injection was possible, weekly dosage with x rays was continued and the dose increased to 120 r.

There was no treatment between April 17 and June 27. Then followed four more weekly injections of 'SSe' (4 ccm) with a dose of x rays (100 r) two days after each injection. No more selenium was given at any time after July 23 1935, and no other treatment at all until October 16.

Between October 16 and December 18 1935 sixteen applications of x rays were given. The whole trunk was irradiated being divided for this purpose into six areas and one area was treated at each sitting. The dose employed was 200 r at 200 kV. The focal skin distance was 50 cm and the rays were filtered through 0.5 mm of zinc and 1 mm of aluminium. Throughout this last course of x rays and for a fortnight afterwards the following medicines were taken:

Dry thyroid extract 1/10 grain once daily

Radiostoleum 6 drops twice daily

Mixture twice daily

Calcium chloride	gr 15
Sodium iodide	gr 5
Sol pectin	32
Syr implex	5 1/2
Aq dest.	ad 3 1/2

Case II

In September, 1932, a lady of middle age, with two children, had her right breast amputated for scirrhus carcinoma. In September, 1933 she had a hysterectomy for fibroids, and later I x-rayed her on account of severe pain and weakness in the left leg but found no cause in the spine or pelvis. A further x ray examination of the bones was made in London in January 1934 and this was also negative. In April, 1934, there was a sudden onset of pain in the lower thoracic region of girdle type. There was still much pain in the region of the left hip and pain also in the neck and right shoulder and in the region of the left ischial ramus. Again an x ray examination was carried out and I found secondary carcinomatous deposits in both ilia in the left ischial ramus in the fifth and sixth cervical and the fourth and fifth lumbar vertebrae, and, lastly, a doubtful spot in the ninth dorsal vertebra. All movements were painful, and the patient had to be brought for examination by ambulance and stretcher.

It was decided to give high voltage x ray treatment for the relief of pain and in the hope of promoting local healing. This was carried out in May, and all the bone lesions were treated with the exception of one small spot in the right ilium. Massive doses were given but no lesion was irradiated through more than two fields.

In June there was considerable improvement, pain was much less and her general condition better. She was able to walk a very little. In August she was a great deal better, had no pain, and was walking well. In September an x-ray examination showed all the bone lesions healed and well mineralized, with the exception of the small one in the right ilium which had not been irradiated.

In order to carry on the good work and if possible to complete the 'cure,' it was agreed that it would be well to give a course of treatment by Todd's method. The patient and her husband were willing and treatment was accordingly begun early in September 1934. Weekly intravenous injections of the compound colloid of selenium and sulphur were given, followed two days later by mild applications of high voltage x rays. This was continued for six weeks, and then the x rays were stopped and a radio-active colloid was alternated with the selenium and sulphur colloid, week by week, until December 11. The veins were difficult to inject, and sometimes there was trouble with rigors and vomiting after the injections.

The patient went away in December for a month's holiday at Newquay, and on her return the alternate weekly injections were started again. Seven were given up to March 19, 1935, but she has had none since. There was continuous increase in weight from September—in one week as much as 5 lb was gained—and on February 19 1935 her weight was 11 st. 3 1/2 lb., which represented a gain of about 3 st. During the treatment the patient did not have the medicines recommended by Todd. X-ray examination after the course showed all the old lesions still healed and also the one in the right ilium.

In March 1936 a year after cessation of treatment a small rarefied spot was discovered in the seventh rib on the left side. This quickly cleared up after two applications of high voltage x rays (200 kV) with a total dose of 800 r. Since then no evidence of carcinoma has been discovered. The patient has led a normal life.

Details of Treatment

Between May 4 and May 25 1934 six applications of x rays were given. All diseased areas of bone received treatment except the small one in the right ilium. On each occasion a full erythema dose was given but no lesion was irradiated through more than two fields. The focal skin distance was 40 cm and a current of 3 mA at 200 kV was employed.

Between September 4 and October 11, 1934, the patient had six weekly intravenous injections of colloidal selenium and sulphur. The initial dose was 2 ccm, all the others were 4 ccm. A ray treatment was given two days after each injection. One or two areas were irradiated each time, and received 100 r at 200 kV from a distance of 50 cm. All diseased areas of bone were treated. On October 16 4 ccm of "SSe" were injected but no x rays were given afterwards.

From October 23 to December 11 alternate weekly injections of RAS (radio active selenide) and "SSe" were given. The initial dose of RAS was 1½ ccm, but later doses were graduated up to 5 ccm. The dose of "SSe" remained at 4 ccm. There was similar alternation of SSe and RAS between January 23 and March 19, the doses being 4 ccm and 5 ccm respectively.

After this no further treatment was given except the two doses of x rays on March 31 and April 1 1936 already mentioned. Each dose was 400 r at 200 kV, and the focal skin distance was 45 cm. Medicines were not administered.

Commentary

In the application of radiation for the treatment of cancer it is generally accepted that there must be two main objectives: (1) the administration, at suitable intervals of time, of sufficient x rays to all parts of the growth to produce a lethal effect on the cancer cells; and (2) the control of irradiation of the surrounding tissues so that their vitality shall not be destroyed or unduly depressed. It would seem, from a consideration of the two cases quoted and of others on record, that there are other factors in the re-establishment of normal conditions which do not depend entirely on a primary lethal effect on the cancer cells and that there is room in our practice for a method of attack in which the prime object of irradiation is not the *direct* destruction of the vitality of these cells.

In neither of these cases was the radiation given in sufficient quantity to ensure such an effect, and in Case I, at any rate, the extent and distribution of the lesions and the condition of the patient prohibited heavy dosage. In Case II although massive dosage was first employed and had a very beneficial effect on the lesions treated it was given primarily for the relief of pain and hardly in sufficient quantity to ensure a lethal effect on the deep-seated lesions. Moreover, one small metastasis in the right ilium was not treated at all the first time, and was still present four months later when treatment with selenium and small doses of x rays was begun, it quickly cleared up under this. Case I was in an extremely advanced stage when treatment was begun; the patient had in fact been told before I saw her that she had probably only three or four months to live. In any event her condition was such that I should have refused to attempt any treatment by heavy x ray therapy.

Todd looking upon cancer as an infective disease, bases his method on the natural though insufficient resistance of the patient and holds that his treatment acts by stimulating the patient's defensive mechanism and improving his general condition. Whether or not this is a full or even a true conception of what occurs, the fact remains that there have been some remarkable

successes with most unpromising material. The avoidance of very heavy dosage by x rays or radium, with its attendant dangers and often depressing effects, is surely one great advantage of this method of treatment. Another is that it can be employed, with the possibility of some success, even in very advanced cases which ordinarily would get nothing beyond palliative and pain-relieving treatment. One obvious disadvantage is the necessity for repeated and frequent intravenous injections. These have to be well controlled and given with great care, and difficulties are apt to arise in connexion with the veins, especially when they are small. Everything considered, it would seem that the method can be looked upon as a useful addition to the means of dealing with cancer.

Clinical Memoranda

Recovery from Streptococcal Meningitis After Prontosil

After reading Dr Christia F Lucas's account (*Journal March 13 p 557*) of a case of streptococcal meningitis successfully treated with prontosil, I feel that the following report of a somewhat similar case may be of interest.

CASE REPORT

A youth aged 17 was admitted to hospital on November 6, 1936 having fallen down a lift shaft from the fourth floor to the basement. He showed clear clinical signs of a fracture of the anterior fossa of the skull—profuse bleeding from the nose and subconjunctival ecchymosis of the right eye. There were no other injuries; the pulse rate was 84 and although there was a history of a few minutes unconsciousness he was already conscious though somewhat irritable on admission.

The patient made good progress and was regarded as practically convalescent when, on the morning of November 13 his temperature rose to 102 F and the pulse rate fell to 68. He was drowsy and complained of pain behind the eyes. There was slight head retraction and Kernig's sign was positive. On lumbar puncture turbid fluid which was under slight pressure was withdrawn; it contained hundreds of polymorphonuclear leucocytes but no organisms. Culture was sterile and the chloride content 650 mg per 100 ccm of fluid. The next day he was quite comatose and incontinent of urine and faeces. Lumbar puncture was repeated with identical findings.

By November 20 the pulse rate had fallen to 48, feeding was practically impossible and the patient's general condition was pitiable. A third lumbar puncture was performed and this time streptococci were found on direct examination. An intravenous injection of 20 ccm of prontosil soluble was given at once and repeated in eight hours. That evening his temperature was 98 F and pulse rate 64 and he took fluids freely. Culture confirmed the presence of a haemolytic streptococcus, and treatment was continued with prontosil album by mouth and two tablets thrice daily. There was no further rise of temperature and he improved rapidly in every way. The prontosil was stopped on November 29 by which time the patient appeared perfectly recovered; there were no signs of toxic effects from the drug. He was discharged on December 4. When he reported three months later there was no evidence of mental deterioration and he was in excellent physical condition, the sole stigma of past illness being a slight ptosis of the right eyelid.

I am indebted to Mr Howard Stevenson F.R.C.S. senior surgeon to the hospital for permission to publish this case.

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Resident Medical Officer

Royal Victoria Hospital Belfast.

Reviews

THE MEDICAL ANNUAL, 1937

The Medical Annual Fifty fifth year 1937 Edited by H. Letheby Tidy M.A., M.D., F.R.C.P., and A. Rendle Short, M.D. B.S. B.Sc., F.R.C.S. (Pp 704 illustrated 20s net.) Bristol J. Wright and Sons London Simpkin Marshall 1937

A reviewer who can find errors of fact, careless proof-reading, poor illustrations, a point of view with which he disagrees, usually has little difficulty in spinning out four or five hundred words to a notice of a book. If he finds little to criticize he may content himself with a description of what is in the book, or vigorously take sides with the author in advocating a policy or theory which they both have at heart. There is, however, little to criticize in the *Medical Annual* so thoroughly have the editors and the publishers done their work in presenting to medical readers their ever welcome review of medical progress during the past year. Nor is a description of the contents possible, for here is surveyed the whole field of medicine and surgery.

Among much that is of value to both the general practitioner and the specialist it is perhaps ridiculous to single out this or that article, but the accounts given by Dr. Macdonald Critchley of the psychology of van der Lubbe, who played such a dramatic part in the burning of the Reichstag, and of "punch drunkenness" are of special interest. It was the fear of becoming "punch drunk"—or "goofy," "slap-happy," "slug nutty" (to give a few synonyms, not forgetting the more elegant "traumatic encephalopathy")—that led to General Tunney's retirement from the ring. Also of interest is the well-written section by Mr. D. Harcourt Kitchin on 'Legal Decisions and Enactments of Recent Date', in the introduction it is stated, 'Readers will undoubtedly welcome the intention of the editors that this shall be an annual article.' Among the illustrations we note those of the Kettering hyperthermia, of the radium bomb teletherapy apparatus, and of Chaoul contact radiotherapy—illustrations of things many readers have heard about but not seen—but we cannot see the reason for including the plate entitled "Treatment of Surgical Shock," unless it is to prove that surgeons can remain in a state of masterly inactivity.

Although the *Medical Annual* sets out to give a summary of 'medical activities,' it confines itself largely to clinical and scientific medicine and devotes little space to what might be called public medicine. The editors refer to the highest importance of preventive medicine, the progress of which they say, is reflected in the various articles in the *Annual*. There are too sections on Food and the Public Health and on Industrial Diseases. Nevertheless more space might be devoted to movements and matters directed to the betterment of the public health: a yearly review of these and of such aspects of public medicine as national health insurance (of concern to some 16,000 medical men), contributory schemes, public medical service schemes etc., would we believe make the *Medical Annual* more truly a survey of medical activities.

A review of the Addendum to the *British Pharmacopoeia* published by the Pharmacopoeia Commission of the General Medical Council, will be found immediately preceding the alphabetical lists of preparations and appliances. A new feature of the present issue is that the general index is now placed at the end of the book.

PRACTICAL PHYSIOLOGY

Human Physiology A Practical Course By C. G. Douglas, C.M.G., M.C. D.M. F.R.S., and J. G. Priestley M.C. D.M. Second edition (Pp 229 32 figures 12s. 6d net) London H. Milford, Oxford University Press 1937

It is now some twelve years since the first edition of this work appeared. Although it was intended to give an account of the practical course in human physiology developed in Oxford, and therefore presumably used principally by students attending that course, the book contained so much that had emerged from the fundamental researches of the Oxford school that, for particular sections, teachers felt that no better descriptions could be found. Since the publication of this first edition other books with a similar object in view have become available; but there was a certain simplicity and clarity about the description of experiments and precautions of all kind as presented in 'Douglas and Priestley' which allowed it to retain a strong position for certain aspects of the subject, notably respiration, respiratory exchange, and the blood gases. In the new edition alterations have been introduced tending to increase the usefulness of the book for practical classes. The influence of Haldane is manifest in the major part of the work, and it is praise indeed to be able to say that the book is a worthy tribute to the master. By restricting the work to operations which are to be carried out on the human subject the clinical aspect is kept constantly before the mind and there can be no doubt that the student who has followed the course prescribed will be in an excellent position to apply sound physiological reasoning to his clinical problems.

ON THE PRACTICE OF MEDICINE

Medical Modes and Morals By Harry Roberts. With chapters on Doctors and Patients in the Past by Margaret Jackson (Pp 255 7s 6d net) London Michael Joseph 1937

Dr. Harry Roberts has here collected a symposium of reflections on the practice of medicine, based on forty years' experience of the profession. Dr. Roberts is especially fitted to write a book of this nature. In the course of thirty years of active practice in the East End of London he has been in a position to observe not only the trends and developments of modern medicine, but also the remarkable changes both of environment and of mental outlook, which have affected the working classes during that period. The appalling conditions existing in the East End in the first years of the present century are apparent from a description of one of Dr. Roberts' earlier confinements. The patient shared her dirty bed with a three-year old child suffering from pneumonia. On a palliasse in another corner lay the body of a one-year old child who had died two days before from the same disease, while the unfortunate mother admonished another child of 5, playing in the room, to refrain from fingering the corpse. Hundreds of similar confinements were attended with the co-operation of "the direct descendants of Mrs. Gamp." Nevertheless it is surprising to read that the proportion of maternal deaths was negligible while puerperal sickness was not at all frequent. Cultural handicaps were even greater than the material. The street corner and the public house were the only alternatives to the overcrowded single room. Although the overcrowding still persists the advent of the cinema, the dance hall, and the wireless has provided a wider and happier outlook. The inferiority feeling from which the working-classes suffered through force of circumstances

has now disappeared. This is especially noticeable among the younger women who in Dr Roberts's opinion, compare very favourably with their more fortunate sisters in the West End.

The author contrasts the revolutionary improvement in surgical practice since the advent of asepsis from the point of view of safety, with the lamentable morbidity and mortality rates still persisting in midwifery. Why has asepsis failed to show a beneficent influence on obstetrics? Dr Roberts attributes this to the lack of obstetric skill in emergencies on the part of the modern practitioner, due simply to the fact that, under present conditions, he has not the opportunity of gaining the necessary experience. Until wholesale hospital midwifery becomes a matter of practical politics Dr Roberts suggests a revival of the better features of the old apprenticeship system as a means of providing the mass of general practitioners with the requisite obstetric skill. The author states his views on many other professional questions. They are valuable in that they are deduced from the personal observation and experience of a man of unusually broad outlook, uninfluenced by textbook teaching or the therapeutic vogues of the moment.

The last fifty pages of the book are devoted to chapters on 'Doctors and Patients in the Past' by Dr Margaret Jackson giving a concise historical survey of the profession from prehistoric times—a series of admirable vignettes.

CUNNINGHAM'S ANATOMY

Cunningham's Textbook of Anatomy. Edited by J. C. Brash M.A. M.D., F.R.C.S. Ed. and E. B. Jamieson M.D. Seventh edition (Pp. 1,506. 1171 figures (653 in colour). 76 plates. 42s. net.) London: H. Milford, Oxford University Press, 1937.

The seventh edition of Cunningham's classical *Textbook of Anatomy* has been brought out under the able superintendence of Professor J. C. Brash and Dr E. B. Jamieson and maintains the lucid character which was impressed on it by its first editor and has been continued for nearly twenty-five years by Professor Arthur Robinson who, though still taking an active interest, has now retired from the editorship. We are glad to have this opportunity of expressing our appreciation of the high standard of his work and also that of Professor J. T. Wilson who likewise has retired. Two distinguished members of the editorial staff, Professor Francis Dixon of the University of Dublin and Sir Grafton Elliot Smith of University College, London, have died; their names will live on for many years in the memory of British anatomists. Among the new contributors are Professor A. B. Appleton (ductless glands) and Professor R. D. Lockhart (myology). Illustrations have been added in all sections of the book and special attention may be drawn to the excellent drawings by R. W. Matthews and A. K. Maxwell and also to the photographic illustrations and the radiographs which give additional interest to a publication that has always held a high place in the artistic representation of anatomy. Space will not allow mention of all those who have contributed new photographs and radiographs but we feel that Professor Lockhart's deserve special recognition not only for their originality but for the fresh light they shed on the problems of movement in the living subject as contrasted with the fixed anatomy of the dead. An important change is the adoption of the nomenclature approved by the Anatomical Society of Great Britain and Ireland at the Birmingham meeting in 1933.

By way of constructive criticism of an admirable book we should like to see inserted in the appropriate places

some clear-cut illustrations of the microscopical structure of these organs and tissues which are important from the practical standpoint. For instance sections of human embryos showing typical stages of organogeny, blood lymph corpuscles, and red marrow, the development of bone, the various types of muscle, the tonsil, the fully developed thymus, lung tissue, the pancreas, including islets of Langerhans, the testis, showing tubules and interstitial cells, a corpus luteum of pregnancy, the uterine mucosa and decidua, the mammary gland in the resting and active conditions, typical areas of the cerebral cortex such as the motor, hippocampal, and visual, with a short description of the evolution of the cortex. In our opinion such drawings made from actual specimens are much more satisfactory than diagrams of an artificial nature which though perhaps more simple may be misleading. For example, Fig. 89 purports to represent the separation of the placenta but shows a mode of detachment that, if it were true, would be dangerous, and might lead to fatal haemorrhage. The book as a whole is, however, a masterly exposition of what a medical student or practitioner would wish to possess as a textbook of human anatomy or for reference.

HISTORY OF THE ZYMOTICS

The History of the Acute Exanthemata. The FitzPatrick Lectures for 1935 and 1936. By J. D. Rolleston M.A. M.D., F.R.C.P., F.S.A. (Pp. 114. 7s. 6d. net.) London: W. Heinemann, 1937.

Modern statistical logicians have less faith in the rule of succession than did Laplace, and certainly authors who have written many good books may write bad ones. But it will be a reasonable exercise of faith to hold that any book bearing the honoured name of Rolleston is valuable. Dr J. D. Rolleston's FitzPatrick Lectures confirm that faith. Scholarship and clinical experience are a rarer combination than in the past; Dr Rolleston has the good fortune to illustrate the value of historical learning to the clinician and medical experience to the scholar. In this short, perhaps too short, volume he records the vicissitudes of small pox, chicken-pox, scarlet fever, measles and German measles, and of medical opinion respecting these illnesses.

Dr Rolleston writes with judicial impartiality. On the once-exciting controversy as to whether small pox was known to the physicians of classical antiquity he contents himself with summarizing the arguments. Perhaps his summary of Haeser's view is a trifle too condensed. The reader might suppose that Haeser put much weight upon the fact that many early medical writings which might have contained unequivocal accounts of small-pox were lost. To us Haeser's main argument appears to have been this: That some clinical descriptions by Galen and others could, without too much ingenuity, be taken to apply to cases of small-pox, and that the admitted rarity of well-described epidemics might partly depend upon the loss of writings, but also upon a genuine infrequency of epidemics in the West earlier than the sixth century.

Dr Rolleston's chapter on chicken pox enables us to get the history into true perspective. Many of us have supposed that the elder Heberden was the first physician to recognize the essential difference between small-pox and chicken pox. Dr Rolleston while giving due credit to Heberden points out that he had predecessors and that after his time competent physicians again confused the issue—no uncommon event in the history of the zymotics. The history of scarlet fever is so dramatic that it is good copy for any historian. Dr Rolleston naturally tells the story well. It is interesting to learn that the

acute Fuller did not believe scarlet fever to be contagious. In his chapter on measles Dr Rolleston describes Home's pioneer experiments in inoculation. He notices that, in spite of Sydenham measles and scarlet fever were confused almost to the end of the eighteenth century. He includes an account of the not too well known modern instance of virulent measles in a population without experience of the disease. The case of the Highland Division quartered in Bedford in 1914-15 is of interest. There were 529 cases with sixty five deaths, mostly due to septic bronchopneumonia. The disease was most severe among men from the remote Highlands. The final chapter deals with German measles, the general recognition of which dates from 1881. All modern writers with extensive experience are unanimous as to the almost invariably mild course of this disease.

This clearly written book is worthy of its author and of the series in which it appears.

Notes on Books

As a practised writer of crime thrillers Mr ANTHONY WEYMOUTH realizes the importance of arresting the reader's attention from the outset. In the first eight pages of his autobiography, *Whod Be a Doctor?* (Rich and Cowan, 8s 6d) which reveals the author as a West End practitioner, a woman patient commits suicide by throwing herself from the third floor window of a nursing home, and three spectators of the Derby are struck by lightning, one fatally, before the end of the chapter a woman swallows the large blade of a penknife. The book then settles down to chronological order, with an excellent description of student life at St Thomas at the beginning of the century. A provincial house appointment follows enlivened by the periodical arrival at the hospital of a four wheeler bearing a case of delirium tremens. The author showed his wisdom by viewing practice from every angle through a variety of locum-tenencies described with considerable humour before setting up in London. Here he rapidly established a successful practice, which became still more lucrative as circumstances and inclination induced him to specialize in neurasthenia. The book is full of amusing anecdotes, both of patients and of doctors and there are many wise observations on diagnosis and treatment. Mr Weymouth writes with a pleasing modesty and shows that he possesses a broad and philosophical outlook on medicine and on life in general. The author's frequent references to his happy family circle are attractive (and unusual) features of this very readable book.

A new edition of *Nursing Homes* (Benn Brothers 4s) has made its appearance. The number of pages this year extends to 280 and the information it contains arranged under counties has been obtained either from the nursing homes direct or from responsible official sources. This volume continues to meet a definite need since it is the only yearbook of its kind covering Great Britain.

Période de Fécondité et Périodes de Stérilité Chez la Femme by H VIGNES and M ROBÉY (Masson et Cie 14 fr) has as its main theme the safe period postulated by Ogino and Knaus. Experimental work suggests that ovulation occurs within a set and limited period of the menstrual cycle and that human spermatozoa can only live for a short time in the female genital passages and therefore that a woman can only conceive during at most one week out of every month. Clinical evidence, on the other hand would appear to offer irrefutable evidence that conception may take place on any and every day of the menstrual cycle. Dr Vignes and Robéy, both clinicians are fully conversant with the scientific literature and are at the same time able to evaluate the vast amount of relevant clinical data which has accumulated.

They conclude that the period of fertility is very circumscribed in the great majority of women, but that in some 20 per cent there is no safe period. We know of no better or more concise exposition of this vexed question.

The third edition of *The Preparation of Scientific and Technical Papers* has been produced by SAM F. TRELEASE and EMMA SAREPTA YULE (Ballière, Tindall and Cox 7s). This manual has been designed to help those who have to write university theses and should enable them to present their material in the most effective form. Though primarily intended for students, the handbook should prove of value to medical men in the preparation of technical articles. Much of the material submitted to scientific journals is badly arranged, this defect often spoiling otherwise good work and thus lessening its chances of acceptance. The information contained in the handbook, properly applied, should assist in the production of a well-balanced paper, and the result thus be less likely to prove a source of tribulation to a busy editorial staff.

Mr GEORGE RYLEY SCOTT's work on *The Sex Life of Man and Woman* (Werner Laurie 10s) claims to be an introduction to the sexual problem not only for the lay public but also for the medical profession, of which he is not a member. The book deals in a popular manner with the anatomy and physiology of the sexual organs, masturbation, venereal disease, impotence, sterility, and birth control. We have noticed a number of verbal errors, such as labias (pp 19 and 21), sine immissio (pp 184, 302, and 311), haemophylic (pp 201 and 304), and pruritis (pp 279 and 316).

Preparations and Appliances

MOBILE LIGHT TREATMENT UNIT FOR WARD WORK

An advance in actinotherapy equipment is the introduction by Hanovia Ltd of Slough of a ward model lamp for light treatment, an easily transportable unit which can be brought to the patient's bedside. The arc lamp with its reflector and hood and the electrical controls are mounted on a small trolley which runs smoothly on ball bearing rubber tyred castors and is so compact and mobile that it can be taken along any corridor through any doorway and into any lift or small room. The ultra violet rays are generated by a mercury arc operating in a U shaped tube of transparent quartz. A parabolic adjustable reflector will in one position diffuse the actinic rays for general treatment and in another concentrate the beam for focal or regional irradiation with threefold intensity. By means of an extension arm and fork bracket the lamp can be swung right over the cot and be operated in any desired position without moving the patient. The unit has the further advantage that it can be connected to any light socket or pendant by means of a universal plug. A timing clock is provided which marks any treatment interval up to thirty minutes and gives a ringing signal when irradiation is finished. From three to five patients an hour can be treated. The great value of the unit is that it makes possible the administration of light treatment at an earlier stage in recovery after operation or other illness. As matters have stood the time for light treatment has often been dictated not by the patient's need for it, but by his ability to go or be taken to the light department. There should be a wide field of application for this new design. The model can be inspected at the firm's London showroom, 3 Victoria Street SW 1.

WHOOPIING COUGH VACCINE

Wellcome brand whooping-cough vaccine (Burroughs Wellcome and Co) is put out by the makers with certain reservations. They point out that there is at present no satisfactory laboratory test for potency. They quote clinical reports favourable to the value of this vaccine as a prophylactic agent, but conclude that so far there is no general agreement as to the efficacy of the vaccine in the treatment of whooping-cough. There will however be general agreement with their conclusion that the disease is such a nuisance and is often so severe that any promising prophylactic measure is worthy of trial.

RURAL HEALTH IN THE SOUTHERN STATES

In the beginning of the seventeenth century certain English people crossed the North Atlantic under the aegis of a corporation known as the London Company. Settling first at Jamestown in Virginia they spread from there towards the west over territory which now forms part of the Southern States of the Union. These planters, as they came to be called, had left home in order to advance their fortunes and not out of any grievance against their native land, and the methods of government which they adopted in their new surroundings were those of the England of their day, where the county and not the town was the recognized administrative unit. A little later in the same century, when the Plymouth Company received its privileges other English settlers of a different temper took ship to Massachusetts, and moved westward also. These colonizers of the northern belt had broken away from the Church of England. Being independents, they thought in terms of separate congregations and tended to cluster round their churches. For these reasons, and also because they had no inclination to copy English ways of administration developed in their hands on an urban and not a county basis.

This difference between the northern and southern belts has shown a strong tendency to persistence, with the result that at the present time county government as understood in America is still exemplified most typically in the south and not the north. Administrative life in many southern counties is one of primeval simplicity. The official stands very close to his people. No difference of status lends distance or enchantment to his position and the average citizen feels entirely at liberty to call him in question personally at every turn. A medical officer assuming duty in one of these young communities, when in seeking to organize health movements he finds his progress barred by unreason may well wish for guidance not only on the professional aspects of the position but also in the more difficult art of managing his fellow creatures.

Guidance by Experience

Guidance for the rural medical officer under such conditions is furnished in a recent work by Professor Harry S. Mustard of the Johns Hopkins University¹ who, having himself had experience of rural health practice, modestly claims to have made most of the mistakes which it is possible for a rural health officer to make. He writes against the background of his own southern experience, which adds weight and value to what he has to say. Keeping in mind the fact that the rural medical officer is to a large extent cut off from recourse to libraries, he details in a tactful manner some of the clinical tests now current in public health work. He reminds his reader how to carry out the Schick test, how to make the Mantoux test which he considers the method of choice among tuberculin tests, and how to enter the spinal canal. He discusses the question of suitable quarters to house the medical officer and his department, whether at the County Buildings or over a store in the main street or in a residential block. In the matter of records and reports he is minutely and even paternally helpful. He devotes close on a page to the family folder which is a folded card destined to contain the health records of the members of a family, pointing out that if the fold breaks through it is better in the long run to use a new folder than to provide a new hinge of course be entered in the new. Turning next to the tabulation of statistical material he warns his reader against the blunder of trying to convey too much in a

graph. He expresses dislike which many will share for complicated diagrams designed to reveal the interrelations of sections of a health department which by means of their "suspended circles hanging triangles, and converging lines" obscure a situation which, simply stated would have been plain enough.

His article on statistical procedures is admirable in its conciseness and lucidity. Beginning with the centring constants he passes on to probability calculations, and finishes up with the Chi square test, remaining throughout within the understanding of the intelligent non-mathematical reader.

Apart from the reasoned sequence of Professor Mustard's work his more general observations upon the world of health as he has found it are lively and instructive. We cite a few. "It is seldom that rural health departments are developed solely through local interest. 'Public meetings are not to be entered into without some previous preparation and stage setting.' 'To inform some men that the maternal mortality rate is 7.5 maternal deaths per 1000 live births causes them only to wonder how one half a woman might die.' 'A low standard of work by a health officer should be sufficient for his removal from office.' The dollar equivalent method of appraisal of health department service is a poor procedure. 'The following up of the nurse on the individual child is one of the least productive things in the school health programme.' 'Midwives in the United States are all much alike, except that some are worse than others.' 'The pasteurization of clean milk is the sheet anchor in milk sanitation.'

Through the whole of Professor Mustard's writing runs a strong vein of common sense, which is, after all, to borrow his own expression, the 'sheet anchor' of public health administration, whether rural or urban.

W. F. Wenner and J. H. Alexander (*Arch. Otolaryng.*, Chicago, December, 1936, p. 742) find that changes in the nasal mucosa following zinc ionization do not hinder the absorption of vasomotor drugs instilled into the nasal cavity. The changes after zinc ionization consist of coagulative necrosis and desquamation of the surface epithelium. The surface then becomes covered with stratified epithelium, and this gives rise again to normal ciliated columnar epithelium within two to three months. The turbescence of the mucous membrane and the rhinorrhoea in allergic rhinitis clear up after intranasal ionization. There are two ways in which one can explain the relief of symptoms: (1) Changes in the epithelial lining have affected the rate of absorption of substances introduced into the nose. (2) Disturbances of the nervous vasomotor mechanism have been brought about by the process of ionization. Any agent that would interfere with the vasodilator nerves would produce symptomatic relief without necessarily altering the state of sensitivity. The authors experimented on cats in order to put these views to a test. Under anaesthesia the left side of the nose was filled with zinc sulphate solution and a current was allowed to flow for twenty minutes. In another group of cats a physiological salt solution was used instead of the zinc sulphate and a current passed in the same way. At intervals varying from one week to three months the animals were again anaesthetized, and tracheal and carotid cannulae were inserted for recording respiration and blood pressure. The choanae were then blocked with post-nasal plugs and various vasoconstricting and vasodilating agents were instilled into either the right or the left nostril. Histological preparations of the nasal mucosa show that the blood vessels and cavernous tissue fail to react to vasoconstrictor and vasodilator substances for six weeks after zinc ionization and for four weeks after treatment with the galvanic current alone. This failure of the vascular structures to constrict or to dilate is due either to a temporary paralysis of the vasomotor nerves or to a loss of vascular tone.

¹ *Rural Health Practice* by Harry S. Mustard, M.D. New York: The Commonwealth Fund. London: H. Milford Oxford University Press. 17s.

BRITISH MEDICAL JOURNAL

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SATURDAY MAY 15 1937

THE CORONATION

When these words appear in print on Friday there can be little left to say about the Coronation. The newspapers and the radio stations are working overtime, and full details of the great ceremony of Wednesday, May 12, will be known to our readers in every part of the world. One backward glance, to an earlier Coronation, may therefore suffice.

In the early summer of 1838—when the British Medical Association was six years old and bore a longer name and its *Journal* had not yet come to birth—Queen Victoria drove to Westminster Abbey to be crowned. "It was a fine day, and the crowds of people exceeded what I have ever seen. Their good humour and excessive loyalty was beyond everything, and I really cannot say how proud I feel to be the Queen of such a Nation. The enthusiasm, affection and loyalty were really touching, and I shall remember this day as the *Proudest* of my life!" It was a memorable and glorious day for me. I likewise venture to add that people thought I did my part very well." So wrote the young Queen of England ninety-nine years ago. And history, we hope, will have repeated itself in all these particulars for her great-grandson on May 12, 1937. Our weather is capricious, but the affection and respect that supported Victoria from the day she came to the throne to the end of her long life can be counted upon by George VI. The ceremonies still follow the ancient ritual, but the plans and preparations this year have been more elaborate than for any earlier Coronation, even that of 1911, and the strain on those responsible is proportionately heavier.

Without further ado we offer congratulations to our King and Queen at this time of national rejoicing and wish them many years of happiness and good work, in the name of the 36,000 medical men and women who make up the British Medical Association to-day. King George VI, like his grandfather, his father, and his eldest brother before him, has honoured the Association by becoming its Patron. The members, scattered throughout the British Empire and beyond, join with their fellow subjects in a loyal toast to His Majesty

VOLUNTARY HOSPITALS

The Voluntary Hospitals Commission set up by the British Hospitals Association which began to collect evidence some sixteen months ago, has now issued its report,¹ and an account of the report was given in last week's *Journal* at page 984. It is a useful document which deserves, and will no doubt receive, careful consideration by all those interested in the work of the voluntary hospitals. If the members of the Commission can scarcely be regarded as thoroughly representative, they constitute a team competent to give, within their terms of reference, a valuable judgement on the matters remitted to them from the aspects of medicine, nursing, the law, administration, and finance and accountancy. The report is signed by all the members without reservations, so that the opinions it expresses and the advice it tenders should be regarded as having much weight and some authority. It does not profess to cover the whole field of hospital problems, it touches only lightly on the relation of voluntary to council hospitals, and while there will be readers who may think that some matters discussed might well have been left for the consideration of the Central Hospital Council, whose formation is one of the chief recommendations, there will be others who may wish that certain of the questions raised had been carried to a more complete conclusion even before their consideration by such a council. For the painstaking sifting of a large volume of evidence and the orderly presentation of conclusions, the Commission deserves thanks.

The report sets out quite definitely the opinion that the continuance of the voluntary hospitals is highly desirable, but that this continuance of their existence will be precarious in the absence of co-operation and organization by them in the field which they cover. These are blessed words but they do stand for important actualities. Though the annual revenue of the voluntary hospitals, taking them all together, at present considerably exceeds their annual expenditure the former is uncertain and the latter is bound to increase and there can be little doubt that unless as a whole these institutions show themselves willing to abandon much of the isolation and individualism to which they have clung obstinately for so long all but a very few which are specially favoured or endowed will find it very difficult or even impossible to survive for many years. The course not only recommended but regarded as essential is a voluntary grading and grouping and regionaliza-

¹ London. The British Hospitals Association, 12, Grosvenor Crescent, S.W. 1 (1s post free 1s 2d)

tion for a large variety of purposes. The grading into central, district, cottage, and auxiliary hospitals, defined in the report in a manner now generally understood, the grouping of a considerable number of hospitals of these several grades round one large hospital fully equipped and staffed for almost all kinds of medical and surgical work, the recognition of the area which such a group of hospitals serves as largely a self-contained region which their activities would cover in common, from which in great part they would derive their revenue, and to which in the main they would direct their appeals for support—these things are urged very strongly upon the numerous boards of management. For each such region and representative of all the hospitals within it, there should be a regional council which would by no means supersede the individual governing bodies, but would enable them collectively to give a more efficient service, to effect considerable economies, and to avoid overlapping appeals for funds and unnecessary or ill-placed future hospital provision. The report sets out with some fullness the organization and duties of such a council but does not touch on two relevant matters of great importance.

What is to be the relation of these organized groups and councils to the hospital work of the Local Government authorities? On what principles are the regions themselves to be mapped out? The absence of more definite guidance as to the best answers to these necessary questions leaves the report relatively unhelpful but one can understand it. The Commission was appointed by a voluntary body and its reference was to voluntary hospitals only. The volume of work within this reference was already large and the Commission had therefore neither the time nor the authority to go much further than it has gone into the statutory powers or duties of local authorities, or to suggest in more than very general terms the desirability of co-operation between the two sets of hospitals and of representation of the local authorities upon the regional councils which the voluntary hospitals might form. Again the actual mapping out of the country into definite hospital regions could scarcely have been expected but the Commission might perhaps have gone more fully into the questions immediately arising with regard thereto. Almost all that is said is that the regions "should be built up in accordance with the position, rank, and size of hospitals and should have regard as far as possible, to the areas of local authorities with which they will co-operate." That is poor material for any adequate discussion of this very important matter. The British Hospitals Association has at present a regional organization and there are several

schemes of group hospital work now operating, but these are all admittedly imperfect or experimental. It is possibly wise of the Commission merely to indicate the way in which this question might be further explored, but a fuller discussion in the report would have been welcome. The success of the whole plan will depend upon the care and tact with which individual hospitals are approached, and, in the long run, on the degree to which the organized regions can be made either directly or, by ingenious arrangements within the organization, to correspond with Local Government areas or with combinations of such areas.

The formation of a Central Hospital Council co-ordinating the work of the several regional councils is a corollary. This is recommended, and an indication, sufficient for the moment, is given of its nature and duties. We are glad to note that on other matters of importance the Commission is in general agreement with the policy advocated by the British Medical Association. Among these may be mentioned the "open staff" for cottage hospitals, the provision of pay-beds and the access thereto of medical practitioners other than the staff of the hospital to which they are attached, the restricted use of out-patient departments, the principle of the payment of visiting medical staffs, an income limit for members of contributory schemes, and the organization of such schemes on an insurance rather than on a charitable basis. It is true that in some of these matters with which the medical profession is specially concerned the Commission sees difficulties in their immediate and universal application, but so does the British Medical Association. Yet it is a distinct advance towards the accomplishment of the Association's policy that in principle, and to a great extent in detail too, this policy should thus have received the endorsement of an impartial and independent authority.

CONGRESSES OF OBSTETRICS AND GYNAECOLOGY

It is scarcely a hundred years since obstetrics and gynaecology began to develop into a separate and distinct branch of medicine. In recent times the field of obstetrics has become enlarged and to day it is recognized that eugenics, sociology, and even the survival of the race are problems which are closely related to and deserve the careful consideration of those engaged in obstetrics. The American Committee on Maternal Welfare has been instructed to explore the possibilities of convening a national congress in the United States representing not only obstetricians and gynaecologists but general practitioners, nurses, and others interested in the social sciences and services to consider those problems which are related to the welfare of women.

Holland has arranged for the first International Congress in Obstetrics and Gynaecology to be held since 1912 to take place in Amsterdam next year. Obstetrics and gynaecology are vitally concerned with "race" in its widest aspects and race is now more than ever an important factor in international relations. It is therefore probable that the American National Congress mooted for 1939 will so far from detracting from the success of that to be held at Amsterdam actually serve to stimulate the nations to resort more frequently to international conferences devoted to the study of woman.

THE IDE TEST

There are many complement fixation and flocculation tests employed in the diagnosis and management of syphilis, but they are not yet perfect, and therefore any new procedure which combines simplicity and ease of performance with a high degree of specificity and of sensitivity deserves attention and trial. Such a one is the Ide test.¹ It is claimed that this test can be carried out in a few minutes with one drop of blood and in a consulting room, and the results compare favourably with such reactions as the Wassermann, Meinicke, Kahn, and others, moreover, it is equally applicable to blood serum, cerebro spinal fluid or serum exudate obtained from a blister. One drop of blood, or serum or cerebro-spinal fluid etc. is mixed with saline on a hollow glass slide and the appropriate antigen is added. The slide is then shaken for four to five minutes and the result read under the low power objective of a microscope or with a powerful lens. Positive reactions show purplish blue coloured clumps, while in a negative reaction there is no sign of clumping. The preparation of the antigen is somewhat laborious but once it is made and standardized there is no further difficulty. Briefly ox heart is extracted with alcohol, and then to the extract are added measured amounts of cholesterol, gum benzoin and dyes (crystal violet and azure II). In a comparison made by the authors with the Wassermann reaction on 1,262 sera the results were in very close agreement. The Wassermann reaction gave 119 strongly positive reactions, 10 "one plus", 7 "plus minus" and 1126 negative reactions as compared with Ide 116, 3, 3 and 1140 respectively. It is not stated what technique was employed in the Wassermann reaction with which the comparison was carried out. Inasmuch as the Wassermann tests are generally rather less sensitive than the best flocculation tests the fact that the Ide test gave rather fewer positives than the Wassermann suggests that it is not a highly sensitive test. On the other hand since apparently no false positives were recorded it would appear to be remarkably specific exactly how it compares in sensitivity with the better flocculation tests such as the Kahn, Kline or Muller-Ballungs we are not told. The Ide test is really little more than a modification of the Kline with the difference that colouring matter and gum benzoin are added to the antigen in order that the "clumping" may be seen more clearly. Even this idea is not altogether

new since Laughlen¹ has described a similar technique using scarlet-red as his dye, his test has been reported on very favourably in America. This account of the Ide test raises the question whether any "consulting room" test is or ever can be applicable to the diagnosis, control of treatment, and test of cure of syphilis. Even the simplest of tests have their pitfalls not only in the setting up of the reaction but in the reading and interpretation of results. Moreover serum tests for syphilis should be done in batches rather than singly for in this way a better control can be exercised and any faulty reagent is more likely to be recognized. It is very doubtful if the time has yet come when such investigations can be taken out of the hands of the skilled pathologist and carried out by the clinician in his consulting room. The danger of the false positive and all that it may bring in its train is too real. The pathologist has controls whereas these may not always be available to the clinician. If the Ide test were shown to be very highly sensitive a negative reaction might be useful for excluding syphilis—like the "presumptive" Kahn or "exclusion" Kline—both in cases with lesions suspicious of contagious syphilis and for testing blood donors and on other occasions when time is of importance but it will need much more testing out before it can be accepted as foolproof and suitable for the "consulting room". In the meantime no doubt the simplicity of the test will appeal to many, and certainly it seems worthy of an extended trial in this country where as yet it appears to be almost unknown.

TRANSIENT VENTRICULAR FIBRILLATION

Ventricular fibrillation has rarely been described because its presence is incompatible with a functioning left ventricle. There is reason to think that it is the cause of an unexpectedly fatal result in patients with Graves's disease, myocardial degeneration and possibly pneumonia. It is therefore of interest that clinical and graphic manifestations of the spontaneous revival of the heart from ventricular fibrillation have been recorded by Sidney P. Schwartz² in seven cases. Seven patients were suffering from transient or established auriculo-ventricular block and the attacks of ventricular fibrillation were apparently incidental. It appears that the following was what happened. The ventricular fibrillation was immediately succeeded by a brief post-fibrillary pause during which the ventricles were at a standstill. During this pause the auricles generally continued to beat but at a slowed rate. After a variable period a regular idioventricular rhythm started and increased in rate up to a maximum in some cases of about 160 a minute. Following this ventricular tachycardia which was quite distinct from the ventricular fibrillation the previously existing normal idioventricular rhythm was resumed at a rate of between 30 and 40. This sequence of events was fairly constant in all the patients who recovered from the attacks of ventricular fibrillation and lasted from a few seconds up to half an hour according to the duration of the

¹ *Canad. med. Ass. J.* 1935, 33, 179.
² *J. Amer. med. Ass.* 1936, 108, 1170.
³ *Amer. J. med. Sci.* 1936, 192, 808.

fibrillation. The clinical picture seemed definite enough to make it possible to suspect the presence of a previous attack of ventricular fibrillation. After the ventricular fibrillation had stopped and the idioventricular tachycardia had started, the skin flushed, the heart beat forcefully and regularly but the pulse at the wrist remained small. The patient recovered consciousness, screamed, spoke incoherently and was completely disorientated to his surroundings. On the resumption of the previous normal basic rate of 30 to 40 coma and unconsciousness might appear and last up to five hours. During the period of ventricular fibrillation the breathing ceased but on the resumption of the ventricular tachycardia and afterwards, it became irregular and sometimes of a Cheyne-Stokes character. Complete electrocardiographic studies are given and it appears that the observations are of definite value in the diagnosis of attacks of ventricular fibrillation in such patients. From the point of view of treatment there is little to add for the obvious drug quinine which might inhibit or cut short the period of ventricular tachycardia, is very dangerous in cases of complete heart block as it has been shown to have a paralysing effect on the idioventricular node with a fatal result.

RESEARCH IN FOOT-AND-MOUTH DISEASE

A committee including distinguished veterinary and medical members was appointed by the Ministry of Agriculture in 1924 'to direct and conduct investigations into foot and mouth disease either in this country or elsewhere with a view of discovering means whereby the invasions of the disease may be rendered less harmful to agriculture'. The fifth progress report of this committee¹ has just been issued and provides a record of continuous valuable work. Difficulties encountered in dealing with a disease of this character are great but the increasing mass of information acquired through the activities of the committee helps to keep outbreaks of the disease under control. The chief centre of research is the experimental station at Pirbright Surrey but work has also been carried out at the National Institute of Medical Research, the Lister Institute of Preventive Medicine, Manchester University, and the Oxford Bureau of Animal Population. The body of information accumulated covers the following more important factors. Washing soda or diluted caustic soda have been established as the most suitable and efficacious disinfectants. The size of the virus and its resistance to physical and chemical changes have been fully investigated. It has been shown that the particles are smaller than those of practically any other known virus, the diameter being estimated to be about one hundred thousandth part of a millimetre. Certain materials alleged to possess curative or preventive properties have been exhaustively tested so far without discovering anything of real value. The committee's researches into immunity have shown that the resistance induced by an attack of the disease is very solid and far more durable than was formerly believed. This fact encourages the hope that an effective method of

artificial immunization may not be out of reach. But this work on immunity is made difficult because several types of virus are now known to exist, each one of which can "break down" an immunity established against any of the others. The severity of attacks of all types is modified by such factors as age, sex, state of nutrition and climatic conditions. Due attention has been paid to possible means of transmission of the disease by other animals in the field and experimentally. In particular, rats, mice, rabbits, moles, voles, ferrets and various species of birds have been carefully tested. The recent discovery of the great susceptibility of the hedgehog is noted as a matter of special interest. It has provided an experimental animal which may prove of great value for the disease is conveyed by contact between one hedgehog and another in the same way as with ordinary farm stock. The committee feels hopeful that its future researches will be much facilitated by this new knowledge.

A NEW SPECIES OF RICKETTSIA

Among the numerous forms of typhus fever now recognized there is one named *fièvre boutonneuse* observed along the Mediterranean littoral which appears to be due to a species of *Rickettsia* called *R. conori*. Man is infected with this organism through the bite of a dog tick, *Rhipicephalus sanguineus*. Observations have shown that as many as 30 to 40 per cent. of dogs in the area where the disease is prevalent may carry a latent infection. Two years ago Donatien and Lestoquard² working in Algeria found that dogs exposed in the open fields became heavily infested by ticks of the species *Rhipicephalus sanguineus* developed fever and anaemia and died in one to two weeks. Examination of their blood revealed the presence of rickettsial bodies confined strictly to the interior of wandering monocytes of medium size. They occurred in the form of groups containing from four to six up to several dozen individual particles. This organism which the authors named *R. canis* is the subject of a fresh communication². Experimental inoculations have shown that *R. canis* in contradistinction to *R. conori* gives rise to a febrile reaction in the dog with the appearance of considerable numbers of histiocytes in the peripheral blood. *Rickettsia* are found in the histiocytes but never in the endothelial lining of the blood vessels or serous membranes. The monkey *Macacus mius* on the other hand reacts strongly to *R. conori* and may even die but is hardly affected at all by *R. canis*. Similarly the guinea-pig which is very sensitive to intradermal or intraperitoneal inoculation with *R. conori* shows no disturbance whatever after inoculation with *R. canis*. These differences between the two organisms are borne out by the results of cross immunity experiments. It is therefore concluded that though *R. conori* and *R. canis* both infect dogs and are both carried by the same tick they belong to different species. Preliminary observations suggest that *R. canis* is not confined to Algeria but occurs as well in the South of France.

¹ H.M. Stationery Office (75)

² *Bull. Soc. Path. exot.* 1935 28 418
² *Ibid.*, 1936 29 1052

CORONATION HONOURS

The medical names included in the Coronation Honours List of May 11 will be found set out at p 1041. Dr Christopher Addison's peerage strengthens the representation of the Labour Party in the House of Lords and rounds off a long career of service to the State. It is more than twenty-five years since Dr Addison gave up the teaching of anatomy for the hurly burly of politics. He parted company with medicine after the National Insurance Bill crisis throughout which he had been a prominent figure in and out of Parliament, but renewed his contacts again for a short time while holding office as the first Minister of Health on the amalgamation of the Local Government Board with the Insurance Commission. Sir Cuthbert Wallace's baronetcy will give great pleasure to the members of our profession; his unselfish work for St. Thomas's Medical School for the Royal College of Surgeons of England of which he is now President, and for Mount Vernon Hospital is known far and wide. The name of George Still has been a household word in paediatrics for so long that no title can add to its fame, but Dr Still's innumerable admirers and disciples will rejoice in the honour that of K C V O which comes to him this week from the King. Dr Arthur Hurst has done fine work for clinical medicine and his knighthood confers one more distinction on Guy's Hospital. Professor Edward Mellanby's K C B recognizes outstanding service to medical science and the cause of research. Obstetrics and the Birmingham Medical School are alike honoured by the knighthood for Professor Harold Beckwith Whitehouse. Air Vice Marshal Alfred William Iredell's K B E will be acclaimed by the R A F Medical Service of which he is the head and the work of Dr John Richards Harris as Minister of Public Health for the State of Victoria has earned him the same honour. Sir John Atkins receives the further distinction of K C V O and a knighthood is bestowed on Dr Arthur Edwin Horn, medical adviser to the Colonial Office. Many other well deserved awards appear in the medical list but this note must not end without congratulations to Dr J P Major on his C B E because the success of the annual meeting of the British Medical Association at Melbourne in 1935 was largely due to his enthusiasm as Honorary Local General Secretary. Three non medical honours should be mentioned here: the knighthood for Mr S P Vivian Registrar General, D B E for Mrs Pimsent late Senior Commissioner Board of Control and the O B E for Mr H N Linstead secretary of the Pharmaceutical Society.

CONTRALATERAL ARTIFICIAL PNEUMOTHORAX

Many explanations of the beneficial action of artificial pneumothorax in pulmonary tuberculosis have been given, but it is generally admitted that rest to the affected part is the most important factor. Since it is unlikely that any breathing occurs in the diseased area even before the pneumothorax is induced the rest is obtained not because the area is immobilized but because the introduction of air into the pleural cavity causes relaxation in the tensions acting on the lesion.

Some workers argue that when the mediastinum is mobile changes in the tensions in one lung are transmitted to some extent at all events to the other lung. It has also been maintained as the recent work of Lopez and A. de Carvalho with angiography confirms, that there is much slowing of the circulation in the collapsed organ while the circulation in the opposite healthy lung is definitely increased. The increase can be demonstrated even when the pneumothorax is quite small and this hyperaemia has been held to account for the not infrequent rapid healing of lesions in the contralateral lung. The above two mechanisms were no doubt in the mind of Ascoli when in 1930 he initiated the practice of contralateral pneumothorax in those patients in whom a pneumothorax on the diseased side could not be induced because the lung was adherent to the chest wall. It is essential that the mediastinum be mobile and that the pneumothorax be kept at a negative pressure so that the respiration in the "collapsed" lung is little reduced. The ideal indication for a contralateral pneumothorax appears to be a large or recurrent haemoptysis originating from an adherent lung. In a recent paper¹ Max Fournier discusses the close anatomical and mechanical interrelations between the two lungs and their vessels and then describes in detail on considerations that are largely theoretical the action of a pneumothorax on the pulmonary circulation in the collapsed and in the contralateral lung. He adds the report of a patient with bilateral disease who did not respond to rest. An artificial pneumothorax was induced on the left the worse side. This though kept at a negative pressure produced some deviation of the mediastinum to the right, where a small cavity was replaced in the skiagram by a much larger diffuse shadow which was interpreted as "congestion". Two months later the mediastinum was in the centre and the lesions on both sides were obviously healing. Four months later still residual fibrosis was all that could be seen on either side. Throughout, the pneumothorax had been kept quite small and at a negative pressure both in inspiration and in expiration after each refill.

The next session of the General Medical Council will open on Tuesday May 25 at 2 p.m., when the President Sir Norman Walker M.D. will take the chair and give an address. The Council will continue to sit from day to day until the termination of its business.

The seventeen new Fellows of the Royal Society elected on May 6 include one member of the medical profession, Dr Alan Nigel Drury, lecturer in pathology, University of Cambridge, and Dr Percival Hartley, Director of Biological Standards, National Institute for Medical Research.

We regret to announce the sudden death of Sir George Badgerow M.D. F.R.C.S. formerly dean and surgeon, Hospital for Diseases of the Throat, Nose and Ear, Golden Square, London, one of the best known Canadians in London.

¹ Arch. med.-chir. Appar. resp. 1936 11 377

ENDOCRINES IN THEORY AND PRACTICE

This article concludes the series on Endocrinology contributed by invitation

THE HISTORY OF ENDOCRINOLOGY

BY

SIR HUMPHRY ROLLESTON, Bt., G.C.V.O., K.C.B.

Nomenclature

The term "ductless glands" was used by the encyclopaedic Haller in the eighteenth century, that of "internal secretion" by Claude Bernard in 1855, endocrine and endocrinology ($\epsilon\upsilon\delta\omicron\nu\omicron\rho\omicron =$ within $\kappa\rho\iota\nu\omega =$ I separate) came into use in this century. In 1905 Starling, on the look out for a synonym for 'chemical messengers', adopted the suggestion of hormones ($\omicron\rho\omicron\upsilon\nu\omega =$ I excite) made by the late Sir W. B. Hardy and his classical colleague W. T. Vesey of Gonville and Caius College, Cambridge. Jayle (1937) argued that the word $\omicron\pi\upsilon\omega\rho\rho\alpha$ of similar derivation in the book of the *Epidemic Diseases* of Hippocrates should be translated as secretions not as 'movements' and from the context included internal as well as external secretions. The word "hormone" fitted secretin—discovered in the duodenum by Bayliss and Starling in 1902—a substance which stimulates the pancreas to secrete, but for chemical messengers which exerted the opposite a depressing or inhibitory effect the word chalones ($\chi\alpha\lambda\omicron\nu\omega =$ I relax) was suggested in 1913 by Schäfer who also proposed autacoids ($\alpha\upsilon\tau\omicron\iota\kappa\omicron =$ self, $\eta\mu\epsilon\rho\epsilon =$ drug) to include both forms. The words dysfunction, dysthyroidism and dyspituitarism have been used in two slightly different senses for an abnormal secretion of a gland—such as a thyroxine differing in its composition from that normally secreted in being incompletely oxidized as was suggested by H. S. Plummer in toxic goitre and for irregular or overlapping syndromes—such as cases of toxic goitre with some features of myxoedema or, with regard to dyspituitarism combinations of hyper and hypo pituitarism, as Cushing pointed out in 1910.

The conception and the name of anti-hormones have recently been brought forward by Loeb, Aron and Collip to explain the diminution of reaction which may follow long-continued injections of hormones. Collip and Anderson (1934) found that repeated experimental injection of the pituitary thyrotropic hormone was followed by the production of an anti-thyrotropic principle in the blood which when injected into normal animals rendered them non-reacting. This mechanism would appear to tend to preserve the endocrine balance. The synonyms given by independent workers to the same hormone, especially those of the gonads and pituitary may be puzzling and confusing; it is therefore to be hoped that a standardized nomenclature will be adhered to in the interests of clarity and precision.

Organotherapy

The use of animal and human substances with medical intent is an ancient and widespread custom among primitive races, the origin of which has been ascribed to various superstitions especially to totemism but has also come about in a somewhat capricious manner. Sometimes, however, the underlying idea appears quite obvious—namely that when a disease was thought to involve an organ—for example the heart or the lungs—that organ was employed as the remedy. Incidentally it must be admitted

that in the recent past a similar train of thought was suggested by some advertisements of glandular extracts. Evidence that organotherapy has long been practised is obvious from the contents of the early pharmacopoeias issued by the Royal College of Physicians of London, those between 1618 and 1746 containing a large number of nauseous substances which have often been compared to the contents of the witches' cauldron in *Macbeth* (1606).

Pre-scientific Suggestions

The conception of internal secretions has been read into a remark of Theophile de Bordeu in 1775 to the effect that each organ gives off 'emanations' which are necessary for the well being of other parts of the body. Like some of his contemporaries, he also laid stress on the tonic effects of the secretions of the testes and ovaries. Legallouis (1801) has been thought to have a more solid claim to be considered the forerunner of the conception of internal secretions. An important experimental proof of the internal secretion of the testes was published in 1849 by A. A. Berthold of Göttingen, who showed that transplantation of a cock's testes to another part of the body prevented the atrophy of the comb, which otherwise follows castration. This result he ascribed to the influence exerted by the testes on the blood and thus on the whole body. This observation, although the same was shown to be true for the ovaries in 1900 by Knauer and by Halben, was forgotten until Biedl exhumed it in 1910, the year that Steinach published his conclusion that sexual desire and the secondary sex characters are controlled by the internal secretions of the gonads.

Claude Bernard, Addison, and Brown-Séquard

Scientific activity in endocrinology otherwise dates from 1855 when two important events took place. On January 9, in a lecture at the Collège de France, Claude Bernard, who was much in advance of his time, pointed out that the liver had two secretions—an external one of bile into the intestine and an internal one of sugar directly into the blood. In the same year Thomas Addison of Guy's Hospital brought out his monograph *On the Constitutional and Local Effects of Disease of Supra-Renal Capsules*. In it he explained, more fully than in his address in 1849 entitled *On Anaemia Disease of the Suprarenal Capsules* that in searching for the cause of "idiopathic" (afterwards called pernicious and later Addisonian) anaemia he "stumbled" (his own word) on the association of disease of the adrenals with the definite train of symptoms to which his name was attached by Trousseau in 1856. This stimulated Brown Séquard in Paris to physiological research on the adrenals, and Sir Jonathan Hutchinson in London to collect clinical cases and post mortem specimens. Brown Séquard was a remarkable pioneer in endocrinology; probably quite unconscious of de Bordeu's speculative views, he expanded the conception of an internal secretion of the ductless glands to include all the organs and tissues of the body, thus anticipating the modern neuro-humoralism though mainly on a basis of keen imagination. Further when a septuagenarian his enthusiastic advocacy of the rejuvenating effects of testicular emulsions though naturally arousing adverse criticism, yet focused attention on the

hormonal effects of the gonads. In 1856 he found that removal of the adrenals was fatal, and ascribed this to toxæmia, poisons normally produced being no longer neutralized or removed by the adrenals. In the discussion which followed it was suggested that the results were due to the operative damage to the sympathetic. But the hypothesis that the ductless glands exerted a detoxicating effect was widely accepted, and in the case of the adrenals was not abandoned until after 1894, when Oliver and Schäfer, by experimental injection of extracts of adrenals, discovered in the adrenal medulla the pressor substance adrenaline. This the first hormone to be thus established was isolated in 1901 by Takamine and by Aldrich, and was synthesized in 1904 by Stolz. The active principle of the cortex, called cortin by Hartman (1928) and eschatin by Swingle and Pfiffner (1930), has been proved to be the hormone absence of which is responsible for the symptoms of Addison's disease, thus reversing the previous belief that these symptoms were due to absence or deficiency of adrenaline.

The Thyroid

The knowledge that the symptoms of endocrine inadequacy are due to the absence or diminution of an internal secretion present in, and necessary for, health was first established in the case of the thyroid.

Attention may be directed to two early but little known anticipations of an internal secretion of the thyroid. In 1836 Wilkinson King, lecturer on pathology at Guy's Hospital in succession to Thomas Hodgkin, described the passage of the secretion of the thyroid into its lymphatics and so into the great veins and clearly foresaw the internal secretion of the thyroid. In 1850 T. B. Curling, surgeon to the London Hospital in reporting "Two Cases of Absence of the Thyroid Body and Symmetrical Swellings of Fat Tissue at the Sides of the Neck, Connected with Defective Cerebral Development," wrote "I am not acquainted with any case on record in which a deficiency of the thyroid body has been observed in the human body," and added, "It is highly probable that this abnormal secretion of fat was dependent on the absence of those changes which result from action of the thyroid."

In 1871 when the endemic form of cretinism, recognized in the sixteenth century in the Duchy of Salzburg by Paracelsus, had practically died out in this country, Hilton Fagge described sporadic cretinism. He then prophesied that this condition might occur in adult life. Two years later his senior at Guy's Hospital Sir William Gull, described a cretinoid condition supervening in adult life in women, which in 1877 W. M. Ord named myxoedema. This was followed by active research into the physiology of the thyroid, the effects of thyroidectomy performed in 1858 were republished by Moritz Schiff in 1884, and repeated by Sir Victor Horsley in 1885 and by others. Clinical observations were widely reported, and in 1883 Sir Felix Semon put forward the view, at first denied but subsequently confirmed, that cretinism, myxoedema, and post-operative myxoedema (cachexia strumipriva) were all due to insufficiency of the thyroid gland.

Other diseases due to diminished endocrine activity or its suppression are parathyroid tetany, eunuchoidism, and disorders due to hypopituitarism—for example adiposogenital dystrophy described by Babinski in 1900 and more fully by Frohlich in the following year and Simmonds's pituitary cachexia (1914) of which progeria (*προγενος* = prematurely old) described by Sir Jonathan Hutchinson (1886) and given that name by Hastings Gilford in 1904 appears to be the juvenile form.

An interesting historical point in therapeutics is the alternating association and neglect of iodine in connexion with (a) the occurrence of goitre in districts poor in iodine, (b) the prophylactic treatment of simple goitre, and (c) the treatment of toxic goitre. Seaweed and sponge had been empirically used in the treatment of simple goitre centuries before iodine was isolated in 1814. In the first quarter of the last century it was employed with such enthusiasm that the resulting iodism led to its almost complete abandonment. In the middle of the last century Chatin's inquiries suggested that iodine was responsible for goitre, but the prophylactic use of iodine was not widely established until after the success obtained in 1916 by Marine and Kimball in North America. Toxic goitre was treated in the middle of the last century by iodine, for example, by W. B. Cheadle in 1869, but this method went completely out of fashion until about 1921.

Diseases Due to Excess of Endocrine Secretion

After it was established that absence or deficiency of the internal secretion of the thyroid caused symptoms which could be relieved by substitution treatment—namely, by the injection of an emulsion of the gland as was done by G. R. Murray in 1891 or later by an extract by the mouth (Hector Mackenzie, E. L. Fox 1892)—a further question excited interest. This was whether an excess of the normal secretion or an altered secretion produced morbid symptoms the reverse of those due to absence or deficiency of the secretion. This possibility had in fact been suggested earlier, before the introduction of the successful treatment of myxoedema by thyroid extract. Rehn in 1884 regarded toxic goitre as due to excessive thyroid secretion, and Möbius two years later argued that the disease was caused by an abnormal activity of the thyroid which poisoned the body. Much later, in 1923, H. S. Plummer and Boothby stated that exophthalmic (or toxic) goitre was due to two factors—namely, an excess of normal thyroxine and an abnormal thyroxine—whereas toxic adenoma was caused by an excess of normal thyroxine alone. Harington (1933) strongly criticized the idea of an abnormal internal secretion in toxic goitre and the general principle that pathological states of endocrine glands may produce too much or too little of their internal secretion but do not manufacture abnormal compounds has recently been emphasized by Cameron (1936). Hyperplasia, adenomas, and, less often, carcinomas of the endocrine glands may, for this is not constantly the case secrete the hormones proper to the glands but their altered histological structure logically suggests that their secretion would also be abnormal.

Diseases other than toxic goitre ascribed to excessive endocrine secretions are (i) acromegaly, at first confused clinically with myxoedema due to adenomatous growth and overactivity of the eosinophil cells in the anterior pituitary, the anterior lobe being incriminated by Tamburini in 1894 and the responsibility of the eosinophilic adenomas established in 1901 by Benda. (ii) Small adenomas composed of basophil cells in the anterior lobe (pituitary basophilism) were described as responsible for a remarkable train of symptoms by Harvey Cushing in 1932—deservedly called Cushing's syndrome, much discussion has been excited about its relation to, or identity with the adrenogenital syndrome. (iii) Although Addison's disease in 1855 was the first endocrine disease to be described it was half a century later that Bulloch and Sequiera (1905) correlated the adrenogenital syndrome of virilism with tumours of the adrenal cortex. The association of tumours of the chromaffin cells (chromaffinomas or pheochromocytomas) of the adrenal medulla with

LONDON SATURDAY MAY 15 1937

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Every Member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he or she belongs.

ONE HUNDRED AND FIFTH ANNUAL MEETING, BELFAST, JULY, 1937

Treasurer N BISHOP HARMAN, LL D, FRCS

The following programme has been arranged
Wednesday July 21 (Combined meeting with Section of
Pathology Bacteriology and Immunology) 10 a.m. Dis-

discussion The Haemorrhagic States To be opened by Prof L J WITTS (London) followed by Dr N B CAPON (Liverpool) Haemorrhagic Conditions in the Newborn Dr JANET M VAUGHAN (London) and Dr S C DYKE (Wolverhampton) Clinical Pathology Dr R G MACFARLANE (London) Mechanism of Haemorrhage and Haemostasis and Dr W A. TIMPERLEY (Sheffield) Treatment of Haemophilia

Thursday July 22—10 a.m. *Discussion* Cholecystitis To be opened by Prof J W McNEE (Glasgow) followed by Dr A F HURST (Windsor) Diagnosis and Treatment Sir DAVID WILKIE (Edinburgh) The Role of Surgery Dr T GARRATT HARDMAN (Dublin) Radiology of the Gall bladder and Dr CHARLES H MILLER (London) Cardiac Pain in Gall-bladder Subjects

Friday July 23 (Combined meeting with Section of Surgery)—10 a.m. *Discussion* The Diagnosis and Treatment of Abscess of the Lung. To be opened by Dr L. S. T. BURRELL (London) and Mr J. E. H. ROBERTS (London) followed by Dr PETER KERLEY (London) Dr CARL SEMB (Oslo) Dr GEOFFREY MARSHALL (London) Dr W. BURTON WOOD (London) and Mr G. R. B. PURCE (Belfast) (Members of the Section of Radiology will be welcome at this discussion)

SURGERY

President Professor P. T. CRYMBLE, M.B., F.R.C.S. (Belfast)

Vice Presidents Professor L. R. BRAITHWAITE, M.B., F.R.C.S. (Leeds) ADAMS A. McCONNELL, M.B. F.R.C.S.I. (Dublin) HOWARD STEVENSON, M.B. F.R.C.S.I. (Belfast), REGINALD M. VICK, O.B.E., M.Chir., F.R.C.S. (London)

Honorary Secretaries H. P. MALCOLM, M.C. M.B., M.Ch. 27, College Gardens Belfast HAROLD C. EDWARDS, M.B., M.S., F.R.C.S. 57, Queen Anne Street W.1

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* The Surgical Treatment of Non-stenosing Peptic Ulcer To be opened by Prof JOHN MORLEY (Manchester) followed by Mr N. C. LAKE (London) Mr W. H. OGILVIE (London) and Dr CARL SEMB (Oslo) *Paper* Mr H. W. RODGERS (London) The Use of the Gastroscope in Cases of Dyspepsia with Normal X-Ray Findings.

Thursday July 22—10 a.m., *Papers* Prof L. R. BRAITHWAITE (Leeds) The Significance of Bile in the Stomach Prof A. K. HENRY (London) Factors in the Successful Treatment of Severe Burns Mr J. G. YATES BELL (London) The Steinach Operation for the Relief of Prostatic Symptoms and Prof E. W. ARCHIBALD (Montreal) Cutting the Sphincter of Oddi for Relief of Pain following Cholecystectomy and Recurring Pancreatitis without Stone and for Subacute Cholangitis. *Discussion* Obstructions of the Common Bile Duct. To be opened by Mr E. R. FLINT (Leeds) followed by Mr HOWARD STEVENSON (Belfast) and Mr G. GORDON TAYLOR (London)

Friday July 23 (Combined meeting with Section of Medicine)—10 a.m., *Discussion* The Diagnosis and Treatment of Abscess of the Lung To be opened by Dr L. S. T. BURRELL (London) and Mr J. E. H. ROBERTS (London) followed by Dr PETER KERLEY (London) Dr CARL SEMB (Oslo) Dr GEOFFREY MARSHALL (London) Dr W. BURTON WOOD (London) and Mr G. R. B. PURCE (Belfast) (Members of the Section of Radiology will be welcome at this discussion.)

OBSTETRICS AND GYNAECOLOGY

President Professor C. G. LOWRY, M.D., F.R.C.S.I., F.C.O.G. (Belfast)

Vice-Presidents ALEX. J. DEMPSEY, M.B. F.C.O.G., (Belfast) T. S. S. HOLMES, M.Ch. F.R.C.S., F.C.O.G. (Belfast) Professor A. L. FYLAND, ROBINSON, M.D., F.R.C.S., F.C.O.G. (Liverpool) WILFRED SHAW, M.D., F.R.C.S., F.C.O.G. (London)

Honorary Secretaries C. H. G. MACAFEE, M.B., F.R.C.S. F.C.O.G., 18 University Square, Belfast, Mrs. HILDA N. LLOYD, M.B. F.R.C.S., F.C.O.G., 40, Harborne Road Edgbaston Birmingham

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussions* (1) Obstetrical Significance of Pelvic Variations. To be opened by Prof. HERRERT THOMAS (Newhaven U.S.A.) (2) The Clinical Value of Protosil and Similar Compounds in the Treatment of Puerperal Infections. To be opened by Mr G. F. GIBBERD

(London) *Papers* Mr PERCY MALPAS (Liverpool) The Problem of Habitual Abortion and Mr V. B. GREEN ARMYTAGE (London) Hystero-salpingography—its Obstetrical and Gynaecological Importance.

Thursday July 22 (Combined meeting with Section of Nutrition)—10 a.m., *Discussion* The Nutritional Needs in Pregnancy To be opened by Sir ROBERT MCCARRISON (Oxford) Scientific and Physiological Aspect Dame LOUISE MCILROY (London) Clinical Aspect and Dr G. C. M. M. GONIGLE (Stockton-on-Tees) Public Health Aspect followed by Dr LUCY WILLS (London) Calcium Phosphorus and Osteomalacia, and Dr MARGARET J. BALFOUR (London) Practical Methods for Securing Better Nutrition in Pregnancy *Papers* Mr D. W. CURRIE (Leeds) The Use of Vitamin E in Habitual Abortion Dr R. A. McCANCE (London) The Actual Food Intakes of Pregnant Women at Different Economic Levels (Members of the Section of Hygiene and Public Health will be welcome at this meeting.)

Friday July 23—Demonstration of talking motion picture on the Forceps Operation including Episiotomy and its Anatomy kindly lent by Prof Joseph De Lee of Chicago *Papers* Mr C. H. G. MACAFEE and Mr H. I. McCLURE (Belfast) A Critical Survey of 349 Cases of Breech Delivery Prof A. H. DAVIDSON (Dublin) Vaginal Hysterectomy (cinema film) Dr KATHLEEN O. VAUGHAN (London) Posture in Child birth.

PATHOLOGY, BACTERIOLOGY, AND IMMUNOLOGY

President Sir THOMAS HOUSTON O.B.E. M.D. (Belfast)

Vice Presidents Professor S. PHILLIPS BEDSON, M.D. F.R.S. (London) S. C. DYKE, D.M. F.R.C.P. (Tottenham Staffs), N. C. GRAHAM, M.C. M.B. B.Ch. (Muckamore, Co. Antrim) Professor J. S. YOUNG, M.C., M.D. (Belfast)

Honorary Secretaries Miss EILEEN M. HICKLEY, M.D. M.R.C.P.I., 31, College Gardens Belfast Miss JANET M. VAUGHAN, D.M., M.R.C.P., British Post-Graduate Medical School, Hammersmith Hospital Ducane Road W.12

The following programme has been arranged

Wednesday July 21 (Combined meeting with Section of Medicine)—10 a.m., *Discussion* The Haemorrhagic States To be opened by Prof L. J. WITTS (London) followed by Dr N. B. CAPON (Liverpool) Haemorrhagic Conditions in the Newborn Dr JANET M. VAUGHAN (London) Idiopathic Purpura Dr S. C. DYKE (Wolverhampton) Clinical Pathology, Dr R. G. MACFARLANE (London) Mechanism of Haemorrhage and Haemostasis and Dr W. A. TIMPERLEY (Sheffield) Treatment of Haemophilia

Thursday July 22 (Combined meeting with Section of Radiology)—10 a.m., *Discussion* Bone Tumours To be opened by Dr R. E. ROBERTS (Liverpool) Prof J. S. YOUNG (Belfast) and Mr HARRY PLATT (Manchester) followed by Dr J. DUNCAN WHITE (London) and Dr J. F. BRAILS FORD (Birmingham) Members of the Section of Orthopaedics will be welcome at this discussion.)

Friday July 23—10 a.m. *Discussions* (1) Influenza To be opened by Dr C. H. ANDREWS (London) followed by Dr C. H. STUART-HARRIS (London) Dr R. W. FAIRBROTHER (Manchester) and Dr J. G. SCADDINO (London) (2) Staphylococcal Infections in Man To be opened by Prof J. W. BIGGER (Dublin) followed by Dr H. J. PARISH (Beckenham) and Dr EILEEN O. BARTLEY (Belfast)

PHARMACOLOGY AND THERAPEUTICS, INCLUDING ANAESTHETICS

(One Day to be devoted to Anaesthetics)

President Professor E. B. C. MAYRS, M.D., D.P.H. (Dunmurry Co. Antrim)

Vice-Presidents OLIVE M. ANDERSON, M.D. D.A. (Belfast), Professor DAVID CAMPBELL, M.C. M.D. F.R.F.P.S. (Aberdeen) Professor J. H. GADDUM, M.R.C.S. L.R.C.P. (London), W. B. PRINROSE, M.B., Ch.B. (Glasgow)

Honorary Secretaries J. T. LEWIS, M.D. F.R.C.P., 25 College Gardens Belfast Miss KATHARINE G. LLOYD-WILLIAMS, M.D. 48 Gordon Square, W.C.1

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* Individual Variations in Response to Drugs To be opened by Prof.

A J CLARK (Edinburgh) followed by Prof J H GADDUM (London) Colonel L W HARRISON (London) Dr G GRAHAM (London) and Dr P MACCARVILL (Dublin) 12 noon *Paper* Dr J F BROCK (Cambridge) Iron Therapy in Hypochromic Anaemia

Thursday July 22—10 a.m. Discussion The Treatment of Circulatory Failure To be opened by Dr J CRIGHTON BRAMWELL (Manchester) followed by Prof K D WILKINSON (Birmingham) Dr S B BOYD CAMPBELL (Belfast) Dr A R. GILCHRIST (Edinburgh) and Dr E. P. POULTON (London) 12 noon *Paper* Dr NATHAN MUTCH (London) Therapeutic Use of Magnesium Trisilicate 2.30 p.m. Demonstration on the Use of Vinyl Ether by Dr VICTOR GOLDMAN (London) at Belfast Hospital for Sick Children Falls Road

Friday July 23—Session to be devoted to Anaesthetics 10 a.m. *Discussions* (1) Anaesthesia in Minor Surgery To be opened by Dr J H T CHALLIS (Woodford Green) followed by Dr RONALD JARMAN (London) Cinema Film Dr J H GILLIES (Edinburgh) Dr W B PRIMROSE (Glasgow) and Mr J S LOUGHRIDG (Belfast) (2) The Use of Vinyl Ether in General Anaesthesia (with cinema film) To be opened by Dr VICTOR GOLDMAN (London) followed by Dr MARY H MAYEUR (London), The Use of Vinyl Ether in Obstetrics

Two films will be shown one dealing with dental work in children and the other with the administration of vinyl ether for dental work

The following Sections will meet on Two Days

ANATOMY, PHYSIOLOGY, AND BIOCHEMISTRY

President Professor E. C. DODDS, M.V.O. MD, FRCP (London)

Vice Presidents Professor HENRY BARCROFT M.D. (Belfast) Professor R J BROCKLEHURST D.M. (Bristol) Professor MARY F. LUCAS KEENE, M.B. B.S. (London) Professor B. A. McSWINEY M.B., B.Ch. (London)

Honorary Secretaries RICHARD H. HUNTER, M.D., M.Ch., Anatomy Department Queen's University Belfast Professor A. WORMALL, D.Sc., Department of Biochemistry, St Bartholomew's Hospital Medical College E.C.1

The following programme has been arranged

Wednesday July 21—10 a.m., Discussion The Anatomy, Physiology and Biochemistry of the Sex Glands. To be opened by Prof E. C. DODDS (London) followed by Dr A. S. PARKES (London) Prof A. B. APPLETON (London) Dr P. M. F. BISHOP (London) Dr J. M. ROBSON (Edinburgh) and Mr W. R. WINTLTON (London) *Papers* Prof W. J. E. JESSOP (Dublin) Clinical Bearings of the Parathyroids Prof A. WORMALL (London) Recent Work in the Chemistry of Insulin and Dr R. D. LAWRENCE (London) The Use of Protamine Insulin and Similar Preparations 2.30 p.m. Demonstration at Pathological Institute of Cinema Film by Sir JOSEPH BARCROFT and Dr D. H. BARROW (Cambridge) The Effect of Experimental Lesions in the Central Nervous System on the Growth and Movements of the Foetus (Members of the Section of Neurology and Psychological Medicine will be welcome)

Friday July 23—10 a.m., Discussion Visceral Pain To be opened by Prof J. R. LEARMONTH (Aberdeen) followed by Prof J. R. LEARMONTH (Aberdeen) Prof B. A. McSWINEY (London) Prof D. T. BARRY (Cork) and Dr E. P. POULTON (London) *Papers* Dr J. DIXON BOYD (Cambridge) The Afferent Nerve Supply of Arteries with Special Reference to Pressure Receptors Dr D. H. SMYTH (Göttingen and Belfast) Vascular Reactions of the Kidney in Response to Carotid Sinus and Other Reflexes Prof T. H. MILROY (Edinburgh) Chemical Mediators in Nervous Activity and Dr S. NEVILL (London) The Application of Advances in Physiology and Biochemistry to the Study of Diseases of Muscle

DISEASES OF CHILDREN

President H. MOFFLEY FLETCHER, M.D., FRCP (London)

Vice Presidents Professor SEYMOUR G. BARLING M.B., B.S., M.Ch., F.R.C.S. (Birmingham) ROBERT MARSHALL, M.D., FRCP (Belfast) M. BRICE SMYTH, M.B., B.Ch. (Belfast)

Honorary Secretaries T. H. COZIER, M.D., MRCP, Liverpool Square Belfast URSULA SHELLEY, M.D., MRCP, 70 Wimpole Street, W.1

The following programme has been arranged

Thursday July 22—10 a.m., Discussion Dilatation and Elongation of the Colon To be opened by Prof J. R. LEARMONTH (Aberdeen) followed by Mr F. A. R. STAMMERS (Birmingham) *Papers* Dr W. R. F. COLLIS (Dublin) Modern Control of Scarlet Fever Mr W. E. M. WARDILL (Newcastle-on-Tyne) Cleft Palate

Friday July 23—10 a.m. Discussion Enuresis To be opened by Dr ROBERT HUTCHISON (London) followed by Dr STANLEY GRAHAM (Glasgow) *Paper* Prof SEYMOUR G. BARLING (Birmingham) Treatment of Tuberculous Cervical Adenitis

NEUROLOGY AND PSYCHOLOGICAL MEDICINE

President GEORGE RIDDOCH, M.D. FRCP (London)

Vice Presidents R. D. GILLESPIE, M.D. DPM. FRCP (London) J. PURDON MARTIN, M.D. FRCP (London) M. J. NOLAN, L.R.C.P. and S.I. (Belfast) Professor LAMBERT C. ROGERS, FRCS, F.R.A.C.S. (Cardiff)

Honorary Secretaries R. S. ALLISON, M.D., MRCP, 27 University Square Belfast DENIS H. BRINTON, B.M., MRCP, 27, Harley Street, W.1

The following programme has been arranged

Wednesday July 21—10 a.m. Discussion Early Diagnosis of Intracranial Tumours To be opened by (a) Dr F. M. R. WALSHIE (London) Clinical Diagnosis followed by Dr T. TENNENT (London) and Dr H. L. PARKER (Dublin) (b) Mr N. M. DOTT (Edinburgh) Special Methods of Diagnosis followed by Prof A. A. McCONNELL (Dublin) Mr G. JEFFERSON (Manchester) and Dr W. GREY WALTER (London)

Thursday July 22—10 a.m. Discussion The Mental Manifestations of Head Injury To be opened by (a) Prof E. MAPOTHER (London), Psychiatric Aspect, followed by Dr F. E. PILLINGTON (London) and Mr C. E. WINTERSTEIN (London) (b) Dr J. PURDON MARTIN (London) Neurological Aspect followed by Dr H. HILTON STEWART (Belfast) and Dr W. RITCHIE RUSSELL (Edinburgh)

NUTRITION

President Sir ROBERT McCARRISON, C.I.E., LL.D., M.D., FRCP (Oxford)

Vice Presidents Professor STUART J. COWELL, M.B., FRCP (London), J. A. SMYTH, M.D. (Belfast) LUCY WILLS, M.B. (London)

Honorary Secretaries Professor DOUGLAS C. HARRISON, D.Sc. Ph.D. Department of Biochemistry Queen's University, Belfast J. F. BROCK, D.M. MRCP., Department of Medicine, The University, Cambridge

The following programme has been arranged

Thursday July 22 (Combined meeting with Section of Obstetrics and Gynaecology)—10 a.m. Discussion The Nutritional Needs in Pregnancy To be opened by Sir ROBERT McCARRISON (Oxford) Scientific and Physiological Aspect Dame LOUISE McILROY (London) Clinical Aspect and Dr G. C. M. MCGONIGLE (Stockton-on-Tees) Public Health Aspect followed by Dr LUCY WILLS (London) Calcium Phosphorus and Osteomalacia and Dr MARGARET I. BALFOUR (London) Practical Methods for Securing Better Nutrition in Pregnancy *Papers* Mr D. W. CURRIE (Leeds) The Use of Vitamin E in Habitual Abortion Dr R. A. McCANCE (London) The Actual Food Intakes of Pregnant Women at Different Economic Levels (Members of the Section of Hygiene and Public Health will be welcome at this meeting.)

Friday July 23—10 a.m. Discussion The Physiological Basis and the Standards of Nutrition To be opened by Prof STUART J. COWELL (London) followed by Dr G. C. M. MCGONIGLE (Stockton-on-Tees) Protein Requirements, Dr HELEN M. MACKAN (London) Iron Deficiency and Anaemia Dr J. F. BROCK (Cambridge) Conditional Vitamin Deficiencies and Dr J. C. SPENCE (Newcastle-on-Tyne) Conditional Nutritional Defects *Papers* Prof W. R. FEARON (Dublin) Micrometabolic Constituents of the Modern Diet, their Sources, Distribution and Significance Dr W. R. AYERST (Coonoon) Standards of Nutrition and the Detection of Malnutrition Dr R. A. McCANCE (London) Food Intakes and Food Requirements

OPHTHALMOLOGY

President J A CRAIG M.B. F.R.C.S. (Belfast)

Vice Presidents J D M CARDELL, M.B. F.R.C.S. (London)
I A DAVIDSON, M.D. (Belfast), PERCIVAL J HAY, M.D.
(Sheffield)

Honorary Secretaries J R WHEELER, M.B. F.R.C.S.,
D.O.M.S., 6 College Gardens Belfast, EUGENE WOLFF, M.B.
F.R.C.S., 99, Harley Street, W1

The following programme has been arranged

Thursday July 22—10 a.m. *Discussion* Squint and Heterophoria with Special Reference to Orthoptic Treatment. To be opened by Mr W. H. McMULLEN (London) followed by Mr G. G. PENMAN (London) and Miss M. A. PUGH (London). *Papers* (1) Wing Commander P. C. LIVINGSTON R.A.F. (London) The Role of Heterophoria in Binocular Disharmony with Special Reference to Air Pilots (2) Miss EUPHAN M. MAXWELL (Dublin) A Note on a Case of Ectopia Lentis Associated with Arachnodactyly

Friday July 23—10 a.m., *Discussion* Affections of the Eye with Relation to Skin Diseases To be opened by Mr J. H. DOGGART (London) Ophthalmic Aspect and Dr G. B. DOWLING (London) Dermatological Aspect. *Papers* Mr R. AFFLECK GREEVES (London) Some Unusual Cases of Glaucoma Secondary to Injury Mr J. V. McAREVEY (Dublin) Corneal Transplantation in an Aphakic Eye (Members of the Section of Dermatology will be welcome at this meeting)

ORTHOPAEDICS, INCLUDING TREATMENT
OF FRACTURES

President S T IRWIN M.B. M.Ch. F.R.C.S. (Belfast)

Vice-Presidents H F MACAULEY, M.B., M.Ch. F.R.C.S.I. (Dublin) R J McCONNELL, M.B. M.Ch. (Belfast), T P McMURRAY M.B., M.Ch. F.R.C.S.Ed. (Liverpool)

Honorary Secretaries CECIL A CALVERT M.B. F.R.C.S.I. 8 University Square Belfast, Miss E. HENRIETTA JEBENS, M.B. F.R.C.S. 56 Wimpole Street W1

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* Operative Treatment and Results in Fracture of the Neck of the Femur To be opened by Prof E. W. HEY GROVES (Bristol) and Dr SVEN JOHANSSON (Göteborg) followed by Dr ELLIS JONES (Los Angeles) Mr ERIC J LLOYD (London) Mr R. WATSON JONES (Liverpool) Mr H. A. BRITAIN (Norwich) and Mr H. O. CLARKE (Manchester) 2 p.m., Exhibition of Cinema Films demonstrating the Treatment of the Neck of the Femur by speakers in the discussion in the Sectional Room at the University

Friday July 23—10 a.m. *Discussions* (1) Modern Treatment of Club-foot To be opened by Mr DENIS BROWNE (London) and Mr E. P. BROCKMAN (London) followed by Mr T. P. McMURRAY (Liverpool) and Miss M. FORRESTER BROWN (Bath) (2) Treatment of Tennis Elbow To be opened by Mr G. P. MILLS (Birmingham)

OTO-RHINO-LARYNGOLOGY

President HENRY HANNA M.B. B.Ch. (Belfast)

Vice-Presidents J W KILLEN M.B. F.R.C.S.I. (London) derry) D F A NEILSON F.R.C.S. (London) DONALD WHEELER, M.B. F.R.C.S. (London) F G WRIGLEY M.D. (Manchester)

Honorary Secretaries F A. McLAUGHLIN M.B., F.R.C.S. 71, University Road Belfast F. C. W. CAPPS F.R.C.S., 16 Park Square East, NW1

The following programme has been arranged

Wednesday July 21—*Papers* Mr A. A. McCONNELL (Dublin) Non suppurative Complications of Otitis Media Mr V. F. LAMBERT (Manchester) The Vocal Cords of Singers Mr L. GRAHAM BROWN (London) External Otitis Mr R. R. WOODS (Dublin) The Audiometer and Differential Diagnosis in Deafness

Friday July 23 (Combined meeting with Section of Hygiene and Public Health)—10 a.m., *Discussion* Prevention and Treatment of Diphtheria To be opened by Dr A. GARDNER ROBB (Belfast) followed by Dr E. H. R. HARRIES (London) and Dr C. J. McSWEENEY (Dublin). *Papers* Dr E. H. T. NASH (Hounslow) and Dr G. CHESNEY (Poole) Diphtheria Immunization

HYGIENE AND PUBLIC HEALTH

President Professor W J WILSON M.D. D.P.H. (Belfast)

Vice-Presidents Professor J JOHNSTONE JERVIS M.D., D.P.H. (Leeds) ELWIN H. T. NASH, M.R.C.S., M.R.C.P., D.P.H. (Hounslow) A. GARDNER ROBB M.B., D.P.H. (Belfast), C. S. THOMSON M.D., M.R.C.P.Ed., D.P.H. (Belfast)

Honorary Secretaries F F KANE, M.D. M.R.C.P.I., D.P.H., Purdysburn Fever Hospital Belfast H. E. COLLIER M.C., M.B., Ch.B., University of Birmingham, Edmund Street, Birmingham.

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* Enteric Fever To be opened by Dr J. RITCHIE (Dumfries) followed by Mr A. FELIX (London) Dr S. WATSON SMITH (Bournemouth) Dr S. H. COOKSON (Bournemouth) Lieut.-Col. C. H. H. HAROLD (London), Major General H. M. J. PERRY (London) Dr E. H. R. HARRIES (London) Dr C. J. McSWEENEY (Dublin) Dr C. S. THOMSON (Belfast) Dr A. GARDNER ROBB (Belfast) and Dr R. J. MAULE HORNE (Poole). *Paper* Dr F. MAY ERSKINE (Belfast) Goitre in School Children

Friday July 23 (Combined meeting with Section of Otorhinolaryngology)—10 a.m., *Discussion* Prevention and Treatment of Diphtheria. To be opened by Dr A. GARDNER ROBB (Belfast) followed by Dr E. H. R. HARRIES (London) and Dr C. J. McSWEENEY (Dublin). *Papers* Dr E. H. T. NASH (Hounslow) and Dr G. CHESNEY (Poole) Diphtheria Immunization

RADIOLOGY

President J C. RANKIN, M.D. (Belfast)

Vice Presidents R. MAITLAND BEATH M.B. B.S. (Belfast) STANFORD CADE F.R.C.S. (London) E. W. TWINING M.R.C.S., L.R.C.P. D.M.R.E. (Manchester)

Honorary Secretaries F. P. MONTGOMERY M.C. M.B., D.M.R.E. Elmwood University Terrace Belfast GRACE BATTEN, B.M. D.M.R.E. Mount Vernon Hospital Northwood, Middlesex.

The following programme has been arranged

Wednesday July 21—10 a.m. *Papers* Dr E. W. TWINING (Manchester), Tomography, Dr A. B. MACLEAN (Glasgow) Normogram for Radiography Dr C. L. McDONOGH (Dublin) Radiological Diagnosis in Obstetrics and Gynaecology, Dr STANFORD CADE (London) Distance Mass Radiation (the Bomb) with film.

Thursday July 22 (Combined meeting with Section of Pathology Bacteriology and Immunology)—10 a.m., *Discussion* Bone Tumours To be opened by Dr R. E. ROBERTS (Liverpool) Prof J. S. YOUNG (Belfast) and Mr HARRY PLATT (Manchester) followed by Dr J. DUNCAN WHITE (London) and Dr J. F. BRAILSFORD (Birmingham) (Members of the Section of Orthopaedics will be welcome at this discussion.)

TUBERCULOSIS

President JOHN R. GILLESPIE, M.D. D.P.H. (Belfast)

Vice Presidents GEOFFREY MARSHALL, OBE, M.D., F.R.C.P. (London) J. E. H. ROBERTS OBE M.B., F.R.C.S. (London) A. TRIMBLE, M.B., B.Ch. D.P.H. (Belfast)

Honorary Secretaries B. R. CLARKE, M.D. Forster Green Hospital for Consumption and Chest Diseases Fortbrea Belfast A. J. MORLAND M.D., M.R.C.P., 135 Harley Street, W1

The following programme has been arranged

Wednesday July 21—10 a.m. *Discussion* Tuberculosis in Hospital Workers To be opened by Dr PETER W. EDWARDS (Cheshire Joint Sanatorium) followed by Dr J. WATT (King George V Sanatorium Godalming) Dr ESTHER CARLING (Berks and Bucks Joint Sanatorium) Dr MADGE MACALIN (University of Western Ontario) and Dr R. MARSHALL (Belfast) 11.30 a.m., *Discussion* The Early Diagnosis of Pulmonary Tuberculosis To be opened by Dr G. MARSHALL (London) followed by Dr L. S. T. BURRELL (London) Dr M. F. O'HEA (Dublin) and Dr J. A. L. JOHNSTON (London derry) 2.30 p.m. Demonstration at Forster Green Hospital (Diseases of the Chest and Tuberculosis) Belfast

Thursday July 22—10 a.m. *Discussion* The Surgical Treatment of Apical Tuberculous Cavities To be opened by Dr CARL SEMB (Oslo) followed by Mr J. E. H. ROBERTS (London), Dr A. J. MORLAND (London) Mr G. A. MASON (Newcastle upon Tyne) Dr G. S. TODD (Midhurst Sana

torium) and Mr H MORRISTON DAVIES (Ruthin) 12 noon
Discussion Artificial Pneumothorax with Special Reference
to Bilateral Collapse To be opened by Dr J CROCKETT
(Glasgow) 2.30 p.m., Demonstration at Belfast Municipal
Sanatorium (Tuberculosis) Whiteabbey

The following Sections will meet on One Day

DERMATOLOGY

President G B DOWLING, M.D., F.R.C.P. (London)
Vice Presidents S W ALLWORTHY, M.D. (Belfast)
REGINALD T BRAIN, M.D. F.R.C.P. (London) W G HARVEY
M.D. F.R.C.P.I. (Dublin)
Honorary Secretaries IVAN H McCAW, M.D. 10 College
Gardens Belfast R MASON, B.O.M.B. Ch 11, Syden
ham Terrace Newcastle-on-Tyne

The following programme has been arranged

Thursday July 22—10 a.m., *Discussion* Autophytic
Dermatitis To be opened by Dr HENRY MACCORMAC
(London) followed by Dr R D GILLESPIE (London) *Papers*
Dr R T BRAIN (London) The Methods and Difficulty of
Investigating Virus Diseases of the Skin and Dr F A E.
SILCOCK (Leicester) Some Minor Methods in Dermatology
Afternoon demonstration of cases and pathological specimens
in the King Edward VII Hall at the Royal Victoria Hospital
(Members of the Section are invited to attend the discussion
on "Affections of the Eye with Relation to Skin Diseases"
in the Section of Ophthalmology on Friday, July 23)

MEDICAL SOCIOLOGY

President THOMAS CARNWATH, D.S.O., M.B. (London)
Vice Presidents Mr ERNEST BEVIN Chairman Trades
Union General Council (London) Sir FRANCIS E. FREMANTLE,
O.B.E. M.D., F.R.C.P. F.R.C.S. M.P. (Hatfield) LEONARD
KIDD M.D. (Enniskillen) Mrs F W OGILVIE, M.A. (Belfast),
Mr J E. WILSON (Belfast)
Honorary Secretaries JAMES BOYD M.D. F.R.C.P.I. D.P.H.,
18 Cadogan Park Belfast Miss OLGA SPICER Secretary
Institute of Labour Management, Terminal House 52
Grosvenor Gardens SW1

The following programme has been arranged

Friday July 23—10 a.m., *Discussion* The Wider Issues of
Health Legislation in Industry To be opened by Dr L P
LOCKHART (Nottingham), Dr R E. LANE (Manchester) Mr
ERNEST BEVIN (London) and Mr J E. WILSON (Belfast)

PROVISIONAL TIME-TABLE

Friday July 16

- 9.30 a.m.—Annual Representative Meeting Assembly Hall
Assembly Buildings Fishervick Place
- 9.00 a.m.—Ladies Club open, Assembly's College Botanic
Avenue
- 10.00 a.m.—Excursions for Ladies.
- 11.00 a.m.—Civil Welcome to Representative Body by the
Lord Mayor
- 1.0 p.m.—Lunch to Overseas Representatives Grand
Central Hotel.
- 4.0 p.m.—President of Ladies Section and Ladies
Executive Committee At Home to Ladies
accompanying members of the Representative
Body Great Hall Queen's University
- 7.10 p.m.—Representative Body Dinner Grand Central
Hotel
- 7.30 p.m.—Dinner to Ladies accompanying Members of
Representative Body Students Union, Queen's University
- 9.0 p.m.—Concert for Members of Representative Body
and their Ladies Students Union Queen's
University

Saturday July 17

- 9.30 a.m.—Annual Representative Meeting Assembly Hall
- 9.00 a.m.—Ladies Club open Assembly's College
- 11.00 a.m.—Excursions for Ladies
- 1.0 p.m.—Photograph of Representative Body Royal
Belfast Academical Institution
- 2.30 p.m.—Afternoon Party for Ladies accompanying
members of the Representative Body by
Royal Ulster Yacht Club Bangor

8.30 p.m.—Reception to Members of the Representative
Body and their Ladies by the President of the
Ulster Medical Society and Mrs
Crymble

Sunday July 18

- 9.30 a.m.—Representative Body Excursion (all day) to
Giant's Causeway and Antrim Coast Road
- 9.0 p.m.—Concert for members of the Representative Body
and their Ladies Whitla Medical Institute

Monday July 19

- 9.0 a.m.—Council Meeting Board Room, Assembly
Buildings
- 9.30 a.m.—Ladies Club open Assembly's College
- 10.0 a.m.—Annual Representative Meeting, Assembly Hall
- 10.15 a.m.—Excursion for Ladies accompanying members of
the Representative Body to Mourne Moun-
tains Silent Valley and Mount Norris,
Newcastle
- 10.30 a.m.—Visit to Hazelwood Estate, Floral Hall and
Bellevue Gardens for Ladies accompanying
Members of Representative Body
- 2.0 p.m.—Reception Room open, Ulster Hall Bedford
Street
- 3.30 p.m.—Garden Party to Ladies accompanying Members
of Representative Body by Mrs Leatham,
Mount Norris Newcastle
- 8.45 p.m.—Theatre Performance for Members of Repre-
sentative Body and their Ladies

Tuesday July 20

- 9.0 a.m.—Official Opening of Exhibition Ulster Hall
- 9.0 a.m.—Reception Room open Ulster Hall
- 9.30 a.m.—Annual Representative Meeting Assembly Hall.
- 9.30 a.m.—Ladies Club open Assembly's College
- 10.0 a.m.—Short Tour for Ladies to Carnickfergus Castle
and Strad
- 10.30 a.m.—Visits to Works including the various linen
manufacturing processes tobacco manufac-
ture shipyards rope making, gardens
nurseries, Art Gallery etc
- 11.0 a.m.—Pathological Museum and Exhibition of Radio-
graphs open, Physics Laboratories, Queen's
University
- 12.30 p.m.—Annual General Meeting Assembly Hall,
followed by Extraordinary General Meeting
- *2.30 p.m.—Visit to Belfast Hospitals and Reception by
Chairman of Board of Management of Royal
Victoria Hospital
- 3.0 p.m.—Visits to Works etc
- *4.30 p.m.—Combined Religious Service Fishervick Presby-
terian Church Malone Road
- *8.0 p.m.—Adjourned Annual General Meeting and Presi-
dent's Address Assembly Hall
- *9.30 p.m.—President's Reception Queen's University

Wednesday July 21

- 9.0 a.m.—Council Meeting Senate Room, Queen's Univer-
sity
- 9.0 a.m.—Reception Room open Ulster Hall.
- 9.0 a.m.—Exhibition open Ulster Hall.
- 9.30 a.m.—Pathological Museum and Exhibition of Radio-
graphs open Physics Laboratories Queen's
University
- 9.30 a.m.—Ladies Club open Assembly's College
- 10.0 a.m.—Scientific Sections Queen's University
- 10.0 a.m.—Notts Ladies Golf Cup Competition and Ladies'
Putting Competition Royal Belfast Golf Club
Craigavad
- 10.0 a.m.—Short Excursion to Bangor Donaghadee, and
Newtownards
- 1.0 p.m.—Visits to Works etc
- 1.0 p.m.—Irish Medical Schools and Graduates' Associa-
tion Lunch Grand Central Hotel
- 2.30 p.m.—Secretaries Conference, Board Room Assembly
Buildings
- 2.30 p.m.—Demonstrations at City Hospitals
- 2.30 p.m.—Tour of Belfast Harbour
- 2.30 p.m.—Visits to Works.
- *4.30 p.m.—Reception by the Chancellor and Senate Queen's
University Lennowale House Malone Road
- 7.0 p.m.—Secretaries' Dinner Thompson's Restaurant,
Donegall Place
- 7.0 p.m.—Inter University Swimming and Diving Com-
petition Pickle Swimming Pool Bangor
- *8.30 p.m.—Reception by the Right Hon the Lord Mayor
of Belfast and the Lady Mayoress City Hall
Belfast
- 8.30 p.m.—Dance on R.M.S. *Almanzora*
- 9.0 p.m.—Dance at the Plaza Chichester Street.

Thursday July 22

- 6.30 a.m.—Annual Medical Breakfast of National Temper-
ance League Students Union, Queen's
University

- *9.0 a.m.—High Mass Coram Pontifice, St Patrick's Church Donegall Street.
 9.0 a.m.—Reception Room open Ulster Hall
 9.0 a.m.—Exhibition open Ulster Hall
 9.30 a.m.—Pathological Museum and Exhibition of Radiographs open Physics Laboratories Queen's University
 9.30 a.m.—Ladies Club open Assembly's College
 9.45 a.m.—Short Tour to Downpatrick, Struell, and Saul (St Patrick's Country)
 10.0 a.m.—Scientific Sections Queen's University
 10.0 a.m.—Golf Competition for Leinster and Childs Golf Cups Malone Golf Club
 10.30 a.m.—Visits to Works etc
 11.0 a.m.—Reception by Countess of Clanwilliam at Montalto Ballynahinch.
 11.0 a.m.—Visit to Nendrum Abbey Island Mahee and Strangford Lough
 1.0 p.m.—Lunch to Women Members of Association Whitla Medical Institute College Square North
 2.30 p.m.—Over seas Conference Board Room, Assembly Buildings
 2.30 p.m.—Demonstrations at Hospitals
 2.30 p.m.—Visits to Works
 *2.30 p.m.—Conferment of Honorary Degrees Queen's University
 *4.0 p.m.—Garden Party and Reception by Government of Northern Ireland at Stormont
 7.0 p.m.—Annual Dinner and Dance at King's Hall Royal Agricultural Society Balmoral

Friday July 23

- 8.30 a.m.—Annual Missionary Breakfast of Medical Prayer Union.
 9.0 a.m.—Reception Room open, Ulster Hall
 9.0 a.m.—Exhibition open Ulster Hall.
 9.30 a.m.—Pathological Museum and Exhibition of Radiographs open Physics Laboratories Queen's University
 9.30 a.m.—Ladies Club open Assembly's College
 10.0 a.m.—Scientific Sections Queen's University
 10.0 a.m.—Morning Coffee for Ladies at Lady President's Week-end House Longacre Newcastle
 10.15 a.m.—Excursion to the Mourne Mountains Silent Valley and Mount Norris Newcastle
 10.30 a.m.—Visits to Works, etc
 11.0 a.m.—Reception and Lunch by Lady O'Neill Cleggan Lodge Broughshane and Visit to Glens of Antrim and Antrim Coast Road
 11.0 a.m.—Coffee at Glencar Banbridge by invitation of Mrs T. J. Gibson
 2.0 p.m.—Treasurer's Cup Golf Competition at Belvoir Park Golf Club
 4.0 p.m.—Garden Party at Mount Stewart Co Down by invitation of the Marquess and Marchioness of Londonderry
 4.0 p.m.—Garden Party at "Seapark" Greenisland by invitation of Sir George and Lady Clark
 4.0 p.m.—Garden Party at Mount Norris, Newcastle by invitation of Mrs R. R. Leatham.
 8.0 p.m.—Popular Lecture by Major General William P. MacArthur D.S.O. F.R.C.P. A.M.S. Insects and Disease Assembly Hall
 9.30 p.m.—Branch and Division Reception and Dance at Floral Hall Hazelwood and Zoological Gardens Bellevue.

Saturday July 24

- 9.30 a.m.—Excursion to Giant's Causeway and Antrim Coast Road
 4.0 p.m.—Garden Party

The Local Honorary General Secretary of the Meeting is Dr F. M. B. Allen, and the Assistant Local Honorary General Secretary Dr R. W. M. Strain. Communications should be addressed to the Whitla Medical Institute College Square North Belfast.

ACADEMIC ROBES

Academic robes which will be worn at the functions indicated * in the above programme may be obtained from Messrs Ede and Ravenscroft official robe makers to the Association 93-94 Chancery Lane, London, W.C.2

HOTEL ACCOMMODATION

First-class accommodation is still available at the Shree Donard Hotel Newcastle Co Down Laharna and Olderfleet Hotels Larne Co Antrim Regent Palace Hotel and Royal Hotel Bangor, Co Down the Mount

Royal Hotel and the Imperial Hotel Donaghadee, Co Down. These are suitable for members who intend bringing their cars. Application for these should be made direct to Messrs Thos Cook and Son, 27, Royal Avenue, Belfast, but applications for private hospitality, lodgings or students hostels should be addressed to the Secretary B.M.A., Whitla Medical Institute, College Square North, Belfast.

ACCOMMODATION AND CRUISE ON
S.S. "ALMANZORA"

To supplement the limited accommodation in an attractive manner arrangements have been made, with the approval of the Council of the Association, for provision of accommodation on board the s.s. *Almanzora*. During the period of the meeting the liner will be moored, in order that members may take a full part in all the social and scientific activities. Moreover, the mooring berth will be adjacent to a tram service which will take members to the city centre in ten to fifteen minutes. At the close of the meeting the liner will leave Belfast and, proceeding via the Inner and Outer Hebrides and Scapa Flow, will cruise in the Norwegian Fjords, visiting Trondhjem, Merok, Hellsøylt, Oie, and other places of interest. The liner will return to Southampton on August 3. This cruise has been planned by Pickfords Travel Service in conjunction with the Royal Mail Lines, and members of the Association who propose to attend the Belfast meeting and are interested in these arrangements are asked to make an early application to Messrs Pickfords at 205 and 206, High Holborn, W.C.1, or at any of their branches.

TRAVELLING ARRANGEMENTS AND
"CONFERENCE" TICKETS

As on this occasion the journey to the place of meeting necessitates travel outside the limit of the English railways, arrangements have been made for the issue to members and those accompanying them to Belfast of a special Conference Ticket at the rate of the ordinary first or third class single fare plus one third for the return journey. This conference rate is more favourable than the special summer or monthly ticket available to all travellers by rail, and can only be obtained on presenting a voucher at the booking office of the station of departure. The vouchers can be obtained from the Financial Secretary B.M.A. House, Tavistock Square London, W.C.1, a separate voucher being required for each individual travelling.

Intending visitors are reminded that early booking of sleeping berths and car space on the cross-channel steamers is advisable and the motor organizations will assist in this matter. Extra steamship services will be available as required subject to notice being given by intending passengers. The Larne Stranraer route is the shortest sea passage (1½ hours open sea), and will not be seriously interfered with by the Glasgow Fair holiday, as sleeping accommodation on board is not required.

AIR SERVICES

As a supplement to the train and boat services members may like to consider the facilities offered by the air routes operating from the principal towns in the British Isles to Belfast. By means of inter-availability arrangements between the railway companies and the air services passengers holding ordinary return air tickets may if they wish exchange the return half at a railway booking office for a first-class single ticket. The companies concerned have agreed that this privilege shall also apply in respect of the special "conference" tickets issued for the Belfast Meeting, the supplement payable being the difference between the value of the return half of the rail ticket and the full air fare. Hand baggage up to 35 lb per passenger is allowed free. Heavy luggage may be forwarded in advance by rail at special rates.

The following table shows the approximate flying hours

from certain points within the British Isles to Belfast and the single and return fares

From—	Approximate Transit Time Hrs. Mins.	Fares	
		Single	Return
Birmingham (Castle Bromwich)	2 10	80/-	132/-
Bristol	4 25	96/-	158/-
Cardiff	6 0	98/6	160/-
Carlisle	3 20	52/-	89/-
Cheltenham and Gloucester	5 5	90/-	150/-
London (Croydon)	3 5	110/-	180/-
Liverpool (Speke)	1 15	59/-	90/-
Manchester (Barton)	1 45	55/-	90/-
Glasgow (Renfrew)	- 55	40/-	65/-

Reservations may be made at Airway Terminus Victoria Station London SW1 Euston House Seymour Street, London NW1 all Railway Air Services booking offices, all principal railway stations if due notice is given

THE ANNUAL DINNER, JULY 22

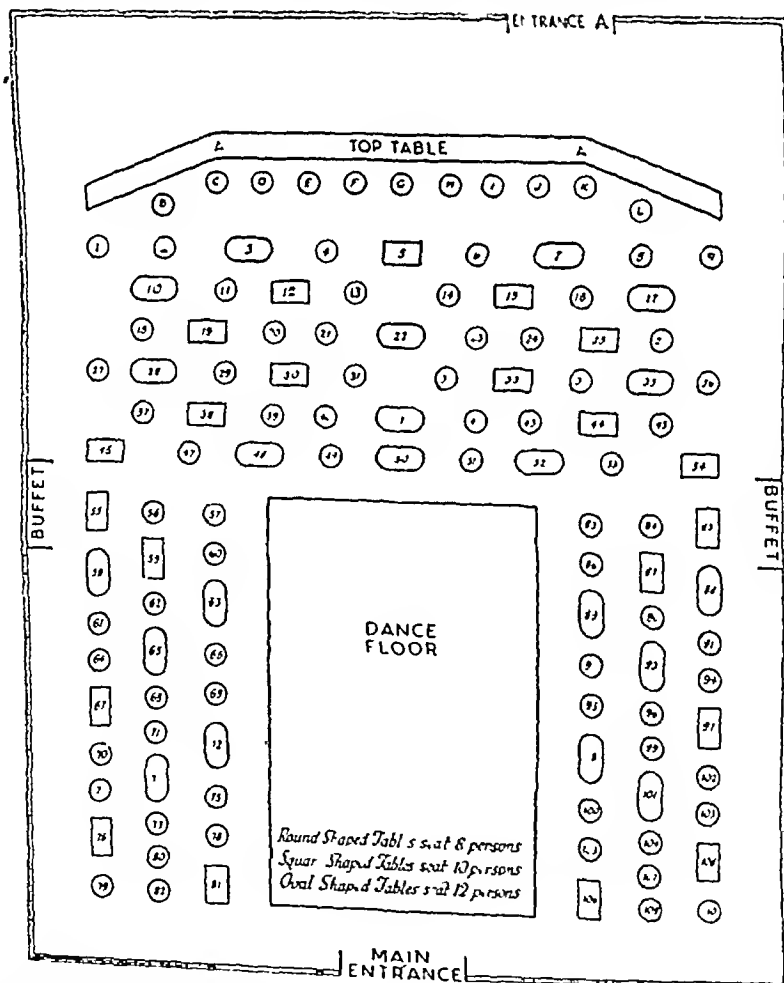
AN INNOVATION

As already announced (*Supplement* April 10 p 179) an innovation is being made in the form of the Annual

appeal to the younger members of the Association as the dances and receptions generally held on the other evenings of the Meeting and accordingly has decided to hold a dinner dance instead

The Kings Hall, Balmoral which has been booked for the occasion is capable of accommodating some 1,200 guests at tables for 8 10 or 12 persons arranged in horseshoe formation round a specially laid dance floor. The toast list and speeches will be limited and it is hoped that dancing will start about 10 o'clock. The Hall is about the size of the main hall at Olympia but the very efficient sound amplifying system will ensure that speeches will be clearly heard in all parts of the room.

It is hoped that members will make up their own parties and seats may be booked according to the position on the Table Plan which is reproduced on this page. If the exact table requested is not available the nearest table of that size will be allocated. Where a request is made for parties not large enough to fill a table seats will be allotted by the Dinner Committee. The ticket for the dinner and dance will 10s 6d, exclusive of wines and seats may be booked in advance upon receipt of payment. The numbers of the tables already booked are 1-9 14 16 21, 22, 27-32, 34, 37-45 47-53 55 56 57 59 60, 62 63, 65 66 68 69 72 74 75, 78 81 83 86, 89 90, 92 93,



B.M.A. Dinner on Thursday July 22. The Local Executive feels that a purely formal dinner such as has been held on previous occasions does not make as wide an

95 98 100 103 Applications should be made to the Dinner Secretary, B.M.A. 105th Annual Meeting, Whitla Medical Institute, College Square North, Belfast

TAKING THE CAR TO NORTHERN IRELAND

In view of the fact that many English and Scottish motorists are unfamiliar with motoring laws and conditions in Northern Ireland, the following details are given for the benefit of those members of the British Medical Association attending the Annual Meeting in Belfast who contemplate transporting their cars to the Ulster capital.

First and foremost the important fact must be emphasized that no Customs barrier exists between Northern Ireland and Great Britain. Therefore when the car has been disembarked on Northern Ireland soil the British motorist has no concern with irritating Customs formalities. Furthermore, motoring laws and regulations operating in Northern Ireland are practically identical with those in force throughout Great Britain with the one important exception—that a general speed limit for motorists is not applicable to this province. The visitor's driving licence, his Road Fund tax, and in almost every instance, his insurance policy are all valid for a temporary stay in Northern Ireland. So it will be obvious that once transport arrangements are completed the motorist is entitled to drive where he chooses in this part of Ireland.

Transport by Sea

When considering a motoring holiday in Northern Ireland transport by sea is an important question to the motorist from Britain. There is a fairly wide choice of shipping services operating between English, Scottish and Northern Irish ports. For example daily sailings take place between Liverpool and Belfast, Heysham and Belfast, and Glasgow and Belfast. Cars may also be shipped daily between Stranraer and Larne. During the summer period—that is from May 1 until September 30—morning and evening services operate between the last named ports.

In addition to the foregoing steamship services operate between London, Plymouth, Southampton and Belfast. Full particulars of sailings, freight charges for cars and passenger fares are as follows:

LONDON-BELFAST (*Clyde Shipping Co. Sailings from London each Tuesday and Friday*)

Car Transport	OR
Per ton	£5 0 0
Minimum	£3 10 0
Passenger Fares	
Saloon single, 55s.	Return 100s
Third-class single	25s

SOUTHAMPTON-BELFAST (*Clyde Shipping Co. Sailings from Southampton each Saturday*)

Car Transport	OR
Per ton	£5 10 0
Minimum	£3 10 0
Passenger Fares	
Saloon single 50s.	Saloon return 90s
Third-class single	22s 6d

PLYMOUTH-BELFAST (*Clyde Shipping Co. Sailings from Plymouth each Friday*)

Car Transport	OR
Per ton	£5 10 0
Minimum	£3 10 0

Passenger Fares

Saloon single 45s. Saloon return (to Glasgow) 80s
(No call at Belfast on outward journey but passengers are landed at Glasgow paying their own fare thence to Belfast.)
Third-class single 22s 6d

(On each of the above trips food costs about 10s. 6d. per day. Return tickets are available for six months but are not issued for third-class passengers.)

From the point of view of some English visitors the choice of route will lie between either Heysham or Liverpool and on both of these routes the loading and unloading facilities for

cars are modern and quite satisfactory. There is little difference in the freight charges levied by the shipping companies concerned as the following figures will demonstrate.

BELFAST-LIVERPOOL (*Belfast Steamship Co. Ltd. Sailings daily except Sunday*)

Car Transport	
Weight not exceeding 10 cwt	£3 0 0
" " 15	£3 5 0
" " 20	£3 10 0
For each additional cwt over 20 cwt	£0 1 6
Tricars up to 8 cwt	£2 12 6

Passenger Fares

Saloon single 22s 6d. return 37s 6d.
Third-class single 10s 6d. return, 21s

(Return tickets are available for three months)

BELFAST-HEYSHAM (*London Midland and Scottish Railway. Sailings daily*)

Car Transport	OR	CR
Weight not exceeding 10 cwt	£2 16 3	£3 3 9
Each additional cwt or part	£0 1 6	£0 1 6

Passenger Fares

Saloon single 22s 6d., return, 37s 6d.
Third-class single 10s 6d. return 21s

(Return tickets are available for three months)

It is of importance to mention that a Sunday night sailing takes place between Heysham and Belfast and vice versa although cars are not accepted for conveyance on Sunday nights.

The Scottish visitor too is well catered for so far as shipping facilities are concerned. He may proceed to Belfast via Glasgow direct, via Ardrrossan or via Stranraer and Larne. Here again freight charges do not vary to any appreciable degree. The rates on the various services mentioned are given below.

BELFAST-GLASGOW (*Burns and Laird Lines Ltd. Sailings daily except Sunday*)

Car Transport	
Not exceeding 10 cwt	each £3 0 0
Over 10 cwt and not exceeding 15 cwt	each £3 5 0
Over 15 cwt and not exceeding 20 cwt	each £3 10 0
Each additional cwt or part	£0 1 6

Passenger Fares

First-class single £1 0 0
return £1 12 0
Third-class single £0 9 6
" , return £0 19 0

(Return tickets are available for three months)

BELFAST-ARDROSSAN (*Burns and Laird Lines Ltd. Sailings daily except Sunday*)

Car Transport	OR
Not exceeding 10 cwt	each £2 10 0
Over 10 cwt and not exceeding 15 cwt	each £2 15 0
Over 15 cwt and not exceeding 25 cwt	each £3 0 0
Each additional cwt or part	£0 1 6

Passenger Fares

Saloon single 17s 6d. return 28s
Third-class single 8s

(Return tickets are available for three months)

LARNE-STRANRAER (*London Midland and Scottish Railway. Sailings twice daily*)

Car Transport	OR
Not exceeding 10 cwt	£2 5 6
Over 10 cwt and not exceeding 25 cwt	3 0 6
Over 25 cwt for each additional cwt or part	£0 1 6

Passenger Fares

Saloon single 10s. saloon return 20s
Steerage single 6s. steerage return, 12s

On each of the services mentioned a motor car may now be shipped outward and return by the same route at a freight charge of fare and a half, provided the car is accompanied by two adult passengers for whom return tickets are taken.

The Automobile Association which has efficient Port Officers at all ports mentioned who will supervise loading and unloading operations will be pleased to relieve the member of all matters connected with the shipment of vehicles. The A.A. will reserve space for cars, book any passenger accommodation required, procure passenger tickets and in other words complete negotiations on behalf of members so that the visitor is free from any petty annoyances connected with this aspect of his holiday. An important point to be remembered is that during the summer months—and this year will certainly be no exception—steamship bookings are particularly heavy, and it is very desirable that lengthy notice should be given to either the shipping company direct or to the A.A., to ensure that the required accommodation can be secured.

Garage accommodation for cars in and around Belfast need present no difficulty to the visitor. The city is adequately supplied with garage establishments which are efficiently staffed and equipped with modern plant thus ensuring the competent handling of any class of repair work. A list of garages in and around Belfast appeared in the Supplement of May 1 p. 246.

Irish Free State—Those visitors who wish to embrace the Irish Free State in their tour should bear in mind that important Customs formalities must be complied with before a motor vehicle can be taken across the land frontier between Northern Ireland and the Irish Free State. In this direction it is suggested that those who are interested should make application to the nearest A.A. Branch Office or to the Belfast Office of the association at Farnham House 5 Oxford Street when full particulars of Customs requirements will be readily advanced.

We are informed that the R.A.C. will provide similar facilities for their members and they advise intending visitors to get into early communication with either their head office Pall Mall, London SW1 or their local branch office 65, Chester Street, Belfast, well in advance of their departure.

Motorists desiring further information should apply to either the A.A. or the R.A.C. for the appropriate guide book. The Ulster Tourist Development Association 6 Royal Avenue, Belfast, have a very useful volume on motoring, which includes a number of tours in and around Belfast and in Northern Ireland generally. Intending motorists are advised to apply for this to the above address.

British Medical Association

ANNUAL REPRESENTATIVE MEETING, BELFAST, 1937

The Annual Representative Meeting of the British Medical Association will be held in the Assembly Hall Assembly Buildings Fishwick Place Belfast, on Friday, Saturday, Monday and Tuesday, July 16, 17, 19, and 20 1937.

RESOLUTIONS BY DIVISIONS AND BRANCHES FOR THE REPRESENTATIVE BODY

INDEX TO ADVERTISEMENTS IN BRITISH MEDICAL JOURNAL

Motion by SOUTHPORT That (with reference to para 53 of Annual Report of Council) the Representative Body protests strongly against the omission of an index to advertisements in the *British Medical Journal* and instructs the Council to consider the restoration of this index at the earliest possible date, as many members are inconvenienced by its absence.

DENTAL BENEFIT REGULATIONS

Motion by SOUTHPORT and LANARKSHIRE That (with reference to para 83 of Annual Report of Council) the Representative Body disapproves of the adoption of a sliding scale for the administration of general anaesthetics for the removal of teeth, and that the policy of the Association as previously expressed be adhered to.

Motion by WAKEFIELD, PONTEFRAC, and CASTLEFORD That (with reference to para 83 of Annual Report of Council) one guinea should be the minimum fee for any general anaesthetic (excluding gas and oxygen) administered by a medical practitioner.

INVESTIGATION OF DEATHS FROM CANCER

Motion by WAKEFIELD, PONTEFRAC, and CASTLEFORD That (with reference to para 86 of Annual Report of Council) the minimum fee for a report made by a medical practitioner to a medical officer of health in connexion with the investigation of deaths from cancer be five shillings.

REMUNERATION OF MEDICAL PRACTITIONERS EMPLOYED PART TIME BY LOCAL AUTHORITIES

Motion by PORTSMOUTH That (with reference to para 103 of Annual Report of Council) the following section B (13) of the Scale of Remuneration of Medical Practitioners Employed Part time by Local Authorities, as adopted by the A.R.M. 1936 (Min 122)

'(13)—Immunization for Diphtheria

Not less than 7s 6d per immunized person, the local authority supplying the materials
be rescinded and the following adopted in substitution thereof

"(13)—Immunization for Diphtheria

Not less than 5s per immunized person the local authority supplying the materials, this fee not to refer to Schick tests.

Motion by PORTSMOUTH That (with reference to para 103 of Annual Report of Council) the Representative Body is of opinion that the local authority should utilize the services of general practitioners in the area of the said authority for carrying out the work of diphtheria immunization at the minimum fee of 5s.

FEES FOR MEDICAL EXAMINATION AND REPORT FOR LIFE ASSURANCE

Motion by LANARKSHIRE That the minimum fee for medical examination and report for life assurance be 10s 6d.

DIVISIONS AND BRANCHES AND NATIONAL HEALTH INSURANCE

Motion by CHELSEA That copies of the circular letters sent by the Insurance Acts Committee and Council of the Association to secretaries of Local Medical and Panel Committees and insurance practitioners be sent at the same time for their information, to those honorary secretaries of the Divisions and Branches who as a result of inquiry intimate a wish to have them.

SUPERANNUATION SCHEME FOR PORTER STAFF B.M.A. HOUSE

Motion by CHELSEA That it be an instruction to the Council to consider the question of establishing a superannuation scheme for the porter staff employed by the Association at B.M.A. House.

THE ASSOCIATION AND INDUSTRY

It was recently reported in these columns that a joint standing committee composed of representatives of the British Medical Association and the Trades Union Council, has been established for the purpose of discussing general medical questions of mutual interest. This desire for co-operation on the part of the representatives of a large section of the industrial population is a recognition of the endeavours of the Association to promote the welfare of the industrial worker.

Fractures

The Association's work in recent years has indeed included much that closely affects industry, both directly and indirectly. The report of the Fractures Committee for instance has a far-reaching effect on industry. It will be remembered that this report showed how enormous was the annual loss to industry due to accidents resulting in fractures and associated injuries of the limbs, and in recommending the extension of organized clinics for the treatment of fractures it showed that whereas 276 cases treated by unorganized methods involved incapacity for a total period of 13,206 weeks, this period could have been reduced to 4,440 weeks if treatment had been given in organized clinics. Incapacity remained permanent in only 1 per cent of the cases treated in organized clinics, while 37 per cent of the patients treated otherwise became permanently incapacitated. On the assumption that these 276 workers would have been in regular employment during the excess period of disability at an average wage of £2 10s per week the Committee estimates that they lost £22,000 in wages. The Committee therefore proposed a scheme for a model fracture unit which would be in charge of a special surgeon and would provide for in-patient treatment and for weekly and bi-weekly clinics for ambulatory cases. It suggested that employers of labour on a big scale might find it advisable and convenient to provide their own rehabilitation centres and pointed out that the provision of these centres, whether attached to hospitals or situated at the factory, was a matter in which employers, hospitals, doctors and insurance companies should maintain the closest co-operation.

The report of the Fractures Committee aroused much interest in both medical and non-medical circles. A number of Divisions of the B.M.A. have arranged lectures on the subject of fractures; the plans of certain new hospitals have included provision for fracture units and the General Federation of Trade Unions a body which has performed valuable work in disseminating information on medical problems among its constituents convened a conference to consider the application to industry of the recommendations of the Fractures Committee. One of the most promising signs of a new era in fracture treatment is the appointment by the Home Office and the Ministry of Health of an Interdepartmental Committee to inquire into the arrangements at present in operation with a view to the restoration of the working capacity of persons injured by accidents and to report as to what improvements and developments are desirable and what steps are expedient to give effect thereto regard being had to the recommendations made in the report issued by the British Medical Association on fractures. At an early stage of the work of this Committee a consultation was held with the Association on the medical aspects of the problem and on the best methods of conducting the investigation.

Miners' Nystagmus

The Miners' Nystagmus Committee of the B.M.A. has dealt with a problem of very serious concern to industry, for

it is estimated that 25 per cent of all workmen employed underground show physical signs of miners' nystagmus. The patients often suffer great hardship, even after they have recovered from the disease, for some colliery managers refuse to employ underground any man who has at any time suffered from nystagmus. The Committee which was appointed to consider and report upon the possibility of securing improved methods of procedure in the diagnosis and certification of miners' nystagmus recommended a system of certification and classification which would exclude from the mining industry those men who were found to be unsuited for the work, and which would facilitate the early return to work of those who could be restored to working capacity after developing the disease. It emphasized the necessity for a new attitude towards the disease among both employers and employed, and pointed out that the problem could be solved only by the continuous and close co-operation of colliery managers, the medical profession and the miners themselves. After the Committee had begun its work the Home Secretary appointed a Departmental Committee on the Workmen's Compensation Act with special reference to miners' nystagmus, and the B.M.A. Committee's report was used as the basis of the evidence submitted by the Association on the subject of nystagmus.

Rehabilitation

Both these Committees had to face the problem of the rehabilitation of the disabled workman, a problem which is of very great importance to industry in general, and, indeed to the community as a whole. It seems to the Association that the greatest fault of the present system of workmen's compensation is the concentration on the provision of financial compensation rather than on the restoration of the injured workman to his working capacity at the earliest possible date. The payment of compensation frequently tends to prolong invalidity, which in its turn may produce a psychoneurotic patient who loses his original recuperative powers and is unable to utilize what working capacity he has. The lump sum form of compensation may be especially insidious in its effect upon the recipient and the Association is of the opinion that this method of compensation should be reserved for permanently incapacitated workmen who have arrived at their minimum disability. It also suggests that advisory committees should be available to workmen receiving lump sums for the purpose of assisting them to employ the money to the best advantage.

Another difficulty in the restoration of an injured person to his full working capacity occurs during convalescence. Although the patient is unable to return to his ordinary duties he is able to perform a certain amount of light work. Large firms are sometimes able to provide light work for their disabled employees and such work is found to be of aid in the restoration of full working capacity, but very frequently the injured workman is unable to obtain suitable employment. The Association therefore believes that serious consideration should be given by all the sections of the community concerned to the preparation of a plan in which attention would be concentrated on adequate treatment and rehabilitation rather than on financial and especially lump sum compensation. It suggests that the desired object could be achieved by the establishment of a system of rehabilitation units which would reduce the cost of compensation and enable the workman in the shortest possible period either to regain his full working capacity or to utilize a reduced capacity to the best advantage. The centre would provide temporary light work for a man who was undergoing such treatment.

as would ultimately enable him to resume his original work and it would provide vocational training for those workmen whose disability made it necessary for them to seek a different occupation. Recommendations on these lines were included in the Memorandum of Evidence submitted last year to the Departmental Committee on the Workmen's Compensation Act, and the possibility of the development of the proposal is at present being investigated by the Joint Committee of the B.M.A. and the T.U.C.

Factory Acts

Bills for the amendment of the Factory Acts have been introduced into Parliament on several occasions, and in 1924, for the purpose of negotiations with the Government on the subject, the Association formulated a policy for the provision of a factory medical service. This policy proposed that instead of the present factory medical service there should be a complete Department of Occupational Hygiene attached to the Ministry of Health, the present service being transferred from the Home Office, and it was suggested that a trial should be made of delegating the administration of the work of occupational hygiene to local authorities. Such a scheme would promote the Association's ideal general medical service, in which all medical services controlled by the State would be administered by one Government Department. There is little prospect, however, of the early fruition of this ideal, and the Factories Bill which is now before a Parliamentary Standing Committee has been considered by the Association on the basis of the present system of administration. Representations have been submitted to the Home Office and the Ministry of Health on various clauses of the Bill with the object of securing improvements in the arrangements concerning health matters. The points raised include questions of safety and welfare, the ventilation and temperature of factories, the hours worked by women and young persons, the employment of pregnant women, and the medical examination of young persons to ascertain their suitability for employment in factories.

A great part of the efficiency of the factory medical service depends upon the work of the certifying factory surgeons, who are required to examine all young persons seeking employment in factories, to examine cases of industrial accidents and occupational diseases, and to make any other examinations required by the Home Office. There was at one time a proposal to abolish, for the purpose of national economy, the reports of certifying surgeons on accident cases on the ground that they were of little value and represented a duplication of the reports made by factory inspectors. The Association successfully resisted this proposal. It pointed out to the Home Office that reports of surgical cases required surgical knowledge and experience which the factory inspector did not possess, that as the factory inspector did not come into such close contact with the patient as did the certifying surgeon, he could not obtain such detailed knowledge of the facts of the accident and that it would be unwise, from a public health point of view, to abolish one of the principal safeguards of workmen against accident. No further action was taken by the Government, and the work of the certifying factory surgeon remains an essential part of the factory medical service.

Industrial Medical Officers

The Association's Medico-Political Committee recently appointed a special subcommittee to consider the position of the industrial medical officer or works doctor, who is playing an increasingly important part in the pro-

motion of the health and welfare of the working population. His duties are many and various. He examines applicants for employment, he examines and observes workers returning after a period of sickness and workers exposed to special dangers to health, he is responsible for the training and maintenance of the nursing and first-aid personnel, he advises the management on the hygiene of the factory and the health conditions of the workers, and he undertakes the instruction of the workers in health matters connected with their work. He is accessible to all employees, and supervisors are encouraged to report to him any signs of ill health in the workers under their charge. The works doctor, therefore, while not undertaking individual treatment except in emergency, shares with the general practitioner the care of the patient's health and the special subcommittee has submitted to the Council, a set of ethical rules for the guidance of the industrial medical officer in his relations with the individual's private medical attendant. These rules indicate the sphere of the industrial medical officer in respect of the individual patient and suggest procedure for consultation between the industrial medical officer and the patient's medical attendant and for the maintenance of professional secrecy.

The health of the industrial workers is frequently considered, incidentally, by other committees of the Association such as that which considered the provision of facilities for physical education and recreation, the Ophthalmic Committee, which is endeavouring to secure eyesight examinations by ophthalmic medical practitioners for all members of the community, and the Insurance Acts Committee but the questions of broad principle considered above illustrate how closely related are medicine and industry, and what beneficial results may be expected from co-operation between the Association and representatives of industrial workers.

MANIPULATIVE SURGERY AND OSTEO-PATHY. SOME OBSERVATIONS

B.M.A. LECTURE BY MR TIMBRELL FISHER

In a recent British Medical Association Lecture delivered to the Glasgow and West of Scotland Branch Mr A. G. Timbrell Fisher, orthopaedic surgeon to the St John Clinic and Institute of Physical Medicine and to the London County Council Arthritic Unit, St Stephen's Hospital, gave some observations on manipulative surgery and osteopathy. He began with a reference to the reorientation of medical thought which had been quietly taking place since the war with regard not only to the treatment of injuries and diseases of joints in their early stages but to the remote effects of such conditions and how they might be prevented.

Manipulative treatment offered great possibilities of relieving or curing the disabilities, often prolonged and unresponsive to many forms of physical therapy which resulted if the earlier treatment had been unsatisfactory. Such manipulative treatment had always been a recognized weapon in the armoury of the medical profession though there had been periods when its value had not been fully appreciated. Some sections of the lay press showed a very unfair and biased attitude to the position of the medical profession in this respect. The inference which the average layman would make would be that the medical profession had completely ignored the subject of manipulative treatment. This was very unfair to many in the medical profession who had laboured for years to place manipulative treatment upon a scientific basis.

It was only fair to state however that the interest of some medical men in this field was first stimulated many years ago by striking successes by bonesetters in cases which had defied orthodox treatment. Indeed, at a much earlier period bonesetters were achieving similar successes, and in 1867 Sir James Paget enunciated the precept "Learn then to imitate what is good and avoid what is bad in the practice of bonesetters." Paget's famous lecture entitled "Cases that Bonesetters Cure" did not escape severe criticism as being contrary to the truth handed down by the fathers of the art. At the very same time similar criticism was levelled against Lister when he described a new method of treating compound fracture but Listerian teaching presently carried all before it, whereas the medical profession, after listening to Paget respectfully went on with certain exceptions, treating joints in the old way, possibly because bonesetting was regarded as something not quite respectable.

Why Unqualified Practice has Flourished

In this way unqualified practice had been allowed to grow until it constituted a real danger. One principal cause was a defect in the method of medical education. Very few of the cases which bonesetters treated were properly studied by the medical students before qualification. The material used for teaching consisted of the more serious forms of illness or injury, and rare and obscure cases which the future general practitioner might never encounter were often sought by the consulting staff for teaching and examination purposes. Sprains and other injuries to joints were among the common conditions found in general practice and it was often such injuries, dealt with by inappropriate treatment, which were followed by chronic disabilities and led to the patients drifting into the hands of bonesetters or osteopaths. The practitioner was also handicapped by the doctrine of absolute rest for injured or diseased joints, which was the orthodox teaching until quite recent times and was still too frequent. Too prolonged rest for sprains and other injuries of joints, muscles, tendons or fasciae resulted in the formation of adhesions and the consequent pain and interference with function might be of long duration if adequate treatment was withheld. It would be to the advantage both of the future general practitioner and of the future consultant if students were given adequate instruction both in the prevention of adhesions and in the recognition of the cases which might benefit by manipulation. It was often overlooked that manipulative treatment was a highly specialized difficult and occasionally dangerous branch of orthopaedics and no medical man should undertake this work who had not received a thorough training preferably as clinical assistant to some orthopaedic surgeon.

Another reason why the irregular cults flourished was because the popular press was their friend. By means of such publicity some irregular practitioners acquired a quite unjustifiable reputation for infallibility and the possession of singular powers. The public did not know that there was another side to this optimistic picture and would be quite surprised to learn also that there were those within the ranks of the medical profession who had successfully specialized in manipulative work. A third reason for the popularity of unscientific systems of healing was the curious phenomenon of a persistent belief in magic even in an educated community. It was this which made the latest cult however absurd sure of a warm welcome from all classes.

Osteopathy

Mr Timbrell Fisher then turned to osteopathy and discussed its theory that all disease was due to an interference with the blood supply brought about by pressure upon the vasomotor system in the region of the spine, which pressure was associated with minor displacements or subluxations of vertebrae. If the osteopathic theory in its extreme form were harmless the cult might be

safely ignored and allowed to die a natural death, but unfortunately in some cases it was extremely dangerous. Osteopaths paid little or no attention to scientific methods of diagnosis. Consequently patients with malignant disease or other serious conditions often wasted precious time and incidentally much money in futile treatment while the conditions from which they were suffering steadily became worse and, in the case of cancer, inoperable.

Again it must be admitted however, that osteopaths sometimes effected cures in patients whose conditions had defied the more traditional methods. The fact must be squarely faced and an endeavour be made to ascertain how such cures were brought about. He divided such cases into three main categories. The first consisted of patients whose symptoms were actually situated in the spinal column or back and the cure was due to the breaking down of adhesions in ligament, muscle or aponeurosis. In the second category were patients whose symptoms were not actually in the spine but elsewhere, the symptoms being principally of the nature of a neurosis. Here came in the influence of suggestion and one of the cleverest and most effective forms of suggestion ever devised was the dramatic treatment of the osteopathic lesion. In the third category were patients suffering from pains often of a neuralgic nature, in various areas of the trunk and limbs. These were referred along the distribution of the anterior or posterior primary divisions of the spinal nerves owing to some pressure at their vertebral origin, often due to vertebral rheumatism or to the after effects of injury. Familiar examples were many cases of occipital neuralgia due to pressure upon the upper cervical nerve roots, some cases of brachial or intercostal neuritis causing pain in the upper extremity or chest, certain cases of obscure abdominal pain often wrongly diagnosed as due to some intra abdominal lesion and many cases of sciatica due to pressure at the exits of the corresponding spinal nerves.

When the osteopath manipulated the spine for any of the above conditions he might relieve or cure the patient. Without an exhaustive examination, however the risks of spinal manipulation were very great, and for this reason such manipulations should only be performed by an experienced surgeon. The treatment of these conditions really belonged to the realm of manipulative treatment proper, and the danger of building up a revolutionary system of medicine upon such a slender hypothesis, unsupported by scientific evidence, was self-evident.

Chiropractic

The assumption made by the chiropractors was that all deformities and diseases were due to displacements of vertebrae causing pressure upon intervertebral nerves. They alleged that such pressure caused interference with the normal flow of "vital force" from the spine to various parts of the body. But it was impossible for such pressure to occur without gross dislocations or displacements of vertebrae with indisputable radiographic evidence and such displacements would give rise to paralysis and other serious signs and symptoms. Furthermore it was a well known anatomical fact that the diameter of the intervertebral foramen considerably exceeded that of the nerve occupying it.

In conclusion Mr Timbrell Fisher asked what should be the attitude of the medical profession if as was probable another campaign was launched by the osteopaths for State registration and recognition. It was clearly a duty which the profession owed to the public to oppose strongly any official recognition of osteopathy for even a limited form of State recognition would be interpreted as a licence to diagnose and treat all forms of injury and disease with disastrous results to the standard of the common health. We shall not adopt this attitude from professional jealousy or prejudice but because it is our sacred trust as a profession to safeguard the health of the nation.

HOSPITAL POLICY OF THE B.M.A.

A meeting of the Hospitals Committee was held at B.M.A. House, Tavistock Square, on May 5 under the chairmanship of Dr PETER MACDONALD. The first part of the discussion was occupied in a preliminary consideration of the newly issued report of the Voluntary Hospitals Commission set up by the British Hospitals Association. The chairman recapitulated the principal points upon which the Association had given evidence and the committee had the advantage of discussing with Sir Henry Brackenbury, a member of the Commission, the views of the Commission upon these topics. It was generally agreed that the report was a very valuable one and that on the whole it reflected very fairly the views of the medical profession. There were however, certain omissions to which the chairman referred. The first he said, was the omission of any reference except incidentally, in relation to cottage hospitals to the desirability of some access for practitioners generally to treat their patients in hospital. Sir Henry explained that the subject which the Commission had been asked to consider was so vast that some questions not directly connected with it had to be left out and this was one of them. The Commission had considered the position in relation to cottage hospitals and to pay beds, but it had not touched the general question. The chairman referred to the admirable section on the out-patient department, and then passed to the question of the payment of staffs. A discussion followed on the general principle and on the paragraphs of the report where the principle was approved but with the suggestion that certain modifications or exceptions might be advisable. It was generally agreed that the report probably went as far as could be expected at the present moment. The Commission's comments on the question of pay-beds were considered to be entirely sound.

Attention was next given to the Commission's proposals for the reorganization of the voluntary hospital system of the country on a regional basis and for the establishment of a central council. Members of the committee regretted that the Commission had not found it possible to consider in more detail the nature or extent of the areas of the proposed regions. Sir Henry Brackenbury pointed out that in order to do so it would have been necessary for the Commission to undertake much detailed investigation and inquiry which was really beyond its reference and which would have needed more time than it had at its disposal. He thought, however, that this was a question upon which the B.M.A.'s co-operation might be very valuable in view of its long experience of local organization. He was sure that its assistance would be welcomed by the British Hospitals Association.

The committee concluded this part of its proceedings with an expression of its sense of gratitude to Sir Henry for his valuable work in educating the members of the Commission in the views of the profession, and in emphasizing the hospital policy of the Association.

Chiropodists and Foot Hospitals

Another subject which necessitated a prolonged discussion was the relation of the profession to what are known as foot hospitals. Sir Henry Brackenbury recalled the decision of the A.R.M. in 1934 to the effect that since the work of chiropodists in dealing with corns and callosities was already known and utilized the Representative Body did not approve of giving an official collective recognition to chiropodists in a more extended field. This decision was passed by a majority against the recommendation submitted by the Council. The Council had entered into communication with the one association which represented the most reputable section of chiropodists, and it decided that it would be wise in the circumstances then prevailing to try to define a field outside which chiropodists would undertake not to work and to give chiropodists a qualified recognition within that field. The

question was now raised again by the Lancashire and Cheshire Branch, which was disturbed by the growth of local foot hospitals. It was stated that many hospitals did not provide a chiropody service and yet there was public demand for it. This demand was being satisfied by foot hospitals some of which were good and some bad. The Branch felt that the Association should again review the situation, and provide some guidance for the profession on a very difficult question. The committee decided to consider the matter during the coming session from the hospital point of view with the object of re-submitting it to the Representative Body in 1938.

Radiological Services

Dr Russell Reynolds, chairman of the Radiologists Group Committee, attended the meeting to present some suggestions concerning radiological services. The first question concerned the use of hospital x-ray films and reports for litigation purposes. The Group Committee had formulated a series of resolutions which it asked the Hospitals Committee to consider with the object of preventing the exploitation of the services of radiologists in this respect. The committee discussed the matter from the point of view of both the radiologists and the other members of the hospital staff, and Dr Reynolds agreed to take back the Group Committee's resolutions for revision in the light of the present discussion. The Group Committee had also proposed that the Association should adopt a policy for the remuneration of whole-time non-resident junior assistant radiologists in hospitals and submitted certain figures for appointments in hospitals where only one assistant was employed and in hospitals where there were more than one. The committee considered that the Group Committee's object would be better achieved by a scale which would provide advantages in salary for seniority and length of service. Dr Reynolds undertook to submit this suggestion to his committee.

Other Business

Among a number of other matters on the agenda was a report that the Swaffham Cottage Hospital dispute was likely shortly to be settled and the question of the ophthalmic treatment at the out-patient departments of eye and general hospitals of persons who were entitled to receive ophthalmic benefit under the national health insurance system, the NOTB scheme, or contributory schemes.

The meeting concluded with a vote of thanks to the chairman for the able way in which he had presided over the committee's meetings during the session.

MATERNAL MORTALITY: TWO OFFICIAL CIRCULARS

The Minister of Health carries the attack on maternal mortality a stage further by the issue last week of new regulations prescribing the qualifications of supervisors of midwives appointed by local authorities. Besides other qualifications the supervisors, who may or may not be medical officers, must have had adequate experience in the actual practice of midwifery. In a communication to local authorities the Minister draws attention to the use in the regulations of the title 'supervisor' rather than 'inspector', and emphasizes the need for persons who in addition to the necessary professional qualifications and experience, possess the essential qualities of sympathy and tact so that they may be regarded as counsellors and friends of the midwives rather than as critics. The regulations apply specifically only to those appointed on or after June 1, 1937, but it is expected that the local authorities responsible for the supervision of midwives will review their existing arrangements and make any changes which may be desirable in view of the qualifications now

prescribed and the particular importance of making any such changes at the present time when the new national service of salaried midwives is about to be established throughout the country in pursuance of the Midwives Act, 1936.

In a further communication the Minister draws attention to the recently published report on maternal mortality and endorses its main recommendations. He urges each local authority to do all in its power to promote proper team work between health visitors, midwives and doctors whether in general practice or attached to hospitals or clinics, or obstetrical specialists, provision for whose services ought to be included in every scheme. Local authorities, acting where necessary in combination, should secure the establishment of 'emergency units' or 'flying squads' of skilled hospital staff to be available not only in the district of the hospital concerned, but within a wide area surrounding it.

The Minister also asks local authorities to review their arrangements for ante natal services and draws attention in particular to the importance of having in each area a consultative ante natal clinic, conducted by an obstetric specialist to which routine clinics and general practitioners could refer cases of difficulty. Post natal services the circular points out are also in need of further development and more post natal clinics should be set up preferably in association with a hospital gynaecological clinic so that diagnosis may be linked up suitably with treatment, which includes contraceptive advice where further pregnancy would be detrimental to health. The importance of an adequate supply of milk or other suitable food for women throughout pregnancy and for nursing mothers is once again emphasized. Every authority should consider the question of setting up a service of home helps, and dental treatment should be provided for expectant and nursing mothers. Local authorities are reminded of the need to persuade women of the importance of ante natal and post-natal care and certain suggestions are made to this end. The national campaign about the health services which will begin in the autumn will deal specially with this subject.

NOTES OF THE WEEK

Conference on Health Matters in Kent

A conference was recently held between representatives of the Kent County Council, the Kent Branch of the B.M.A., the Kent Medical and Panel Committee and the Kent Hospitals Consultative Committee to consider questions of mutual interest concerning the medical services of the county. The chairman of the Kent County Council presided. Among the matters discussed were the maternity services including ante natal care and the midwifery service, hospital provision and staffing and the domiciliary treatment of public assistance patients. It was generally felt that the conference had served a very useful purpose and the chairman said that at no time during the last ten years had there seemed to be so little difference of opinion among the conferring bodies. At the conclusion of the meeting Dr Watts on behalf of the Kent Branch of the B.M.A. expressed the hope that the Kent County Council would consider the advisability of forming a permanent advisory committee for the informal discussion of matters affecting the medical and health services of the county.

Air Raid Precaution Measures at Southend

The Air Raid Precautions Committee of the Southend Corporation has presented to the town council a report on the different precautionary measures which should be adopted. The committee appointed an advisory subcommittee which consisted of medical and lay members of the

former including a representative of the local Division of the B.M.A., and this subcommittee appointed three special subcommittees to consider respectively the provision of hospital accommodation, first aid posts and their staffing and of ambulance transport services. The recommendations of the committee were accepted by the town council.

Donations to Charities

The subscriptions and donations to the charitable funds of the profession which have been received by the Association during the first four months of this year amount to approximately £4,000. This total exceeds by about £100 the sum collected during the corresponding period last year.

Southampton Contributory Scheme

An agreement has been arranged between the Southampton Borough Council and the Southampton and District Hospitals Association for the payment to the council by the association of charges for treatment of contributory scheme patients in municipal hospitals in the area.

New Terms of Service in I.M.S.

New terms of service for European members of the I.M.S. to which reference was made in the *Journal* on April 3 (p. 735) have just been issued in booklet form. They may be obtained by intending applicants from the Secretary, Military Department, India Office, Whitehall SW1.

National Health Insurance in British Columbia

The contemplated national health insurance scheme for British Columbia has been postponed indefinitely, mainly on account of the opposition of the medical profession. The *Canadian Medical Association Journal* for April, 1937, remarks that the solidarity shown by the medical profession on the question surprised not only the Government and the public, but the doctors themselves. In a ballot taken of the views of the profession 96 per cent of the ballot papers were returned, 614 voting against the scheme and 13 in favour of it.

Dr J. G. McCutcheon, president of the Glasgow and West of Scotland Branch, was recently appointed a Deputy Lieutenant for the County of the City of Glasgow. This is an unusual honour to be bestowed upon a general practitioner and to mark their sense of appreciation of the distinction a number of his medical friends in the city entertained Dr McCutcheon at lunch on April 29.

On the occasion of his retirement from the office of chief consulting physician to the City of London Hospital for Diseases of the Heart and Lungs Dr E. H. Colbeck has been presented with a portrait of himself. Dr Colbeck joined the staff of the hospital forty-five years ago.

Dr C. D. Temple has received a presentation from the people of Comrie, Perthshire, to mark the completion of his fiftieth year of practice there.

Mr G. Forbes, lecturer in anatomy at Aberdeen University, has been recommended for appointment as police surgeon for Sheffield.

Dr P. Mullins of Bawtry, Yorkshire, has been elected a member of Bawtry Parish Council and of Worksop Rural District Council.

The Civil Service Clerical Association has approved a scheme for the erection of a new headquarters, the amenities of which will include a medical and dental service, an x-ray department and a hospital ward.

PUBLIC HEALTH NOTES

Education of the Deaf Child

By Section 42 of the Education Act, 1921, it is obligatory on "the parents of every child between the ages of 5 and 14 or, if a by law under this Act so provides, between the ages of 6 and 14, to cause that child to receive efficient elementary instruction in reading, writing, and arithmetic," a further section of the Act making it compulsory for the local education authority to take proceedings to enforce the duty of the parent. The responsibilities of both parties, however, are somewhat modified in the case of blind, deaf, defective, and epileptic children. In regard to the blind and the deaf child the duty of the parents includes that of causing the child to receive suitable instruction.

the fact of a child being blind or deaf (except in the case of a deaf child under 7 years) or the fact that there is not, within any particular distance from the residence of a blind or deaf child, any public elementary school which the child can attend shall not, of itself be a reasonable excuse for not causing the child to attend school or for neglecting to provide efficient elementary instruction for the child.

It is the duty of the local education authority to enable such of these children for whose elementary education efficient and suitable provision is not otherwise made to obtain that education in some school certified by the Board of Education as suitable. For the purpose of this part of the Act the expression "deaf" means 'too deaf to be taught in a class of hearing children in an elementary school'.

Under existing legislation, then, the education of the deaf child can be insisted upon only on his reaching the age of 7 years. This results, in some cases in the loss of two years of education in right methods at an age when the child is particularly susceptible to instruction. The Deaf Child (School Attendance) Bill, which would provide for the compulsory attendance at school of deaf children at the age of 5 years, passed through the House of Commons without opposition, and has now passed the second reading in the House of Lords.

Amended Rules of the Central Midwives Board

That section of the rules of the Central Midwives Board which governs the procedure for removal of a name from the roll has recently been amended, to take effect from April 1, 1937. *Early practice was that in any proceedings for the removal of a name from the roll the prosecutor was the secretary or other person appointed by the Board for the purpose, and not the local supervising authority which reported the midwife to the Board, the medical officer of health or inspector of midwives of the authority appeared as a witness called by the secretary as prosecutor, and not as a prosecutor laying an information before the Board.* More recently the local supervising authority has been empowered subject to certain conditions to undertake the conduct of the case if the Penal Cases Committee of the Board is satisfied that the case is one in which proceedings ought to be taken. Certain of the amendments of the rules are merely to correct inaccurate drafting of the latest issued rules. The following important subsections, however, have been added to Rule 10.

"The complainant and the midwife shall, subject to legal objection produce before the Board all documents within their possession or power respectively which may be required or called for and do all other things which during the proceedings on the charge the Board may require."

The witnesses called for or against the midwife shall, if the Board thinks fit, be examined on oath or affirmation."

"The Board shall have power to administer oaths to or take the affirmation of the witnesses called for or against the midwife."

"The complainant or the midwife may sue out a writ of subpoena ad testificandum or of subpoena duces tecum but

no person shall be compelled under any such writ to produce any document which he could not be compelled to produce on the trial of an action."

Disinfectants in Dustbins

Following the publication of the Dawes Report on the Public Cleansing Services in London, the Metropolitan Boroughs Standing Joint Committee set up a cleansing subcommittee, which has recently issued a report on the collection of house and trade refuse, street and gully cleansing and costing. In this reference is made to the common practice of sprinkling disinfectant powders in dustbins, and it is suggested that if proper use is made of the bin by wrapping wet refuse in paper and regularly washing the bin the disinfectant is unnecessary. Dr Lawrence Smith touches on the same subject in his report for the year 1935 as medical officer of health for the urban district of Carshalton.

'Considerable confusion exists' he states, 'as to the value of sprinkling dustbins with disinfectant powder. This process is even referred to as disinfecting dustbins' but nothing could be more grossly misleading or inaccurate. Such a process cannot disinfect the dustbin. What then, is the action of the powder used in this way? It cannot affect the contents of a bin since it does not come into contact with them, and any action it has can only be on whatever is adhering to the bottom of the bin. Even so it will only touch the surface layer of such matter and chemical disinfectants have practically no effect in the absence of moisture. The dusting powder by its odour, masks any undesirable smell the bin may have. In other words it acts as a deodorant. If a bin is so foul as to smell badly enough to need a deodorant it needs cleaning out. To mask such a smell only gives a sense of false security. If dustbins are used as they should be used—that is to say, kept dry and all refuse which can be burned burned on the fire or slow combustion stove—there should be no nuisance. It is conceivable that in very hot weather when there may be no domestic fires the contents of a bin even when care is exercised may begin to smell as the time for emptying approaches and in these circumstances the use of a deodorant may well serve some purpose.

Public Health Appointments

The following changes have recently taken place in the Public Health Service.

Dr E D Irvine, assistant medical officer of health for Blackburn, to be medical officer of health for Shipley.

Dr W D M Millar to be medical officer of health for Felling and Washington Urban District Councils.

Dr V R Walker deputy medical officer of health for Swindon, to be medical officer of health to the Borough and Port of Lowestoft.

Dr W Scatterty has resigned from the position of medical superintendent to Keighley, Bingley and Shipley Joint Hospital Board. Dr Scatterty has been medical superintendent at the board's hospital at Morton Banks since it was opened forty years ago. For thirty seven years he was medical officer of health for Keighley, retiring in 1928, and he is still medical officer to the Craven Combined Districts.

PRESENTATION TO DR. A. H. MACKLIN

Dr Macklin has intimated his resignation as Honorary Secretary of the Dundee Branch of the British Medical Association an office which he has held during the past seven years. All those who have come in contact with him have appreciated the services he has so efficiently and enthusiastically rendered during that time and his constant desire to further the interests and work of the Branch. The duties of secretaryship have entailed much time and energy and many wish to show their appreciation by subscribing to a presentation fund. Donations not to exceed 10s will be collected in Dundee, and country members are asked to send their contributions to Dr G A Rome 163 Princes Street, Dundee.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

Partnership with a Non insurance Partner

In this column on April 3 (p 166) reference was made to a case which had been considered by the Insurance Acts Committee where it had been suggested that there might be objection to a partnership between a practitioner who was doing insurance work and another who was not. The following full note embodying a communication from the Ministry of Health will be of interest in this connexion.

A practitioner resigned from the committee's medical list at the end of last year in the hope of securing a hospital appointment as head of the department for the psychological treatment of nervous diseases to which appointment his having an insurance practice would have been a bar and he transferred his insured persons to one member of a firm of two practitioners (both under agreement with the committee) with whom he has remained in partnership. The doctor who resigned from the list wished to attend insured persons on behalf of his partners and the committee expressed the opinion that it is undesirable for a partner or partners of an insurance practitioner or practitioners not to be under contract to treat insured persons because of the possibility of misunderstandings and abuses arising in connexion with the treatment of insured persons by the non insurance practitioner or practitioners.

The committee also considered that as the doctor who resigned acts as a consultant it was conceivable that his partners might call him in as a consultant when he might not be the best specialist for the purpose. These representations were made by the committee in a communication to the Ministry who replied in the following terms.

The Minister is advised that there is no legal objection to the partner of an insurance practitioner not being under contract with the Insurance Committee and the Minister has no information which would lead to the conclusion that such a partnership is undesirable as tending to lead to misunderstanding and abuse. The Minister sees no ground on which exception could be taken to the giving of treatment outside the scope by the non insurance partner in the case of the partnership to which you refer. It appears to the Minister that if an insurance practitioner refers one of his patients to his non insurance partner for treatment outside the scope of an insurance practitioner's obligations under his terms of service no case could lie against the insurance practitioner unless it were shown that he had not faithfully discharged his duties under Clause 9 (1) of the terms of service and that if the non insurance partner had the necessary qualifications for undertaking the treatment, the fact that some other practitioner might be better qualified would not necessarily indicate non-compliance on the part of the insurance practitioner with the requirements of Clause 9 (1).

A Salaried Partner

An insurance practitioner recently intimated to the committee that he had taken another practitioner into partnership. On being asked whether the terms of the partnership agreement conformed to the requirements of the proviso to Clause 11 (8) of the terms of service he stated that under the partnership agreement his partner is not entitled to any stated share of the profits but is actually in receipt of a salary which together with certain allowances amounts to a sum greater than one third share of the profits* of the partnership. The committee sought the opinion of the Department as to whether the conditions laid down could be considered as complying with the definition of partner under the terms of service for insurance practitioners.

The Department replied that although there was nothing in the information given which necessarily negated the existence of a partnership it might be desirable for the

It may be noted that the provision in the terms of service is not one-third of the profits but one third of the share of any other partner.

Insurance Committee to satisfy itself as to the position by an examination of the deed of partnership if any. The practitioners were not willing to submit the deed of partnership but the principal partner reiterated that the partner whose status was in question was actually in receipt of a salary, and that such salary together with certain allowances amounted to a sum greater than one third share of the profits* of the partnership. The Department in the course of a further reply, said that if as was assumed, the expression 'salary' meant merely a fixed sum payable out of the profits so long as the profits were sufficient to meet it, there would appear to be nothing to indicate that a partner did not exist.

THE COURT OF INQUIRY INTO THE CAPITATION FEE

The Right Hon Lord Amulree GBE, KC LL.D., who is chairman of the Court of Inquiry set up by the Government to report on the appropriate capitation fee for insurance practitioners, has been the chairman of a large number of Government committees of inquiry. He was president of the Industrial Court, chairman of the Railway National Wages Board, and chairman of the Royal Commission on Licensing Laws. He has acted as arbitrator and conciliator in industrial differences for the Board of Trade and Ministry of Labour.

Mr Thomas Howorth, A.C.A., is a chartered accountant and a member of the firm of Price, Waterhouse and Company.

Mr D H Robertson M.A., is Reader in Economics in the University of Cambridge and Fellow and Lecturer of Trinity College, Cambridge. He is a member of the Economic Advisory Council.

The terms of reference to the Court of Inquiry were printed in full in last week's Supplement (p 272).

Naval, Military, and Air Force Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Captains J H Burdett to the *Pembroke* for Royal Naval Hospital Chatham. J D Danson to the *Victory* for Royal Naval Hospital Haslar.

Surgeon Lieutenant Commanders J B Patneke to the *President* for course. C D D de Labilliere to the *Pembroke* for Royal Naval Barracks.

Surgeon Lieutenant J M Fitzpatrick's seniority has been ante dated to July 23 1935.

Surgeon Lieutenants W B Taylor to the *President* for course. J G Vincent Smith to the *Pembroke* for Royal Marine Infirmary Chatham. I C Macdonald to the *Pembroke* for Royal Naval Barracks. D Simpson to the *Victory* for Royal Naval Hospital Haslar.

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Sublieutenant R F Hand to be Surgeon Lieutenant. L F Donnan to be Probationary Surgeon Lieutenant.

ROYAL ARMY MEDICAL CORPS

Captains A McMillan and W G S Foster to be Majors. Lieutenants C P Stevens (with seniority August 27 1936) and J A G M Lynch to be Captains.

The appointment of Lieutenant C P Stevens is ante dated to August 22 1935 under the provisions of Article 36 Royal Warrant for Pay and Promotion 1931, but not to carry pay and allowances prior to May 1 1936.

SUPPLEMENTARY RESERVE OF OFFICERS ROYAL ARMY MEDICAL CORPS

G Robertson to be Lieutenant.

ROYAL AIR FORCE MEDICAL SERVICE

Squadron Leaders H W Corner to R.A.F. Depot Uxbridge for duty as Medical Officer. J Hutchison to R.A.F. Station Dhahran Iraq for duty as Senior Medical Officer. G W Paton to Aircraft Depot Hunsditch Iraq for duty as Senior Medical Officer.

Flight Lieutenant R C H Tripp to R.A.F. Station Upper Heyford.

Flying Officer F L Whitehead to be Flight Lieutenant.

Correspondence

CAPITATION FEE FOR JUVENILES ANOTHER ASPECT

SIR,—There is one aspect of the suggestion that the profession should attend young persons of from 14 to 16 years of age at a figure less than the standard capitation fee which seems to me to have received less attention than it deserves. In or about 1912, before the Ministry of Health was formed the Health Commissioners were considering the position of the old age pensioners under the N.H.I. Act. There were then no old age pensions at 65 but the statutory old age pension was payable to those attaining the age of 70. These old people then ceased to be entitled to such benefit, but the Health Commissioners were anxious that they should if possible remain in medical benefit. They approached the medical profession and asked if we would "as an act of grace" continue to attend this group of admittedly bad lives at the standard capitation flat rate. This we agreed to do and have done ever since and done I think I may say, fairly and conscientiously. The Commissioners contended at the time that this "act of grace" would not really amount to very much as there could not be many of these pensioners, and they could not in any case live very long—both of which opinions time has proved to be erroneous. Of the insured persons on my panel who were attended by me during the first three months of this year, 12 per cent. were old age pensioners—that is were 65 or more years of age.

The medical profession in its innocence believed that the principle of insurance consisted in taking, at a flat rate the good lives and the bad the former making up to us for the latter. The Ministry of Health's idea of the principle of insurance seems to be that when they have a group of admittedly bad lives the profession should accept these at the flat rate, but when they have what they believe to be a group of good lives—namely from 14 to 16 years of age—the profession should accept these at something less than the flat rate. In my opinion the Ministry is being neither fair nor just in even making such an offer. But if it insists on ignoring the principle of the flat rate and discriminates between young and old between good lives and bad then I maintain that for the latter we ought to be paid at a figure above the flat rate—I am, etc.,

Bury May 4

P. F. BRATHWAITE.

THE GENERAL PRACTITIONER AND MIDWIFERY

SIR,—Practitioners as a whole will welcome the memorandum of the Council of the Association (*Supplement* May 8 p. 269) which sets out how midwifery can be carried out with safety to the patient without preventing the practitioner doing the work for which he is trained. But if one admires the pronouncement of the Association how illogical is the attitude of those who would restrict the doctor in his ordinary activities? Certain practitioners on certain occasions have had unfortunate results in their midwifery work therefore no doctor is capable of doing this work.

But what would happen if we carried these principles of reasoning into other spheres of activity? In 1932 the infant mortality rate in London was 67 but in two boroughs the rate was 107 and 98 respectively. Would it be justifiable if one suggested in such circumstances that the medical officer of health in each case was unable to perform his duties? Would it not at once be pointed out that there were many other factors involved? And if one went further on the same lines, would it be so unreasonable to suggest that because of these two relatively poor figures no medical officer of health should be allowed to go on with infant welfare work? Is this any more sweeping than the present arguments on the other side regarding midwifery work?

The organized medical profession might with advantage consider whether what is threatened in midwifery practice to-day is not exactly what has happened in infant welfare work in recent years without any organized protest having been raised. Certain doctors do not do this work or do not

do it very efficiently, therefore all this work must be taken away from the general practitioner and done by local clinics.

It is quite time that the whole position regarding encroachments was considered by the profession—I am, etc.,

London, W 10 May 8

HORACE A. NATHAN

British Medical Association

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Diary of Central Meetings

MAY

- 14 Fri Journal Committee Epitome Subcommittee 11.30 a.m.
Public Health Committee 12 noon (Change of time)
* Journal Committee 2 p.m.
18 Tues Organization Committee 2 p.m.
19 Wed Finance Committee 2 p.m.
20 Thurs Committee re Organization of the Medical Profession in India 2.15 p.m.
21 Fri Consultants and Specialists Group Committee, 2.15 p.m.
Naval and Military Committee 2.30 p.m.
24 Mon Dominions Committee 2.15 p.m.
27 Thurs Subcommittee re Case of Marshall versus Lindsey County Council 2.30 p.m.
28 Fri Science Committee Library Subcommittee, 2.30 p.m.

JUNE

- 1 Tues Standing Ethical Subcommittee 3 p.m.
2 Wed Council, 10 a.m.
4 Fri Subcommittee re Remuneration of Non-professional Medical Teachers Laboratory and Research Workers 2.30 p.m.
11 Fri Journal Committee Foods and Drugs (Advertisements) Subcommittee, 11.30 a.m.
Science Committee Scholarships and Grants Subcommittee 2.30 p.m.

Branch and Division Meetings to be Held

BORDER COUNTIES BRANCH CUMBERLAND DIVISION—At the Convalescent Home Silloth Thursday, May 20 3.30 p.m. Annual general meeting. Consideration of Annual Report of Council election of officers, etc.

EDINBURGH BRANCH EDINBURGH AND LEITH DIVISION—At B.M.A. Scottish House 7 Drumsheugh Gardens Edinburgh Tuesday May 18 8.15 p.m. Annual meeting. Consideration of Annual Report of Council election of officers, etc.

LANCASHIRE AND CHESHIRE BRANCH—At Newton le Willows, Thursday June 24 Annual meeting.

LANCASHIRE AND CHESHIRE BRANCH ROCHDALE DIVISION—At Bailie Street Council School Rochdale Friday May 21, 8.45 p.m. Air Raid Precautions Lecture and Demonstration by Dr L. T. Challenor, Home Office Lecturer for the Liverpool Centre open to all medical practitioners in the Rochdale area.

METROPOLITAN COUNTIES BRANCH CAMBERWELL DIVISION—At Dulwich Hospital, Tuesday May 18 9 p.m. Annual general meeting.

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital Kingsland Road E Friday May 14, 4.30 p.m. Dr R. A. Dunlop Clinical cases.

METROPOLITAN COUNTIES BRANCH KENSINGTON DIVISION—At Kensington Town Hall Friday May 28 8.45 p.m. Dr A. F. Head Things a Panel Doctor Ought to Know. A course of six lectures and demonstrations on air raid precautions will be given on Wednesday June 9 and Mondays, June 14, 21, 28 and July 5 and 12, at 8.30 p.m. by Colonel J. Mackenzie Home Office Medical Instructor for the London Centre. The course is open to all members of the medical dental and veterinary professions, and will be held at the British Post-Graduate Medical School Hammersmith Hospital, Duane Road W.

METROPOLITAN COUNTIES BRANCH LEWISHAM DIVISION—At Cafford Town Hall Tuesday May 18 8.45 p.m. Annual general meeting

METROPOLITAN COUNTIES BRANCH SOUTH WEST ESSEX DIVISION—At Town Hall Orford Road Walthamstow E 3 p.m. A course of 12 lectures on air raid precautions, commencing on Monday May 24

METROPOLITAN COUNTIES BRANCH WILLESDEN DIVISION—At Willesden General Hospital Harlesden Road NW Wednesday, May 19 9 p.m. Annual general meeting

NORTH OF ENGLAND BRANCH GATESHEAD DIVISION—At 60, Bewick Road Gateshead Friday May 21 8.30 p.m. Annual general meeting Consideration of Annual Report of Council election of officers etc

SOUTHERN BRANCH PORTSMOUTH DIVISION—At Kimbell's Café Osborne Road Southsea Thursday May 27, 8 p.m. Annual dinner

SOUTH WESTERN BRANCH BARNSTAPLE DIVISION—At Imperial Hotel Barnstaple Friday May 28 8 p.m. Dr A C Roxburgh Points in the Diagnosis and Treatment of Common Skin Diseases

SURREY BRANCH REJOATE DIVISION—At Lakers Hotel Reigate Wednesday, May 19 7 p.m. Annual dinner and meeting

SUSSEX BRANCH BRIGHTON DIVISION—At Royal Sussex County Hospital Thursday May 20 3.45 p.m. Clinical meeting Thursday May 27 Summer outing to Cissbury Ring

YORKSHIRE BRANCH GOOLE AND SELBY DIVISION—At Chestnut Croft Carlton, Tuesday May 18 3.30 p.m. Annual general meeting

YORKSHIRE BRANCH SHEFFIELD DIVISION—At Church House St James Street Sheffield Tuesday, May 25 8.30 p.m. Annual general meeting Election of officers

Meetings of Branches and Divisions

FIFE BRANCH

The second clinical meeting of the year of the Fife Branch was held in Kirkcaldy Station Hotel on April 1 when Mr ARCHIBALD MCKENDRICK (Edinburgh) gave an address on Medical Reports and Workmen's Compensation Acts. Dr G. M. FYFE, president of the Branch, was in the chair.

The lecturer said that in making a report the examiner should confine himself to a statement of the facts observed, noting them as he would demonstrate the case to a class of students. He should be particularly careful with regard to complaints to note the nature of the injuries complained of, the exact locality, the area affected and the mode of onset. Patients often made misleading statements with regard to injuries and their cause. Intentionally misleading statements gave rise to suspicion of malingering. This question might or might not be very difficult but it was very important to establish a clear case to stick to facts and to ignore unfavourable impressions produced by the demeanour of the complainant. In head injuries it was essential to ascertain if the patient lost consciousness and the duration of any unconsciousness. In limb injuries both limbs should be examined and the differences noted. The girth of a limb was important.

A discussion took place on various points dealt with in the address, such as time of onset of osteomyelitis after trauma the stiff joint, and the aggravation of pre-existing disease by injury.

A vote of thanks to Mr McKendrick for his address was moved by Dr G. W. McIntosh and was cordially endorsed by everyone.

NORTH OF ENGLAND BRANCH NORTH NORTHUMBERLAND DIVISION

At a meeting of the North Northumberland Division, held at Belford on April 21 the following officers were elected for the ensuing year:

Chairman Dr J. A. McLeod Vice-Chairman Dr B. W. E. Trevor Roper Honorary Secretary and Treasurer and Deputy Representative in Representative Body Dr D. T. McDonald Representative in Representative Body Dr R. A. Welsh

Arrangements were made to hold meetings of the Division on the following dates during the year: May 26, June 23, July 7, September 15, October 20 and November 17. The date of the annual dinner was not fixed but will be arranged on a suitable date in the autumn.

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses: thoracic surgery at Brompton Hospital May 24 to 29; urology at St Peter's Hospital May 31 to June 12; gynaecology at Chelsea Hospital June 14 to 26; children's diseases at Princess Elizabeth of York Hospital May 29 and 30; general medicine June 5 and 6 and general surgery June 19 and 20 both at Prince of Wales's General Hospital; obstetrics at City of London Maternity Hospital June 12 and 13. Courses in preparation for the M.R.C.P. examination will be given as follows: clinical and pathological at National Temperance Hospital Tuesdays and Thursdays 8 p.m. June 1 to 17; chest diseases at Brompton Hospital, Mondays and Thursdays or Tuesdays and Fridays 5 p.m., June 7 to July 13; heart and lungs at Victoria Park Hospital Wednesdays and Fridays 6 p.m. June 9 to July 3; neurology at West End Hospital for Nervous Diseases June 21 to July 3. The annual dinner-dance of the Fellowship will take place at Claridge's Hotel on Friday May 28. Tickets can be obtained from the Fellowship at 1 Wimpole Street W or from any member of the Ladies Committee. All members of the medical profession and their friends will be welcome.

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road W.—Daily 10 a.m. to 4 p.m. Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations *Wed* 12 noon Clinical and Pathological Conference (Medical) 2 p.m. Dr J. Gray Peptic Ulcer and Gastric Carcinoma, 3 p.m. Clinical and Pathological Conference (Surgical) *Thurs* 2.15 p.m. Dr Duncan White Radiological Demonstration 3.30 p.m. Mr A. K. Henry, Demonstrations on the Cadaver of Surgical Exposures *Fri* 2 p.m. Operative Obstetrics, 2.30 p.m. Mr Russell Howard Diseases of the Breast 3 p.m., Clinical and Pathological Conference (Obstetrics and Gynaecology)

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION 1 Wimpole Street W.—*St John Clinic and Institute of Physical Medicine* Ranelagh Road S.W. Sat and Sun Course in Physical Medicine *St John's Hospital* 5 Lisle Street, W.C. Afternoon Course in Dermatology *Maudsley Hospital* Denmark Hill S.E. Afternoon Course in Psychological Medicine

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—*Thurs* 2 p.m. Clinical Lecture Dr B. E. Schlesinger Periodic Vomiting Headache Pyrexia 3 p.m. Clinico-Pathological Lecture Mr H. C. Apperly, Care of the Child's Teeth. Out-patient Clinics mornings 10 a.m. to 12 noon Ward Visits afternoons 2 p.m. to 3.30 p.m.

INSTITUTE OF PATHOLOGY AND RESEARCH St Mary's Hospital W.—*Tues* 5 p.m. Dr W. R. Thompson F.R.S., Biological Control of Insects and Plant Pests

LONDON SCHOOL OF DERMATOLOGY 5 Lisle Street W.C.—*Tues* 5 p.m., Dr J. E. M. Wigley Napkin Area Eruptions *Wed* 5 p.m. Dr J. Muende Pathological Demonstration *Fri*, 5 p.m. Dr W. J. O'Donovan Tuberculosis of the Skin

TAVISTOCK CLINIC Malet Place W.C.—*Thurs* 3 p.m., Dr 11 Creighton Miller Hysteria 4.30 p.m. Dr Cedric Shaw Cardiovascular Syndromes 5.45 p.m. Dr Alice Hutehison Disorders of Childhood Temper Wandering Truncity Fears and Anxiety

UNIVERSITY COLLEGE Gower Street W.C.—*Tues* 5.30 p.m. Dr E. S. Russell O.B.E. Ancient Biological Conceptions *Thurs* and *Fri* 5.30 p.m. Prof Charles Singer Emergence of Modern Physiological Doctrines to the End of the Eighteenth Century with Special Reference to the Growth of Views on the Circulation of the Blood

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE Hammersmith W.—*Daily* 2 p.m. Operations Medical and Surgical Clinics *Tues* 10 a.m., Medical Wards 11 a.m. Surgical Wards 2 p.m., Throat Clinic *Wed* 10 a.m. Children's Ward and Clinic 11 a.m., Medical Wards 2 p.m. Eye Clinic Gynaecological Operations. *Thurs* 10 a.m. Neurological and Gynaecological Clinics 12 noon Fracture Clinic 2 p.m., Eye and Genito-Urinary Clinics *Fri* 10 a.m. Medical Wards Skin Clinic 12 noon Lecture on Treatment 2 p.m. Throat Clinic *Sat* 10 a.m., Children's and Surgical Clinics 11 a.m., Medical Wards. The lectures at 4.15 p.m. are open to all medical practitioners without fee.

ABERDEEN MEDICAL SCHOOL—At City Hospital *Tues* 3.15 p.m. Dr H. J. Rae Prophylaxis of Infectious Diseases *Thurs* 3.15 p.m. Dr John Smith Bacteriological Diagnosis

BIRMINGHAM UNIVERSITY—At Edmund Street Buildings *Tues* and *Thurs* 5 p.m. Ingleby Lectures by Prof Arvid Wallgren (1) Erythema Nodosum and (2) Childhood Infection and Adult Type of Pulmonary Tuberculosis

GLASGOW UNIVERSITY—At Tennent Memorial Building, Church Street *Tues* 5 p.m. Prof A. J. Ballantine Entorpi and Psychological Phenomena

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION—At Royal Infirmary *Wed* 4.15 p.m. Mr Arthur Jacobs Urological Cases

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

Section of Surgery. Subsection of Proctology—Wed. 5 p.m. Annual General Meeting. Election of Officers and Council for 1937-8. Paper by Sir Edmund Spriggs. Remarks upon the Incidence and Treatment of Diseases of the Colon. A discussion will follow. Members of the Section of Medicine are specially invited to attend the meeting. The Annual Dinner of the Subsection will be held at Langham Hotel at 8.15 p.m.

Section of Dermatology—Thurs. 5 p.m. (Cases at 4 p.m.) Annual General Meeting. Election of Officers and Council for 1937-8. Cases by Dr S. M. Whittledge, Dr H. MacCormac, Dr A. D. K. Peters, Dr A. D. K. Peters and Dr A. N. Macbeth, Dr F. Jacobson and Dr R. T. Brain. Other cases will be shown. Film by Dr R. E. A. Price and Mr Pask. Infantile Prurigo.

Section of Neurology—Thurs. 8 p.m. Annual General Meeting. Election of Officers and Council for 1937-8. Paper by Prof. M. Kroll (Moscow). Remote Symptoms of Nervous Diseases.

Section of Radiology—Fri. 7 p.m. Annual General Meeting. Election of Officers and Council for 1937-8. The Annual Dinner of the Section will be held at Clarendon Hotel at 8 p.m.

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE.—At 26, Portland Place W. Thurs. 8.15 p.m. Dr Ellis H. Hudson Bejel, the Endemic Syphilis of the Euphrates Arab. Preceded by demonstration at 7.45 p.m.

CHELSEA CLINICAL SOCIETY.—At Hotel Rembrandt, Thurloe Place S.W., Tues. Discussion. Ultra Short Wave Therapy. To be opened by Dr Philippe Bauwens and Dr F. Howard Humphris. Preceded by dinner at 7.30 p.m.

MEDICAL SOCIETY OF INDIVIDUAL PSYCHOLOGY.—At 11, Chancery Street W. Thurs. 8.30 p.m. Dr Elsie Warren. Psychology of Minor Ailments. Dr C. W. J. Brasher. Present Position of Medical Psychology.

SOCIETY OF MEDICAL OFFICERS OF HEALTH. 1, Thornhaugh Street, Russell Square W.C.—Fri. 5 p.m. Dr W. G. Savage and Dr E. H. T. Nash. The Future of Obstetrical Practice.

TUBERCULOSIS ASSOCIATION.—At 26, Portland Place, W., Fri. 5.15 p.m. Dr A. Stanley Griffith. Bovine Tuberculosis in Man. 8.30 p.m. Dr James Watt and Dr Burton Wood. Radiological Classification of Pulmonary Tuberculosis.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—At Chiselmans Restaurant, High Street, Lewisham S.E., Thurs. 7.30 p.m. Annual Dinner and Dance.

BOOKS ADDED TO THE LIBRARY

The following books were added to the Library of the British Medical Association during April, 1937.

- Babonneix, L. Les Régimes chez l'Enfant 1936
 Barber H. H. Physiology for Pharmaceutical Students 1937
 Beattie, D. J. Public Health Act, 1936 1937
 Beltrami G. La Révolution Alimentaire Actuelle 1936
 Buchanan's Manual of Anatomy. Sixth edition by J. E. Frazer 1937
 Davenport, C. B. How We Came by Our Bodies 1937
 Dawkins C. J. M. On the Incidence of Anaesthetic Complications and their Relations to Basal Narcosis. 1936
 Dixey R. N. Tuberculin-tested Milk 1937
 Evans, G. Latent Syphilis and the Autonomic Nervous System. Second edition 1937
 Fahrenkamp K. Essential and Commonplace Aspects of Heart Disease 1936
 Gladston I. (Editor). Medicine and Mankind 1936
 Griffiths J. H. Psychology of Human Behaviour 1936
 Haggard H. W., and Fry C. C. Anatomy of Personality 1936
 Hill C. Manual of Normal Histology and Organography. Seventh edition. 1937
 Hoffman F. L. Cancer and Diet 1937
 Hutchison R. Principles of Diagnosis Prognosis and Treatment. Second edition 1937
 Lautman M. F. Arthritis and Rheumatic Disease 1936
 Lereboullet P. Manuel de Puériculture. Second edition 1936
 Love J. K. Deafness and Common Sense 1936
 McCleary G. F. Menace of British Depopulation 1937
 McConnell, J. K., and Griffin, F. W. W. Health and Muscular Habits 1937
 Major R. H. Physical Diagnosis 1937
 Osborn T. W. B. Complement or Alexin 1937
 Osman, A. A. Original Papers of Richard Bright on Renal Disease 1937

- Pardo-Castello V. Diseases of the Nails 1936
 Proceedings of the Second International Congress for Microbiology, London, 1936 1937
 Reid's Practical Sanitation. Twenty third edition, by J. J. Buchan 1937
 Reik, T. Surprise and the Psycho-analyst 1936
 Reik T. Unknown Murderer 1936
 Ross T. A. Common Neuroses. Second Edition 1937
 Scott G. L. Morphine Habit. Second edition 1937
 Sears, W. G. Vade Mecum of Medical Treatment 1937
 Sinclair R. Metropolitan Man 1937
 Solomons, B. Epitome of Obstetrical Diagnosis and Treatment in General Practice. Second edition. Two volumes 1936
 Terman, L. M., and Miles C. C. Sex and Personality 1936
 Thomson, Sir St. Clair, and Negus V. E. Diseases of the Nose and Throat. Fourth edition 1937
 Tredgold A. F. Mental Deficiency (Amentia). Sixth edition 1937
 Vignes, H. Maladies des Femmes Enceintes. Two volumes 1935
 Webster, D. H. Page J. R., and White, F. W. Nursing in Diseases of the Eye, Ear, Nose, and Throat. Sixth edition 1937
 Young, J. Textbook of Gynaecology. Fourth edition 1936
 Zahorsky, J. and Zahorsky, T. S. Synopsis of Pediatrics. Second edition 1937

VACANCIES

All advertisements should be addressed to the Financial Secretary and Business Manager and NOT to the Editor

- ANNIE McCALL MATERNITY HOSPITAL, Juffreys Road, S.W.—M.O. (female). Salary £100 p.a.
 ALTRINCHAM GENERAL HOSPITAL—(1) Senior H.S. (2) J.H.S. Salaries £150 p.a. and £120 p.a. respectively
 BARNESLEY COUNTY BOROUGH—Whole-time M.O. (male) for St. Helen Municipal General Hospital. Salary £650-£700 p.a.
 BEDFORD COUNTY HOSPITAL—Second H.S. (male unmarried). Salary £150 p.a.
 BELFAST ROYAL MATERNITY HOSPITAL—R.H.S. in charge of Rea Block (Isolation). Salary £100 p.a.
 BLACKBURN ROYAL INFIRMARY—R.H.S. (male). Salary £175 p.a.
 BRADFORD CHILDREN'S HOSPITAL—H.S. (female). Salary £100 p.a.
 BRIDGEWATER GENERAL HOSPITAL—R.H.S. Salary £130
 BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL—H.P. (male, unmarried). Salary £150 p.a.
 BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN—H.P. Salary £125 p.a.
 BURY INFIRMARY—(1) Third H.S. (2) C.O. Males. Salaries £150 p.a. each
 CARDIFF KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION—(1) R.M.O. and (2) R.A.M.O. (males unmarried) for Sully Hospital. Salaries £350 p.a. and £200 p.a. respectively (3) Three Area Assistant Tuberculosis P.s. Salaries £500-£700 p.a. each (4) A.R.M.O. (male unmarried) for Glan Ely Tuberculosis Hospital. Salary £200 p.a.
 CHELSEA HOSPITAL FOR WOMEN, Arthur Street S.W.—H.S. (male). Salary £100 p.a.
 CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS, Victoria Park E.—H.P. (male). Salary £180 p.a.
 CONNAUGHT HOSPITAL, Walthamstow E.—(1) Senior R.M.O. Salary £175 p.a. (2) H.S. (3) H.P. (4) C.O. Salaries £110 p.a. each
 COVENTRY AND WARWICKSHIRE HOSPITAL—(1) R.H.S. (2) C.O. (3) R.H.S. for the Aural and Ophthalmic Departments. Salaries £125 p.a. each (4) Hon. Assistant S.
 CROYDON COUNTY BOROUGH—A.M.O. (male unmarried) for Croydon Mental Hospital, Upper Warrington. Salary £350-£25 £450 p.a.
 DARTFORD CITY OF LONDON MENTAL HOSPITAL—J.A.M.O. (unmarried). Salary £350-£25 £450 p.a.
 DEWSBURY AND DISTRICT GENERAL INFIRMARY—(1) Senior H.S. (2) Second H.S. Males. Salaries £200 p.a. and £150 p.a. respectively
 DOWNPATRICK, DOWN COUNTY MENTAL HOSPITAL—J.A.M.O. (male unmarried). Salary £350-£25 £450 p.a.
 DUNDY CORPORATION—Deputy M.O.H. (male). Salary £750-£20-£850 p.a.
 EAST HAM MEMORIAL HOSPITAL, Shrewsbury Road E.—H.S. to the Special Departments and C.O. (male). Salary £120 p.a.
 EAST HAM AND SOUTHEAST-ON-SEA COUNTY BOROUGH—Assistant Resident P. to Runwell Hospital, near Wickford. Salary £350-£225-£450 p.a.
 ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road, N.W.—(1) Hon. Assistant S. (2) Hon. Junior Obstetric S.

ESSEX COUNTY COUNCIL—Assistant County M.O.H. (female) Salary £500-£25 £700 p.a.
 EVELINA HOSPITAL FOR SICK CHILDREN Southwark S.E.—H.P. (male) Salary £120 p.a.
 EXETER ROYAL DEVON AND EXETER HOSPITAL—H.S. (male) to the Ear Nose and Throat Department
 GLAMORGAN COUNTY COUNCIL—R.A.M.O. for Llynypia Hospital Rhondda Salary £350-£25-£450 p.a.
 GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION—H.P. (male) Salary £150 p.a.
 GORDON HOSPITAL FOR RECTAL DISEASES Vauxhall Bridge Road S.W.—R.H.S. Salary £150 p.a.
 GOSWELL WOMEN'S WELFARE CENTRE Spencer Street E.C.—M.O.
 HASTINGS ROYAL EAST SUSSEX HOSPITAL—J.H.S. (female) Salary £150 p.a.
 HELLINGLY EAST SUSSEX COUNTY MENTAL HOSPITAL—Senior A.M.O. Salary £600 p.a.
 HERTFORD COUNTY HOSPITAL—H.S. (male) Salary £180 p.a.
 HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale W.—Hon. Anaesthetist
 HOSPITAL FOR SICK CHILDREN—(1) R.H.P. (2) R.H.S. Males unmarried Salaries £100 p.a. each
 HOSPITAL FOR TROPICAL DISEASES Gordon Street W.C.—H.P. (male) Salary £120 p.a.
 HOSPITAL FOR WOMEN Soho Square W.—R.M.O. Salary £100 p.a.
 HOSPITAL OF ST JOHN AND ST ELIZABETH Grove End Road N.W.—Ophthalmic S.
 HUDDERSFIELD COUNTY BOROUGH—Assistant School M.O. Salary £500-£700 p.a.
 HULL ROYAL INFIRMARY—(1) First H.S. (2) H.S. to the Ophthalmic and Ear Nose and Throat Departments (3) Second C.O. Males unmarried Salaries £150 p.a. each
 HULL VICTORIA HOSPITAL FOR SICK CHILDREN—R.H.P. (female) Salary £120
 ILFRID BOROUGH—R.M.O. (female) for the Maternity Home Salary £400-£25 £500 p.a.
 INFANTS HOSPITAL Vincent Square Westminster S.W.—(1) H.P. Salary £100 p.a. (2) Hon. Clinical Assistants to the Outpatient Department
 KENSINGTON ROYAL BOROUGH—Deputy M.O.H. Salary £900-£50-£100 p.a.
 KENT COUNTY COUNCIL—R.A.M.O. for the Farnborough Public Assistance Hospital Salary £250 p.a.
 KETTERING AND DISTRICT GENERAL HOSPITAL—(1) R.M.O. (2) Second R.M.O. Salaries £160 and £140 respectively
 LANCASHIRE COUNTY COUNCIL—Second R.M.O. (male unmarried) for Park Hospital Davyhulme Salary £225 p.a.
 LIVERPOOL HEART HOSPITAL—Hon. Assistant P.
 LONDON LOCK HOSPITAL—R.M.O. to the Male Departments Salary £175 p.a.
 MANCHESTER ANCOATS HOSPITAL—(1) Orthopaedic Registrar Honorarium £50 p.a. (2) Hon. Registrar (3) R.S.O. Salary £200 p.a.
 MANCHESTER CITY—R.A.M.O. to Withington Hospital Salary £200 p.a.
 MANCHESTER AND SALFORD HOSPITAL FOR DISEASES OF THE SKIN—Two A.M.O.s Salaries £100 p.a. each
 MIDDLESEX COUNTY COUNCIL—Non resident Casualty M.O. for West Middlesex County Hospital Isleworth Salary £350 p.a.
 MIDDLESEX COUNTY COUNCIL—(1) A.M.O. for the Public Health and School Medical Department (2) Assistant Dental Officer Salaries £600 £30-£750 p.a. and £500-£25 £700 p.a. respectively
 MILLER GENERAL HOSPITAL Greenwich Road S.E.—(1) Two H.P. (2) H.S. Males unmarried Salaries £100 p.a. each
 NEWPORT ROYAL GWENT HOSPITAL—Two H.S. (males) Salaries £135 p.a. each
 NEWCASTLE UPON TYNE ROYAL VICTORIA INFIRMARY—(1) Junior Surgical Registrar Salary £150 p.a. (2) Hon. Assistant S. (3) Hon. Assistant to the Throat and Ear Department
 NOTTINGHAM GENERAL HOSPITAL—(1) Two R.C.O. (males) (2) H.S. to the Ear Nose and Throat Department Salaries £150 p.a. each
 NOTTINGHAMSHIRE COUNTY COUNCIL—Assistant School M.O. (male) Salary £500-£25 £700 p.a.
 OLDHAM COUNTY BOROUGH—(1) Whole time Assistant School M.O. (male) Salary £500-£25 £700 p.a. (2) R.A.M.O. (unmarried) for the Municipal Hospital Salary £200 p.a.
 OXFORD EYE HOSPITAL—H.S. to the Ophthalmic Department Salary £150 p.a.
 PLYMOUTH PRINCE OF WALES HOSPITAL—(1) Hon. P. (2) Hon. P. with charge of Outpatients (3) Hon. Ophthalmic S.
 PLYMOUTH PRINCE OF WALES HOSPITAL Greenbank Road—R.S.O. (male) Salary £225 p.a.
 PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN Shadwell E.—(1) H.P. (2) C.O. (3) H.S. Salaries £125 p.a. each
 PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue W.—H.S. (male) Salary £120-£150 p.a.
 QUEEN MARY'S HOSPITAL FOR THE EAST END Stratford E.—(1) R.M.O. (2) Two Casualty and Outpatient Officers Salaries £150 p.a. each (3) Two H.S.s (4) H.P. (5) Obstetric H.S. (6) Resident Anaesthetist and H.P. Salaries £120 p.a. each Males unmarried
 READING ROYAL BERKSHIRE HOSPITAL—(1) C.O. (2) H.S. to the Special Departments. Males Salaries £150 p.a. each
 ROCHSTER ST BARTHOLOMEW'S HOSPITAL—(1) H.P. (2) C.O. Males, unmarried Salaries £150 p.a. each
 ROTHAMPTON HOSPITAL—Casualty H.S. (male) Salary £150 p.a.

ROYAL FREE HOSPITAL Gray's Inn Road W.C.—(1) Senior R.M.O. (male) Salary £150 p.a. (2) R.C.O. (male) Salary £150 p.a.
 ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road S.E.—H.S. (male) Salary £100 p.a.
 SALFORD ROYAL HOSPITAL—Psychiatrist Honorarium £52 p.a.
 ST BARTHOLOMEW'S HOSPITAL E.C.—Assistant P. and Assistant Director to the Medical Professional Unit
 SALISBURY GENERAL INFIRMARY—(1) R.M.O. (2) H.P. Males. Salaries £250 p.a. and £125 p.a. respectively
 SHEFFIELD CITY—(1) A.M.O. (female) for Nether Edge Hospital Salary £350-£25 £450 p.a. (2) J.A.M.O. (male) to the City General Hospital Salary £200 p.a.
 SHREWSBURY ROYAL SALOP INFIRMARY—R.H.P. (male unmarried) Salary £160 p.a.
 SOUTHALL—NORWOOD HOSPITAL—R.M.O. (male, unmarried) Salary £125 p.a.
 SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON REGIONAL RADIUM CENTRE—Locumtenent Radium Officer Salary £12 12s per week
 SOUTHEAST-ON-SEA GENERAL HOSPITAL—Surgical Registrar Salary £275 p.a.
 STOKES-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.
 STROUD GENERAL HOSPITAL—R.M.O. Salary £160 p.a.
 SUNDERLAND ROYAL INFIRMARY—(1) H.P. (2) Two H.S.s (males) Salaries £120 p.a. each
 SURREY COUNTY COUNCIL—(1) A.M.O. (male) Salary £600-£20-£700 p.a. (2) Whole time Dental S. Salary £500 £20-£600 p.a.
 TAUNTON AND SOMERSET HOSPITAL—H.P. Salary £100 p.a.
 TIPTON URBAN DISTRICT COUNCIL—M.O.H. and School M.O. Salary £800 p.a.
 VICTORIA HOSPITAL FOR CHILDREN Tite Street, S.W.—Physio-therapist Honorarium £50 p.a.
 WEST HAM COUNTY BOROUGH—Second A.R.M.O. (male) for Central Home Leytonstone E. Salary £350 £25 £450 p.a.
 WEST LONDON HOSPITAL Hammersmith Road W.—(1) J.A.M.O. for the Venereal Diseases Department Salary £350 p.a. (2) H.P. (3) Two H.S.s Males Salaries £100 p.a. each
 WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL Shooters Hill Hill S.E.—(1) Surgical Registrar Honorarium £100 p.a. (2) Three Hon. Anaesthetists
 WORKSOP VICTORIA HOSPITAL—(1) Senior Resident (2) Junior Resident. Salaries £150 p.a. and £120 p.a. respectively
 YORK COUNTY HOSPITAL—H.S. to the Eye Ear Nose and Throat Department Salary £150 p.a.

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 47 48 49 50 51 52 53 and 56 of our advertisement columns and advertisements as to partnerships assistant ships and locumtenencies at pages 54 and 55

APPOINTMENTS

GOW H. M.B. Ch.B. Certifying Factory Surgeon for the Newbury District (Berkshire)
 OVENS G. H. C. M.B. B.S. F.R.C.S., Surgical Registrar St Mary's Hospital W.
 RENOALL S. S. M.B. B.S. Medical Referee under the Workmen's Compensation Act 1925 for the Boston Holbeach Steadford Spalding, Spilsby and Skegness County Court Districts (Circuit No. 17)
 WOODROOPE P. Esq. M.B. Ch.B. Honorary Anaesthetist Royal Halifax Infirmary
 KING'S COLLEGE HOSPITAL Denmark Hill S.E.—Senior Assistant Radiologist A. M. Rackow M.B. B.S., D.M.R.E. Junior Assistant Radiologist Bryan G. Thompson M.D., D.M.R.E.

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

DEATHS

BROWN—Robert Story Brown M.B. B.S. beloved husband of Martha Jane Brown on May 6 at Lane House Bootle Cumberland aged 60 years
 STANLEY TURNER—On April 1st suddenly at Newgate B.C., Canada Harry Philip Stanley eldest son of Wing Commander H. M. Stanley Turner M.D., F.R.S.E., R.A.F. Buried at Roseville B.C.

paroxysmal crises of hypertension has been quite recently established. This condition contrasts with the persistent hypertension seen in some tumours of the adrenal cortex. (iv) Adenomas of the parathyroid glands were associated in 1904 by Askanasy with von Recklinghausen's generalized osteitis fibrosa cystica, but this was not definitely recognized until 1926. (v) Adenomas or hyperplasia of the islands of Langerhans (hyperinsulinism) give rise to spontaneous hypoglycaemia, a morbid state which was not recognized until 1924 by Seale Harris, after it had been produced by the administration of insulin to animals and described early in 1923 by Banting, Campbell and Fletcher before insulin was available in this country.

Parathyroids

Though described in man and animals in 1880 by I. V. Sandström of Upsala University, the parathyroid glands did not attract any attention until 1891 when Eugène Gley of Paris independently described them in animals. At first they were regarded as accessory thyroids, but Kohn (1895) stated that they are anatomically and physiologically distinct from the thyroid, and in 1909 MacCallum and Voegtlin proved that they control calcium metabolism and that their removal is followed by tetany. Before the recognition of the parathyroids some of the symptoms following total thyroidectomy, which were really due to simultaneous removal of the parathyroids, were ascribed to removal of the thyroid. The isolation and standardization of a powerful parathyroid extract by Collip (1925) and the association of hyperparathyroidism, due to adenomatous change in the parathyroids with generalized osteitis fibrosa cystica (1926) are milestones in the physiology and pathology of the parathyroids.

Multiglandular Syndromes

The conception of inadequacy of several endocrine glands was initiated in 1907 by Claude and Gougerot, and was followed in 1908 by that of the interaction and interdependence of the endocrine glands or the endocrine balance brought forward by Eppinger, Falta and Rudinger. The idea of multiglandular syndromes—namely, co-existent primary disturbance of more than one endocrine gland—met with considerable criticism. The position has been altered and clarified by the discovery of the controlling influence of the anterior pituitary over the other endocrine glands, by means of its thyrotropic, adrenotropic, gonadotropic, and other hormones.

The Pituitary

The pituitary, now the predominant endocrine gland, was later than the adrenals and the thyroid in attracting modern investigation. For in 1889, in a review of nervous physiology it was dismissed as having little if any use in the organism of the higher vertebrates, and in the same year Alexander Macalister, professor of anatomy at Cambridge, described it as 'probably the rudiment of an archaic sense organ. Like the thyroid and pineal, it was known to Galen, Vesalius (1543) believing that it collected waste material (*pituita* = phlegm, slime) from the brain and in some way conducted it into the nasopharynx, gave it what is still its familiar name, although a century later C. V. Schneider and Richard Lower destroyed the basis for such a title. Soemmerring (1778) called it the hypophysis. Like the pineal or epiphysis it was thought to be concerned in the regulation of the cerebro-spinal fluid by Sylvius of Leyden and Vieussens in the seventeenth century, and even as late as 1842 by Magendie.

Pierre Marie in 1886 gave the clinical account of acromegaly which in the following year was connected with the pituitary by Minkowski, and thus directed attention to the gland, but it was not until this century, especially since 1905, that its physiology and pathology were exhaustively investigated, particularly by Harvey Cushing whose epoch making work *The Pituitary Body and its Disorders* appeared in 1912. The pituitary now bears much the same relation to the other ductless glands that the brain does to the remainder of the nervous system. Unlike the thyroid, parathyroids, and adrenal medulla, which each secrete one hormone only, the pituitary has been thought to manufacture an increasing number of active principles or hormones—the anterior pituitary as many as fourteen and the posterior seven—but doubt has been expressed, especially by Abel (1924), whether each different action of pituitary extracts is necessarily due to a separate hormone. The pituitary hormones chiefly, if not entirely, act by stimulating other endocrine glands, the thyroid, adrenals, gonads.

Thus hyperpituitarism—hyperplasia and correspondingly increased secretion of eosinophil or of basophil cells in the anterior pituitary—may be followed by similar reactions in the adrenals, gonads, and thyroid. It has been suggested, but not proved, that the thyroid changes in exophthalmic (or toxic) goitre are primarily due to excessive secretion of the thyrotropic hormone by the anterior pituitary. On the other hand hypopituitarism due to disease, for example, by infarction as in pituitary cachexia (Simmonds's disease, 1914), or to experimental hypophysectomy is followed by atrophy not only of the dependent endocrine glands but of the body generally. The interrelations between the anterior pituitary and other endocrine glands are at any rate in some instances, reciprocal, thus castration gives rise to the cellular changes known as 'castration cells,' and the corpus luteum of pregnancy causes the formation of 'pregnancy cells' in the anterior lobe of the pituitary.

The Islands of Langerhans

The islands in the pancreas, described in 1869 by P. Langerhans were in 1893 named after him by Laguesse, who with Hédouin in that year concluded that the islands provided the internal secretion of which the experimental production of fatal diabetes mellitus by excision of the pancreas in 1889 by von Mering and Minkowski had shown the existence. In 1902 Opie described hyaline degeneration of the islands in diabetes mellitus. In the next twenty years there were several attempts to treat diabetes mellitus by pancreatic extracts especially by Zuelzer in 1908, but these preparations produced such severe reactions from the contained proteins that they were abandoned. The hormone was named 'insuline' in advance (before it was obtained protein free in 1922 at Toronto) by de Meyer in 1910 and independently by Schäfer in 1916. After first calling their hormone 'letin,' Macleod, Banting and Best in 1922 adopted the slightly modified name insulin.

The Gonads

Though from the eighteenth century the gonads were vaguely thought to exert what is now recognized as an endocrine influence and although the first experimental evidence of a testicular and indeed of any hormonal function dates back to Berthold in 1849 further scientific advance in this direction is of quite recent origin. During the last few years the output of scientific investigation

has been enormous, so much so that the practical application of this new physiological knowledge has not had time to keep abreast. The sex hormones and their relations to the anterior pituitary have thus been recognized, and their extreme complexity especially of the female hormones has become manifest. Probably the services of organic chemistry are now more important here than in any other branch of endocrinology.

Methods of Endocrine Research

These comprise (1) Correlation and comparison of the clinical features with the morbid changes in the endocrine glands the method employed by Addison. With this may be associated observation of substitution treatment—namely, the clinical effect of (a) administration of an extract of the gland damaged or rendered inadequate by atrophy or disease or (b) removal of a gland considered to be over-active such as the thyroid in exophthalmic goitre or of an adrenal in the adrenogenital syndrome. (2) Experimental removal of normal glands and, when symptoms have been thus produced grafting the same gland into the animal or by giving extracts of the gland parenterally. (3) The new method of extending over successive generations of animals either (a) excision of the endocrine organ or (b) administration of its extract. Employing this technique Rowntree, Hanson, and their co-workers have brought forward evidence to show that the thymus (1934) and the pineal (1936) are endocrine glands controlling growth and sexual development. (4) The isolation, crystallization, and synthesis of hormones by organic chemists a comparatively recent and most important line of advance.

Neuro-humoralism

The vegetative portions of the animal body appear to be controlled by a double or alternative mechanism—namely by nervous and by chemical messages. In 1904 T. R. Elliott suggested that nervous impulses of the sympathetic may act on the effector cells at the periphery by the liberation of adrenaline. In 1906 W. E. Dixon found that a heart submitted to vagal stimulation liberated a body which inhibited the frog's heart; this hypothesis was followed up by Loewi (1921), Dale (1929), and Cannon (1933) and Dixon's inhibitor has been called 'vagal substance', acetylcholine, and parasympathin. Acetylcholine therefore stands in much the same relation to the parasympathetic as adrenaline does to the sympathetic division of the autonomic system.

In this short essay on the history of endocrinology it was inevitable that reference should be made to what is happening to-day. The future historian of the subject indeed may look upon to-day as the most important and fruitful period in the development of a science to which the clinician has made such valuable contributions. What these are is plain to the reader of the previous articles in the series which fill the many large gaps in this survey and bring the story of endocrinology up to the present moment.

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Nova et Vetera

THE CORONATION AND A DISUSED RITUAL [FROM A CORRESPONDENT]

The practice of touching for the king's evil is no doubt as dead as Queen Anne, the last of our monarchs to essay the therapeutic art. Yet for all those who decline to regard history as 'bunk', any matter which was for centuries closely connected with the sovereignty of England cannot in this year of the King's crowning be without interest.

In 1911, the year of the Coronation of King George V, a scholarly series of lectures was delivered by Sir Raymond Crawford before the Royal College of Physicians and subsequently published by the Clarendon Press under the title of *The King's Evil*. Since the publication of this volume there appears to have been no further detailed investigation of the subject. It seems opportune therefore, to gather up and supplement the result of these earlier researches.

History of the Practice

In England the beginning of the practice may be reckoned as dating from the reign of Edward the Confessor, who died in the year 1066, though in France the ceremony is referred back to the Coronation of Clovis in A.D. 496. It began soon to be debated by the chronicler William of Malmesbury and the monks whether the Confessor had cured by virtue of his own holiness or whether the power had been transmitted to him by his royal ancestors. These healings seem at first to have been of many diseases—leprosy, plague, jaundice, and possibly tubercle—and from the large numbers touched at later dates it must surely be inferred that the term 'scrofula' was extended to cover not only glandular swellings of the neck, but swellings of any kind in any part of the body. Evidence of the practice is lacking during the reigns of William II, Henry I, and Stephen. It was revived by Henry II, but there is no evidence that John or Richard I ever touched—the latter King being very little in England. With Edward I we are on firmer ground, for the House hold accounts (1277-8) of that monarch show for 17 sick persons signed by the King 17d., and in one month he touched 533 persons. During the fifteenth century there are few cases recorded, but Henry VII restored the practice and added a new ceremony, giving to each person an angel—a gold coin with the figure of St. Michael on the obverse. The service employed, together with others, has been preserved and there was little alteration in the forms until the rite was finally discontinued after the death of Queen Anne, except that after the Reformation the office was said in English and some few markedly Roman Catholic characteristics such as the invocation of the Virgin Mary and the Saints were omitted. The words of the first Gospel, "They shall lay their hands on the sick and they shall recover," were repeated by the chaplain so long as the King was handling the sick persons. The concluding words of the second Gospel, "That was the true Light which lighteth every man that cometh into the world," were similarly repeated "as long as the King shall be crossing the sore of the sick person with an Angel Noble and the sick person is to have the same Angel hanged about his neck and to wear it until he be full whole." The dissolution of the monasteries by Henry VIII led to a large increase in the numbers of the sick poor for whom there was now no provision, and—though there is no certainty that Edward VI touched—this led to a great number attending the court both of Mary and of Elizabeth to obtain relief. Queen Mary's Manual formerly in the possession of Cardinal Manning contains three miniatures: (1) showing the Queen blessing cramp rings; (2) a crucifixion; (3) the Queen clasping the swollen neck of a boy with both hands.

The Paris Academy of Surgery has awarded the international Lannelongue medal of surgery to Dr A Lambotte honorary professor of the Brussels Faculty of Medicine, for his work on bone surgery.

CARE AND AFTER-CARE OF THE TUBERCULOUS

CONCLUSION OF EMPIRE CONFERENCE

The Empire Conference on the Care and After-care of the Tuberculous the first three sessions of which were reported last week at page 987 concluded its discussions on May 5 with contributions from various countries, but especially India and East and West Africa, on tuberculosis control in those regions

Surgical Tuberculosis

Sir HENRY GAUVAIN discussed some problems of surgical tuberculosis. Conservative treatment, he said, was the procedure of choice in most cases of surgical tuberculosis, with a few rather striking exceptions. For example in tuberculous disease of the knee joint in an adult after perhaps three months conservative treatment, excision should be practised. With regard to tuberculous glands of the neck, the treatment had given rise to some controversy. Some surgeons advocated immediate excision. On the other hand many tuberculosis officers followed a conservative treatment. Actually the method depended on the individual needs of the patient. If there was one large fluctuating gland and it was aspirated it would probably heal without difficulty, but if there was a mass of glands the patient should first of all have conservative treatment. He advocated fixing the neck with a light metal carapace which gave the patient a chance of resting his back. Light treatment should be applied in very even minimal doses and in that way and with fixation the glands might disappear completely. Even if they did not disappear they became more discrete, and it was easier to excise them after three months trial of the resting method. The procedure of excision should be regarded as a major operation. Sir Henry Gauvain also touched on a tuberculous condition of which, he said, more and more was seen—tuberculous glands of the mesentery. Here again the ideal treatment was rest. An important point was careful dieting and avoidance of roughage in diet.

Tuberculosis Control in Scotland

Dr ERNEST WATT representing the Department of Health for Scotland after outlining the successful history of the anti tuberculosis campaign in Scotland, said that there were now beds in the proportion of 1 to 900 of the population distributed over some 112 institutions. With regard to after-care and the very important matter of supervision of contacts the latter should not be limited to child contacts if success was to be assured. Supervision must be continued throughout young adult life at least. Was it over ambitious to suggest that the dossier of each member of a contact family should contain an x-ray film of the chest for purposes of comparison when, later in life sickness or any suspicious condition occurred? Observations along similar lines should be extended to the young adult contact or other entering upon factory or scholastic life.

Modified colony and workshop conditions had been in operation at two centres in Scotland. The opinion had been expressed that Scotland's problem in this respect did not justify expansion along village settlement lines. An outlet had been found at Papworth and Preston Hall for a number of colonists from Scotland and so long as such an outlet was freely taken advantage of further development in Scotland would not be justified. In the after-care of the ex sanatorium patient the orthopaedic specialist service in the industrial parts of Scotland would give second place to none and even in the most outlying areas a very satisfactory service was available.

This account from Scotland was followed by some remarks by ISABEL MARCHIONESS OF ABERDEEN, president of the Women's National Health Association in Ireland,

who described in particular the establishment of the two sanatoriums at Peamont, near Dublin and at Rossclare, near Enniskillen.

Tuberculosis Control

After a brief discussion on the resettlement of the tuberculous ex soldier to which Dr J. B. McDougall and others contributed Dr G. LISSANT, central tuberculosis officer Lancashire read a paper on the scheme for control of tuberculosis in the County Palatine. He described it briefly as based on the principles of 'find isolate, educate and treat the adult positive case'. From 1914 to 1935 the death rate from pulmonary tuberculosis in the administrative county had fallen from 0.87 to 0.46 per 1,000 of population and from non pulmonary tuberculosis from 0.32 to 0.10.

Dr L. S. T. BURRELL briefly discussed the function of the hospital in the tuberculosis problem, and also gave some account of the growth of the work at Brompton. In his view the hospital had three functions: to treat the early case and prepare for sanatorium treatment; to deal with the serious case of advanced disease, largely for the protection of the community; and to serve as a centre for diagnosis. Lord HORDER said that Dr Burrell might have added a fourth function that of teaching.

Dr PHILIP ELLMAN said that despite advances such as artificial pneumothorax and thoracic surgery the problem of the relapsed case still remained. He gave three reasons for relapses: (1) the return to bad home conditions; (2) insufficient attention to nutrition after discharge from the sanatorium; (3) the stress of competition in the employment market. He deplored the policy of some local councils whereby the last person to be given a council house was the ex-tuberculous patient. Institutional treatment was only one aspect of the case, the continuing care and safeguarding of the patient was above all necessary.

India and the Near East

Dr P. V. BENJAMIN of South India gave the results of a tuberculin survey of 3,000 individuals in the Chittoor district near Madras. The positive reactors numbered over 40 per cent among adults and 11 per cent among children. Lately with the rapid growth of communications and the springing up of crowded industrial centres the tuberculosis problem in India had received a new aspect of urgency. The fact that practically only one type of acute exudative disseminated pulmonary tuberculosis was met with rather suggested that much of the disease might be due to auto inoculation brought on by undue stress or unfavourable environment. Sir CUTHBERT SPRAWSON, Director General I.M.S., said that as a whole the native population of India was more susceptible to tuberculosis than that of Great Britain and the disease in India often tended to run a more acute course. He urged the establishment of tuberculosis colonies or settlements. If every city with a population of 100,000 or over were to start a tuberculosis settlement just outside the municipal limits with accommodation and arrangement for expert treatment of all types of tuberculosis a great step would be taken towards the improvement of public health.

Mr NORMAN H. MACLENNAN representing the Department of Public Health Palestine, recounted the conditions in that country. The figures for tuberculosis could only be adduced on the basis of the death rate in the seventeen principal towns of Palestine. On this basis the mean average death rate for 1930-4 from tuberculosis was 5.16 per million population the pulmonary form accounting for 387. The disease in Palestine reached an endemic importance equal to that experienced in England and it seemed probable that the incidence was increasing. From the scanty historical information available the disease had been present for centuries in Palestine. In the past its effects had been confined more or less to the large urban

communities, but the unparalleled development of Palestine of recent years had deprived the rural communities of their isolation, and promoted an extension of the disease among them. The incidence of the disease and the mortality from it was greatest among the Mohammedan community.

The African Races

Dr. CHARLES WILCOCKS representing the medical services of Tanganyika Territory, addressed the conference on the tuberculosis problem in Central Africa. Of the five million native population, mostly of Bantu origin, in Tanganyika a large proportion of those who died did so without having been treated by a qualified medical practitioner. They lived under primitive conditions, of which he gave a vivid description but the conditions were changing rapidly under the influence of education, and the people were now frequently finding employment away from their homes. In a survey with tuberculin of representative groups he found out of 9,866 examinations, 114 cases of definite tuberculous disease, and there were over 50 per cent positive reactors. The higher tuberculin rates were found in the districts of densest population. The great majority of cases were infected by the human type, there were very few cases of bovine infection. His conclusion was that tuberculosis was present throughout Tanganyika, and the natives could not be regarded as virgin soil.

Dr. A. D. PRINGLE whose previous communication on the European populations of the Transvaal and Natal was summarized in the last issue supplemented it by some account of the care and after-care of the tuberculous native, and other contributors to the discussion, which ranged over tuberculosis throughout the Empire, were Dr. J. CAUCHI of Nigeria who dealt with tuberculosis in West Africa, Dr. G. M. C. POWELL of Northern Rhodesia, Dr. R. B. MACGREGOR of the Straits Settlements, and the Hon. FRANCIS GAHA Minister of Health for Tasmania. Mr. Gaha stated that his Government was about to establish a full time free medical service for people living in the remoter parts of the State. It was not intended to place medical officers in these remote regions and leave them there—they would be drafted back to the cities at frequent intervals for refresher courses in hospitals as resident medical officers.

After this full exchange of experiences and views, extending over three days those attending the Conference paid visits to Brompton Hospital and the Papworth Settlement.

MEASUREMENT IN EXCELSIS

WORK OF THE N.P.L.

The report of the National Physical Laboratory¹ appears this year in a new dress—royal octavo instead of quarto—and is of only half its usual bulk, being much more handy and readable. The work of this great institution at Teddington which employs about 700 persons, is carried on in eight departments, in all of which a vast amount of general research and routine testing is done. As an instance of the refinement to which measurement is now carried a description is given of what is probably the most accurate experiment ever completed. Its object was to confirm or otherwise the theory of relativity whereby it is impossible by physical measurement to detect the motion of the earth through the ether of space. The experiment consisted in comparing the period of vibration of a quartz rod with that of a similar oscillator placed successively in a series of different positions so that its axis was rotated through 360 degrees. The fact that the general theory of relativity was confirmed seems much less impressive than the

extraordinary accuracy whereof no difference in period exceeding four parts in one hundred thousand millions could be detected.

Estimation of Noise

On a less ethereal plane the institution has been doing a great deal of work on the measurement of noise. It has been investigating for the Ministry of Transport the noise from mechanically propelled vehicles under varied conditions of use. A noise meter has been developed which gives dial readings corresponding to aural loudness of noises, including those of an intermittent and impulsive character. Tests have shown that motor cycles are in general the worst offenders, with some sports cars and commercial vehicles not far behind in nuisance value. A noise level of 90 phons—the phon being a unit of equivalent loudness recently set up by the British Standards Institution—is recommended as a limit which should not be exceeded by new motor vehicles. Sound insulation in buildings has also received attention, and such conclusions as that the insulating value of a solid wall can be increased appreciably by the application to both sides of plastered building board fixed to battens, or that partitions of lath and plaster or fibre board on each side of wooden studding are superior to single partitions of the same weight, are of value in a period when people live and work in ever closer proximity.

Work in Radiology

The National Physical Laboratory continues its useful work in radiology—the term here including the industrial as well as the medical uses of x-rays. X-ray diffraction or crystal analysis investigations are beginning to find a wide application in industry. One piece of work along this line which is of medical interest is the x-ray study of tooth structure undertaken for the Medical Research Council. This study has shown that the main crystalline constituent of the enamel is identical with that of the underlying dentine, but that while the crystallites in the dentine are arranged at random there is a marked fibre structure in the enamel and that a high quality of enamel is associated with a well marked fibre structure. It appears that in the case of the enamel the calcification is the more marked the later the enamel is formed in the life of the tooth, while the opposite holds for the dentine.

The work done in optics has found a useful application for the protection of the x-ray worker from the dangerous stray radiations emitted from modern radiation plants. A viewing system consisting of spherical mirrors arranged on each side of a massive protecting wall is being tried so far with satisfactory results. The patient can be clearly viewed through an aperture in the wall 3 in. in diameter several feet above the head level of the observer, so that he may carry on his work in perfect safety. Further work has been done on the approximation of x-ray and radium measurements, and it has been found that the röntgen—the unit of x-ray quantity introduced by international agreement in 1928—can equally well be used for gamma measurements. The quantity of gamma rays produced from one milligramme of radium filtered by one half millimetre of platinum amounts to 7.8 röntgens an hour at one centimetre from the source. It has also been shown that small closed ionization chambers similar to those used in x-ray work may be employed to measure the dose from a radium source if suitable precautions are taken. Thus there is resulting a unification of x-ray and radium dosage measurements—an important conclusion from the point of view of the medical radiologist. The amount of radium measured by the laboratory during the past year was 8½ grammes in some 1,100 containers. Since the beginning of its work it has measured 130 grammes of radium or one-fifth of the world's estimated supply. The amount of radium now in Great Britain is believed to be about 100 grammes of which about one quarter is owned by the National Radium Trust.

¹ National Physical Laboratory Report for the Year 1936
H.M. Stationery Office (2s. 6d. net)

REFORM OF MEDICAL CURRICULUM

DEBATE IN EDINBURGH

A discussion, attended by over 200 students and others, regarding changes that might with advantage be made in the training of medical students, took place in the Edinburgh University Union on May 6. Sir FRANCIS FREMANTLE chairman of the Parliamentary Medical Committee, in opening the discussion said that even in present-day medical education there was a faulty idea in pathology, for the causation of disease did not always begin with the condition of the individual and of the invading organism as found in hospital. The cause ought to be traced back to the home, school, or factory, and to the whole life and surroundings of the individual which had originally enabled the cause to arise, the germ to breed or the patient to be susceptible. At present the patient after treatment returned home with only the crudest general advice as to how he should fight the same conditions again. The cause, treatment, after-care and prevention of disease were therefore of the first importance, and in this the dispensary system that prevailed in Edinburgh could be of enormous value in teaching. Some change in the system of examining medical students was also required. Both the General Medical Council and the British Medical Association recognized that the student should be judged not merely by his facility in passing an examination but by his record of work in quantity and quality, and by the intelligence he had displayed throughout his period of study. The General Medical Council in 1936 had finally adopted resolutions which would come into force in 1938, but these resolutions had been originally suggested in 1922, and very little had been done to put them into effect. Something far quicker and more effective than the GMC's slow, quiet, toning up of medical education was necessary if the medical student was to face future needs as well as the present limited requirements of his professional life. As at present constituted the GMC consisted, with few exceptions of men saturated with the limited outlook of thirty years or more ago. Moreover, the natural tendency of Parliament was to leave the medical profession to manage itself, and this was done at present by the heads of the various medical corporations. He concluded by saying that reform must come from the individual medical schools. Edinburgh University had an exceptional opportunity—it had made a splendid start by its keenness on the subject—to lead those in England and to lead the whole world.

THE CURRICULUM AND THE GENERAL PRACTITIONER'S NEEDS

Dr G. O. BARBER of Cambridge University and St Mary's Hospital speaking on 'The Standpoint of the General Practitioner' said that the medical student had little opportunity of realizing how greatly different the day's work of a general practitioner was from the training he received in hospital. The public had a touching faith in the letters which a newly qualified man wrote after his name, and believed that any student who had successfully passed examinations was qualified to look after his patients in health and illness. In actual fact such letters showed that the student had achieved a high standard in a number of disconnected academic scientific subjects. For this however and for the present system no blame rested upon the teachers themselves for they were bound partly by tradition and partly by the recommendations of the General Medical Council with regard to the conduct of examinations. The medical student's attitude towards what he was taught was largely 'Will this help me to pass my examinations?' instead of 'Will this eventually help my patients?' Dr Barber believed that more time should be allowed for the student to learn how to think and how to teach himself and that there ought to be less cramming. Systematic lectures should be re-

duced and their practical application should be increased. In certain scientific subjects, such as anatomy, physiology, pathology, and bacteriology, some of the demonstrations should from the first be of a clinical nature in the hospital itself. Such an innovation would enormously increase the interest of the student and would enable the teacher to stress the application of his subject and to curb theoretical discussions which were of merely academic interest.

The speaker also thought that a more up-to-date body than the General Medical Council to guide the whole of medical education was necessary. The General Medical Council should contain a much larger proportion of men versed in the needs of the general practitioner for at present there were only seven men elected by the great body of general practitioners while of these only two he believed, had ever engaged in general practice. Dr Barber considered that the scientific subjects should be taught to a greater extent in their reference to general practice—for example anatomy should be taught only as it was applicable to the living body. In Edinburgh fuller use might be made of the dispensaries with which this city was well provided to give students some idea of what general practice was like. He believed that if some such changes were made general practice would take its rightful position as one of the highest branches of medicine instead of being regarded as at present, as a branch for mediocre and unambitious people.

SOME CRITICISMS ANSWERED

Professor SYDNEY SMITH dean of the Faculty of Medicine in Edinburgh University spoke to some extent in reply to criticisms which had been made of the present curriculum. He said that every member of the medical faculty was ready to alter and improve his course as seemed necessary. He considered that the curriculum of Edinburgh University was years ahead of anything that had developed south of the border. The great reduction that had taken place in present day mortality figures as compared with figures at the beginning of the century was a proof that their study of preventive medicine had been intensive. The maintenance of the health of the individual was stressed right through the curriculum and the recently established chair in Edinburgh of child life and health was specifically devoted to the problem of the child and of keeping him in health. Speaking of the preliminary scientific subjects, he hoped that in future medical students would spend considerable time on the subjects of chemistry, botany and physics at school before they came to the University. It had already been proposed in Edinburgh that anatomy and physiology should run together, with an increase in the amount of time given to physiology and a diminution in that given to anatomy and also that throughout the later stages of the course the clinical applications of physiology and anatomy should be studied in the wards of the hospital. He did not agree that medical students were over-worked but nevertheless it was intended in Edinburgh to ease the studies of the third year. It was also proposed that the amount of clinical work should be increased by two terms and that the long summer vacation should be shortened.

The discussion was finally summed up by Dr CHALMERS WATSON who said that Sir Francis Fremantle's plea for a definite reorganization of the curriculum strongly commended itself as well as his suggestion that a progressively minded university should give a pioneer lead at the present time. It was in accordance with tradition that Edinburgh should play that part, for the University had already given much consideration to the subject and it was gratifying to learn from the dean of the Medical Faculty that changes had already been contemplated to meet the new conditions. It had been said that medicine had come to a new birth and he would like to observe that if the birth was not to prove a stillbirth it must arise out of an appropriate marriage between what was best in the curative medicine of the past with

what was best in the preventive medicine of the future Tradition died hard, and the enthusiasm of each teacher for his own special subject was boundless and might require to be curbed Medicine should be regarded both as a science and an art, and the development which had been foreshadowed by the dean of the Faculty would enhance the students knowledge of both Other schools would no doubt follow Edinburgh's lead in this matter The speaker shared the views already expressed regarding the advisability of reorganizing the controlling body of medical education

THE CORONATION HONOURS LIST

An Honours List, issued on the occasion of the Coronation of His Majesty King George VI, was published on May 11 as a Supplement to the *London Gazette* of May 7 The list contained the names of the following members of the medical profession

Baron

The Right Hon CHRISTOPHER ADDISON P.C. M.D., F.R.C.S. First Minister of Health 1919-21 Parliamentary Secretary to the Ministry of Agriculture 1929-30 and Minister of Agriculture 1930-31 For political and public services

Baronet

Sir CUTHBERT SIDNEY WALLACE, K.C.M.G., C.B. D.Sc., M.B., F.R.C.S., President of the Royal College of Surgeons of England

K.C.B. (Civil)

EDWARD MELLANBY M.D. F.R.C.P. F.R.S., Secretary, Medical Research Council.

K.C.V.O.

Sir JOHN ATKINS K.C.M.G. M.B. F.R.C.S., Physician in Ordinary to H.R.H. the Duke of Connaught
GEORGE FREDERIC STILL, M.D., F.R.C.P. Consulting Physician Hospital for Sick Children, Great Ormond Street.

K.B.E. (Military)

Air Vice Marshal ALFRED WILLIAM IREDELL, C.B. M.R.C.S. F.R.C.P. Director of Medical Services R.A.F. Honorary Physician to the King.

A.B.E. (Civil)

The Honourable JOHN RICHARDS HARRIS M.D., Minister of Public Instruction and Minister of Public Health State of Victoria.

Knighthood

ARTHUR FREDERICK HURST D.M. F.R.C.P. Senior Physician to Guy's Hospital

HAROLD BECKWITH WHITEHOUSE M.B. M.S., F.R.C.S. Professor of Midwifery and Diseases of Women in the University of Birmingham

ARTHUR EDWIN HORN C.M.G., M.D., M.R.C.P. Consulting Physician to the Colonial Office

C.B. (Military)

Surgeon Rear Admiral GUY LESLIE BUCKERIDGE O.B.E., M.R.C.S., L.R.C.P., Honorary Surgeon to the King.

Major General OSBURN JEVERS D.S.O., M.B. late R.A.M.C. Honorary Surgeon to the King Deputy Director of Medical Services, Southern Command

Major General HENRY MARRIAN JOSEPH PERRY O.B.E., late R.A.M.C., Honorary Surgeon to the King Director and Professor of Pathology Royal Army Medical College

Major-General WILLIAM HAYWOOD HAMILTON C.I.E., C.B.E. D.S.O., F.R.C.S., I.M.S. Honorary Physician to the King, Deputy Director of Medical Services Northern Command India

Air Commodore ALBERT VICTOR JOHN RICHARDSON O.B.E., M.B., B.Ch., D.P.H., R.A.F. Honorary Surgeon to the King.

C.B. (Civil)

JOHN HARRY HEBB, C.B.E., M.B., B.Ch. Director-General of Medical Services, Ministry of Pensions

C.M.G.

ROBERT HENRY HOGG O.B.E. M.B., President of the New Zealand Branch of the British Medical Association.

C.I.E.

Colonel JOHN TAYLOR, D.S.O., M.D., I.M.S. Honorary Surgeon to the Viceroy of India, Director, Central Research Institute Kasauli

Lieut.-Colonel CLIVE NEWCOMB B.Ch. D.M. M.R.C.S. L.R.C.P. F.I.C., F.C.S. I.M.S., Chemical Examiner to the Government of Madras, and Principal, Medical College, Madras

Lieut. Colonel RONALD HERBERT CANDY M.B., B.S., M.R.C.S., L.R.C.P. I.M.S. Civil Surgeon Poona, Bombay

ERNEST MUIR, M.D. F.R.C.S.E. LL.D. General and Medical Secretary, British Empire Leprosy Relief Association

C.B.E. (Military)

Surgeon Captain WILLIAM BRADBURY D.S.O. M.B., B.Ch., R.N.

Colonel JOHN HEATLY SPENCER, O.B.E., M.D., F.R.C.P., late R.A.M.C. Honorary Physician to the King Professor of Tropical Medicine Royal Army Medical College and Consulting Physician to the Army

C.B.E. (Civil)

EDGAR LEIGH COLLIS M.D., M.R.C.P., Emeritus Professor of Preventive Medicine in the University of Wales, Member of the Miners' Welfare Committee

GEORGE CARTER COSSAR, M.C. L.R.C.P. and S.E.D., L.R.F.P.S. Glas. Founder of the Todhills Farm Colony and the Craigelinn Training Farm for the Training of Boys in Agriculture

JAMES PERRINS MAJOR M.D. B.S. Honorary Secretary of the Victorian Branch of the British Medical Association Honorary Local General Secretary of the 103rd Annual Meeting of the British Medical Association, Melbourne September 1935

PETER SINCLAIR HUNTER, M.B. Municipal Health Officer, Singapore Straits Settlements

JAMES LOCHHEAD O.B.E. M.D. F.R.C.S. Colonial Medical Service, Senior Medical Officer Gibraltar

O.B.E. (Military)

Surgeon Commander JOHN WYLIE, M.B. Ch.B., R.N.

Surgeon Captain JAMES BRUCE RONALDSON V.D., M.D., R.N.V.R.

Major DAVID FETTES M.B. F.R.C.S.E. R.A.M.C.

Major FRANK HOLMES M.B. R.A.M.C.

Captain TREVOR EDWARD PALMER M.B. I.M.S. late Medical Officer British Legation Guard Addis Ababa Abyssinia

Wing Commander ALAN FILMER ROOK M.R.C.P. M.R.C.S., D.P.H., R.A.F.

O.B.E. (Civil)

Alderman OWEN WYNNE GRIFFITH, L.R.C.P. L.R.C.S., J.P. Eleven times Mayor of Pwllheli and forty four years member of the Town Council

CHARLES RALPH COOKE-TAYLOR, M.R.C.S. L.R.C.P. For political and public services in Dulwich

DAVID HYND M.B. Ch.B. Raleigh Fitkin Memorial Hospital Bremersdorp Swaziland For social welfare services

Major GEORGE MAYNE MOFFATT L.R.C.P. and S.I. I.M.S. Civil Surgeon, Lashio Northern Shan States Burma

Lieut.-Colonel JOHN RODGER M.C., M.B. I.M.S., Chief Medical Officer in Baluchistan

Lieut.-Colonel PAUL HERBERT SHELLEY SMITH M.B., B.Ch., I.M.S., Superintendent, Central Jail, Harpur (Hazara), North-West Frontier Province

JOHN MERRILL CRUKSHANK, M.D., Colonial Medical Service Chief Medical Officer and Resident Surgeon Bahamas

JOHN DANIEL HARMER, M.B., F.R.C.S. Colonial Medical Service Surgical Specialist Health Department Northern Rhodesia

Mrs DOROTHY MARY ROBERTS M.B. For social services in the Straits Settlements

GEORGE WAUGH SCOTT M.D. For public services in the Federated Malay States

I.S.O.

HERBERT RENDELL, M.B. C.M., formerly Superintendent of the Tuberculosis Sanatorium, Newfoundland

M.B.E. (Military)

1st Class Assistant Surgeon ARTHUR NORMAN DE MONTE, M.C. Indian Medical Department.

Lieutenant (Senior Assistant Surgeon) HAROLD JAMES CLARKE FLANAGAN Retired late Indian Medical Department.

Captain ALISTAIR GORDON DONALD WHYTE, R.A.M.C. For valuable services rendered in the field in connexion with the operations in Palestine during the period April-October, 1941.

M.B.E. (Civil)

MISS HARRIETT BIFFIN M.B. M.S. For charitable and social welfare services in the State of New South Wales
THOMAS BERTRAM BUTCHER, M.R.C.S. L.R.C.P. Honorary Surgeon Superintendent, Cottage Hospital Mussoorie United Provinces

MAJOR FRANCIS JOSEPH D. ROSE Indian Medical Department Civil Surgeon and Superintendent of the Central Jail at Myaungmya Burma.

BIRENDRA NATH GHOSH L.M.S., F.R.F.P.S. Medical Practitioner Bengal

BARJOR FRAMJI KHAMBATTA M.B., B.S., D.P.H. Port Health Officer Karachi Sind

MAJOR JOHN MICHAEL PEREIRA Indian Medical Department (retired) Superintendent, Patna Medical College Hospital Bihar

PERCY WILLIAM BARNDEN M.R.C.S. L.R.C.P. For social services in Nigeria

ATUL CHANDRA DUTTA, L.M.S. Lately Medical Officer, Malacca, Straits Settlements

Kaiser i Hind Medal (First Class)

JEHANGIR ARDESHIR ANKLESARIA M.B., B.S. D.P.H. D.T.M., Port Health Officer Rangoon Burma

ST JOHN AMBULANCE BRIGADE

Jubilee Celebrations

The St John Ambulance Brigade will celebrate its jubilee this year immediately after the Coronation, beginning with a reception at St John's Gate, London, on May 14. The Brigade was formed in 1887 in order to give members of the St John Ambulance Association greater opportunities for putting their knowledge of first aid and nursing to practical test and by its connexion with the Order of St John of Jerusalem is part of the oldest order of chivalry in the world having its origin in the eleventh century. The Brigade has now grown to a strength of 101,917 men, women, and cadets in this country and over seas from where many will be making long journeys to attend both the jubilee celebrations and the Coronation. Representatives will come from many parts of the British Empire. The Queen who is Commandant-in-Chief of the Nursing Corps and Divisions, will take part in the jubilee celebrations by reviewing the Brigade in Hyde Park on May 22.

The arrangements in addition to the reception and the great review, include May 18 garden party at St. James's Palace given by the Grand Prior H.R.H. the Duke of Connaught. May 21, jubilee first aid competitions at the Great Central Hotel, prizes distributed by H.R.H. Princess Alice. May 23 service at St. Paul's attended by H.R.H. the Duke of Kent. May 25 investiture at Buckingham Palace by H.M. the King. May 29 to 30 intensive air raid precautions course for over seas at Great Central Hotel.

Surgeons-in Chief

The first Surgeon-in-Chief was Sir William MacCormac Bt. P.R.C.S. who was appointed to that post in 1896 though he had been in the St John movement from the time when the association (which teaches examines and certifies lay persons) was born and joined the Brigade at its origin. Then followed Edmund Owen F.R.C.S. of St. Mary's Hospital who was Chairman of Council of the British Medical Association 1905-10 next Sir William Bennett F.R.C.S., for fifteen years then Colonel C. I. Ellis A.M.S.T. (1931-6). The present Surgeon-in-Chief is Dr. N. Corbet Fletcher of Hampstead a general practitioner who on his promotion last year had already had twenty years service with the Brigade and is credited with several authoritative manuals on first aid and home nursing.

An Argentine Society of the History of Medicine has recently been formed in Buenos Aires under the presidency of Dr. Ramon Pardo, its special purpose being the study of medicine in America.

Local News

ENGLAND AND WALES

Centenary of Liverpool Medical Institution

The programme has now been issued for the centenary celebrations of the Liverpool Medical Institution on Sunday, Monday, and Tuesday, May 30, 31, and June 1. At the cathedral service on Sunday at 3.30 p.m. the preacher will be the Bishop of Glasgow and Galloway, and at 3.45 p.m. members of the Guild of St. Luke Cosmas and Damian will meet at the Catholic Cathedral site for benediction after which they will join the others for tea at the Medical Institution. At the centenary meeting on Monday at 3.30 p.m. honorary membership is to be conferred upon Sir Cuthbert Wallace, President of the Royal College of Surgeons of England. Sir Norman Walker, President of the General Medical Council. Sir E. Farquhar Buzzard, President of the British Medical Association, Sir Ewen Maclean, President of the British College of Obstetricians and Gynaecologists, Professor W. Fletcher Shaw, President of the Manchester Medical Society, Sir James Barr, Mr. C. Thurstan Holland and Mr. Frank T. Paul. The new honorary members will be introduced by Professor John Hay, and congratulations will be offered to Dr. Hugh A. Clarke on the attainment of his jubilee of membership. Professor R. E. Kelly will then give his presidential address, entitled *Surgery 100 Years Ago*. The centenary dinner will be held at 7.30 at the Adelphi Hotel. On Tuesday at 3.30 p.m. the opening of the Hugh Owen Thomas and Robert Jones Memorial Library of Orthopaedic Surgery will be followed by the Hugh Owen Thomas Memorial Lecture by Mr. W. Rowley Bristow, President of the British Orthopaedic Association. At 9 p.m. the Lord Mayor of Liverpool will give an *At Home* in the Town Hall with dancing till midnight.

University of London Medical Graduates

The annual dinner of the University of London Medical Graduates Society was held on May 6 in the new University buildings in Bloomsbury, Dr. Dorothy Hare presiding over a large number of members and guests. The health of the society and its president was proposed by Mr. H. Lightfoot Eason. In a characteristically witty speech he welcomed Sir St. Clair Thomson as the "well known gynaecologist" who had been present at the birth of the society in his house in 1927. Sir St. Clair he said was known not only in England but all over the world, and it was a pleasure to them that he would be present in the Abbey at the Coronation as a representative of the Royal College of Physicians. The University of London Medical Graduates Society had been created for purely social reasons to promote the interests of the faculty of medicine in London. In coupling the name of their president with the toast of The Society, Mr. Eason said that Dr. Hare was a worthy representative of the society and all that it stood for. Thanking Mr. Eason for the way in which he had proposed the toast Dr. Hare said that this was a red letter day in its short history for they were holding their dinner in the new hall of the University. She would like to thank Colonel Brook and his staff for the efficient way in which the entertainment had been conducted. The society she continued owed a great debt to the outgoing secretary Dr. Louise Livingstone and to Mr. John Hosford who would continue in office. She would also like to express their indebtedness to the treasurer Mr. Philip Mitchiner and to extend a welcome to Sir Charlton Briscoe who would shortly be the new president. She was glad to be able to record that this year the society had received official

recognition from the University of London. The society stood for adhesion to the University and cohesion among its members, of whom there were now over 700, including many over seas. The health of the guests was proposed in a short speech by Sir Charlton Briscoe, and Mr W. Girling Ball replied.

New Antitoxin Establishment for London

It is proposed to set up at Queen Mary's Hospital, Carshalton at a cost of £116,000, a new antitoxin establishment designed and equipped on modern lines. The London County Council has hitherto depended on the laboratories at Belmont, Sutton, which were built thirty years ago, to deal with the preparation of diphtheria antitoxin and of materials used in the diagnosis of diphtheria for the hospitals controlled by the former Metropolitan Asylums Board. Since the Council assumed control the work carried out at Belmont has been extended to the preparation of other products with the result that although there have been some extensions of the building the accommodation is inadequate. It is expected that the provision of the establishment at Carshalton will assure the County Council of a constant and ample supply of the products now being prepared at Belmont, as well as of others that are being purchased, with the important additional advantages resulting from research which will become possible in new forms of specific and preventive treatment. The space required for the preparation of the products at present issued and those required to meet the anticipated increase in the demands for them is estimated at twice that of the existing laboratory. The Belmont laboratories will be retained for work which can conveniently be carried out there.

SCOTLAND

Lectureship in Psychopathology at Aberdeen

Aberdeen University Court, at a special meeting recently, accepted a gift of a capital sum from an anonymous donor for the foundation of a part-time lectureship in psychopathology. It was a condition of the gift that the lecturer should not be an alienist, and that his clinical work be done in the Royal Infirmary. Among other benefactions intimated was a gift of £500 from Lord Glanely to permit research in rheumatism.

Deaconess Hospital, Edinburgh

At the annual meeting of the Church of Scotland Deaconess Hospital Edinburgh Sir John Fraser, professor of clinical surgery in the University said that this hospital illustrated in its work the beauty of what he might call practical Christianity. Religion and medicine were very fitting partners in life's work, and this was the reason why many members of the medical profession were staunch admirers of the great work done in this hospital. There was evidence now of a growing tendency to accept the principle that the State should make itself responsible for the care and maintenance of the sick. The present was not a time to discuss the ethics of that question. There was much to say in favour of it, but the very thought brought into prominence the privilege of giving voluntarily. Therefore while there was still time, they should share in the joy of voluntarily supporting hospitals, and aiding in hospital activities by all means in their power. Mr J. A. S. Millar chairman of the Hospital Board, recalled that the reopening of the Deaconess Hospital after reconstruction last December had been the last public function performed by the King and Queen as Duke and Duchess of York. The scheme of reconstruction would cost about £42,000, and towards that sum £36,000 had been received.

Correspondence

The Oxford University Appeal

SIR.—At a meeting of members of the Oxford Medical Graduates Club recently held in London to consider how they might best assist the Oxford University Appeal, the opinion was expressed that many medical graduates would like to be associated together in any contribution which they might make towards the appeal. It has therefore been arranged that a special fund will be opened to include the contributions from all medical graduates who may so desire it, the names of individuals being of course retained. It is felt that, in this way, the medical graduates of Oxford will be able more adequately to express their gratitude to their University and their desire to come to her assistance.—We are, etc.,

E. FARQUHAR BUZZARD
President

R. C. JEWESBURY
Hon. Secretary

May 3

Blood Transfusion in Obstetrics

SIR—I have read Dr Malcolm D. Black's communication on blood transfusion in obstetrics in the *Journal* for May 1 (p. 903) with some interest, the more so because active efforts, in the shape of the provision of 'flying squads' and transfusion services, are being made to deal with serious cases of haemorrhage among women delivered in their own homes. With such efforts directed towards saving women who have had severe haemorrhage at childbirth I am in natural sympathy. Common sense alone would appear to dictate blood transfusion along the lines suggested and in the type of case cited by Dr Black, but are we doing all we can to avoid the haemorrhages which call for such treatment?

When I was appointed to the Dudley Road Hospital, Birmingham, in 1932, I dealt with eighteen cases of severe post-partum haemorrhage, with collapse, in my first half-year. None of the patients died and none was transfused, all were delivered in the hospital. During the four and a half years since then there have been three cases only among the same class of patient, again without a death. Twenty cases were sent to the hospital following delivery at home during the same period, there were two deaths and one of the patients had a ruptured uterus. The hospital deals with from 1,200 to 1,500 confinements and 600 to 700 abortions a year.

On investigating the eighteen cases that occurred in the first half-year, I found that the whole trouble could be attributed to faulty management of the third stage of labour, which culminated in the loss of the retroplacental haematoma from one edge of the placenta too early, leaving the remainder of the placenta attached. In other words, when the haematoma has been conserved until the whole of the placenta has been hydraulically lifted off, all is well.

Dr Black advocates transfusion before any attempt is made to deal with the placenta or the products of conception in abortion cases. I have stated (*Journal* 1935, 1, 78) that separated placental tissue is, of itself, shock-producing. Mangled or dying tissue anywhere in the body will lower the blood pressure steeply until it is removed. When that is done the patient's pulse shows a constant and welcome recovery in twenty minutes or less and rectal salines and absolute quiet are then all that

are required Dr Black comments on the number of deaths as between the period when there was no proper transfusion service (the average of the five years 1930-4 was 21.4) and the year 1935 when such a service was instituted, and there were sixteen deaths. The smallness of this drop should be noted by everyone in charge of clinics comparable in scope with the Glasgow hospital to which Dr Black is attached. He has the kind of results that may be obtained in cases of desperate need, however quickly the transfusion is given or rather made available.

While an active supporter of the kind of work that Dr Black is doing, I feel that there is even more to be done in the way of disseminating knowledge of the real physiology underlying the separation and expulsion of the placenta, from which the management of the third stage of labour follows as a corollary. Further all perineal lacerations following operative delivery should be immediately sutured, thus avoiding confusion as to the source of the bleeding. If the placenta is not expelled naturally an anaesthetic should be given and the placenta expressed or removed manually. In my own experience covering nine years spent in large maternity hospitals I am convinced that the best time for transfusion to improve the patient's general condition is the fifth or sixth day of the puerperium. With Dr Black's remarks on placenta praevia I am in full agreement—I am, etc.,

WENTWORTH TAYLOR FRCSI, MCOG
Birmingham, May 4

SIR—Dr Malcolm Black is to be congratulated on his admirable survey of blood transfusion in obstetrics in the *Journal* of May 1 (p 903). The experience at Leeds Maternity Hospital confirms that of Dr Black. The improvement of the maternal results in placenta praevia since blood transfusion has been freely resorted to is striking. Before 1931 the annual number of transfusions recorded never reached ten, from 1922 to 1930 260 cases of placenta praevia were treated in the hospital and twenty-eight of these patients died (10.8 per cent). In 1931 there were eleven transfusions in 1932 and 1933 eighteen each and in 1934 twenty-five from 1931 to 1934 177 cases of placenta praevia were treated and four of these patients died (2.3 per cent). Figures later than 1934 are not available. Since 1931 the Leeds Blood Transfusion Service has kindly provided most of the donors. The only alterations in the obstetric treatment of placenta praevia since 1930 have been the introduction in 1932 of Willett's forceps as the method of choice and an increase in the incidence of Caesarean section. No doubt Willett's forceps should share with blood transfusion the credit for the improved results.

I am glad to see that Dr Black stresses the value of blood transfusion in the patient's home in certain cases. I am convinced that the transfer to hospital kills some patients who are in a state of collapse from haemorrhage and brings others near to death. The flying squad advocated and introduced by Professor Farquhar Murray at Newcastle can save many lives and has been strongly recommended in the recent report on maternal mortality published by the Ministry of Health.

I think the best form of transfusion service is one whose members are available to give blood in any emergency whether medical surgical or obstetric. I do not know what is done in Glasgow when donors are required for say surgical cases but it would surely be uneconomical to have two services with two office staffs and two sets of the necessary stationery in one city. The Leeds service was modified from those of London and Birmingham. The hospitals pay the service a small sum

for the donors used and private patients each pay a fee of five guineas. The fees are used to meet service expenses as the donors as a body have refused to accept any remuneration for what they give—I am, etc.

Leeds May 3

ANDREW M. CLAYE.

Treatment of Tetanus

SIR—I have read with great interest Dr Yodh's paper (*Journal* April 24 p 855) on the treatment of tetanus in which he has published further results with repeated doses of antitoxin given by the cisternal combined with other routes. My own results in a small series of thirty consecutive cases treated almost entirely by one single large dose of antitoxin (usually 200,000 international units) given intravenously are perhaps of sufficient interest to quote. Out of thirty patients seventeen recovered and thirteen died, a mortality rate of 43.3 per cent (Dr Yodh 438 cases, mortality 50.6 per cent). Five of these cases were extremely severe and the patient died within twenty-four hours of admission; three others were severe cases in men over 60 whose general physique gave no chance of recovery from tetanus. If these eight cases are excluded then there was recovery in seventeen out of twenty-two a mortality rate of 22.7 per cent. It should be added that however much earlier these eight cases had come under treatment nothing could have saved them. In my experience this applies in most cases in which the patients die within twenty-four hours of admission so that their exclusion is liable to give a false idea of the mortality rate. In my series there were no cases of purely local tetanus.

Dr Yodh quotes me as saying that he (Dr Yodh) in his previous paper (*British Medical Journal* 1932, 2, 589) did not give the incubation periods. My exact words were "but does not give exact details of incubation periods" (*Quart J Med New Series* 4 298). Dr Yodh classified his cases into groups with incubation periods of one to five, six to ten, and eleven or more days. My point is that in assessing prognosis the exact incubation period and even more important the exact period of onset are of the greatest value. The prognosis in a series of cases with incubation periods of six or seven days is much worse than in a series with incubation periods of nine or ten days. The same applies to a period of onset of two days as compared with one of three.

In attempting to compare the results of two methods of treatment of tetanus it is most important to take two series of cases in which the incubation periods and periods of onset are as near as possible identical, which are as similar as possible in other respects, and in which apart from tetanus the patients are physically fit. I believe that a very careful study of smaller groups of patients on these lines would yield information of considerable value. Tetanus is such a variable disease that unless this method of control is used the results obtained in different series of cases are bound to be conflicting—I am, etc.

Cambridge May 5

LESLIE COLE

Rectal Injuries from an Enema Nozzle

SIR—Mr Walter W. Galbraith's paper on rectal injuries in the *Journal* of April 24 (p 859) justifies the following records.

CASE 1

A healthy single woman in her forties with a huge ovarian cyst complained only of her abdominal enlargement and the playful taunts of her friends. The operation was timed for 10 a.m. but the matron of the home told me that the patient had complained of rectal pain following the admini-

tration of an enema the previous evening, and suggested postponement of the operation to allow of the possible after treatment

On examination a small spot of redness not more than a sixpence in circumference was found at the edge of the anus. It suggested an inflamed pile and I agreed to postpone the operation. At 6 p.m. on the same evening I was horrified to find a raised erysipelatous rash extending all over the buttocks and perineum, and up to the small of the back and well down her thighs. Over the perineal region there were black gangrenous streaks. The patient was removed to the isolation hospital where prompt surgical treatment involving extensive incisions did not prevent gangrene and sloughing of the rectum and perirectal tissues.

Some three months later she again came under my care, and I found a funnel shaped somewhat wide opening leading up from the perineal area to the end of the rectal tube some three inches higher up. Local plastic repair was out of the question. I removed the ovarian cyst, and was astonished to find no evidence of any inflammatory reaction in the floor of the pouch of Douglas with which the lower pole of the cyst was in contact. A colostomy was performed later.

CASE II

This patient was a maternity hospital case," and had a laceration involving the perineum and rectum. It was repaired. She complained of severe pain following the administration of an enema. The subsequent history was one of cellulitis sloughing, septicaemia pyaemia and death. It was generally believed that the nozzle of the enema had either perforated the rectal wall or had in some way penetrated a stitched laceration.

These two cases have convinced me that even in expert hands the rigid nozzle is inadvisable, and in the hands of probationers and untrained women positively dangerous. I always insist that enemas are given by means of either a catheter or a rectal tube, the pliability of the rubber will reduce to the minimum the risks of the procedure. Mr Galbraith has called attention to a most important matter. I share his abhorrence of the rigid nozzle of the enema syringe—I am, etc.,

Newcastle upon Tyne May 3

FARQUHAR MURRAY

Cancer of the Breast

Sir—In the *Journal* of February 6 certain questions were put forward by Dr Gilbert Scott bearing on cancer of the breast. These appear to me very much to the point and worthy of consideration. Each week I have been hoping that someone more able than myself might attempt to supply some of the answers, instead there has been an exchange of personalities.

The answer to Dr Scott's first conundrum, whether the therapeutical results of radium are sufficiently satisfactory to justify the expenditure of large sums of money in creating an apparatus that will produce x rays of the same wave length as that of radium, must be in the negative. For it seems to me that even if an agent was found which was capable of completely destroying every atom of the primary growth we should be no nearer to a cure than were the Egyptians in 2000 B.C. The reason is contained in question four in which Dr Scott says, "Metastases do all the killing." This unfortunately is only too true and but little progress will be made in cancer research unless this obvious fact is taken into consideration. It would seem that the presence of a primary lesion only indicates that the patient is cancerous—analogous to the primary chancre in syphilis. The removal or destruction of the chancre alone, however complete and satisfactory does not prevent the formation of a gumma at a later stage.

Dr Scott asks why the word metastasis is but seldom mentioned in discussions on cancer, and the recent meeting

of the British Empire Cancer Campaign was no exception. I think the answer must be because there is no known means of prevention. If this is so surely we are not justified in talking about a cure for cancer. Research workers might concentrate some of their energy on the solving of this problem. If, eventually, some means of preventing the formation of metastases is discovered, it is quite probable that the primary lesion will look after itself. If the principle of deep x-ray therapy is as stated in the second question, then clearly it can be of no real value in prophylactic work. It is rather like putting down an intense barrage here and there, not having the remotest idea where the enemy is hidden. Cut off their food supply or poison their water, their position and strength will then be of little consequence.

Question three deals with the value of pre-operative irradiation. Obviously if post-operative methods of irradiation are really reliable, pre-operative irradiation must be the correct procedure. Question five asks whether there is any evidence that secondary deposits are less likely to occur after the destruction of the growth by radium or x rays than after removal by operation. That is an important point, but I do not know the answer.

Finally, there can surely be no doubt of the palliative value of judicious doses of radium and x rays in cancer. I can also deplore the tragic results of well-meaning efforts to cure cancer by irradiation in unsuitable cases. The medical man's motto should not be forgotten. *Primum non nocere*—I am, etc.,

JOHN E RYAN M.B., B.S., F.R.C.S.

London W 1, May 5

Intraperitoneal Haemorrhage from a Graafian Follicle

Sir,—Dr Cresswell Davis has seen fit to state (*Journal* April 24 p 889) that of the two cases of ovarian haemorrhage which I reported only the second had its origin in a ruptured lutein cyst. If he had read my letter (*Journal* March 6 p 527) he could not have failed to notice that in both cases there was histological evidence that this was the source of the bleeding. His artless assertion that 'most of these cases appear to be of haemorrhage from a Graafian follicle' receives no support from his own case, in which no tissue was taken for 'section'—I am, etc.,

Birmingham, May 6

J C LEEDHAM GREEN

Water Dropwort Poisoning

Sir,—On Easter Monday, while visiting in the country, I knocked at a cottage door to inquire my way, and was confronted with a rather anxious mother holding a small girl who was having a convulsion.

I put the child on a sofa and she had five convulsions in rapid succession, becoming blue in the face, frothy at the mouth and with shallow respiration. Her elder sister was sent to fetch my bag from the car and she came back and said "Mother Vivian is on his back in the garden having fits." Now I had two children who were vomiting and having convulsions the cause of which was obscure and by this time I too was becoming anxious as the boy aged 5½ was unconscious, grey in the face and with his pulse imperceptible at the wrist. In view of his grave condition I injected 1 c.c. of coramine and later he showed signs of reviving. Both children seemed to have got over the serious effects next day, but their muscles were still twitching.

I discovered that both children had eaten the leaves and root of a plant they found in the river bed, the *Oenanthe crocata* or water dropwort, an exceedingly com-

non plant in this district Cushnys *Pharmacology and Therapeutics* gives a good description of the human poisoning which the symptoms of the children closely followed The poisonous principle is oenanthotoxin, which produces symptoms similar to those caused by picrotoxin In view of the coincidence and unusual nature of the cases I think them worth recording—I am etc,

Cowbridge May 6

W E THOMAS

Prevention of Constipation

SIR—Dr E M Dimock's article on the prevention of constipation by bran (*Journal* May 1, p 906) causes me to point out what may not be generally known in these motoring days, that it is customary for horses on dry food during the hunting season to have a bran mash every Saturday night—I am, etc.,

Rotherham May 3

G E MOULD

Technique of Ionization

SIR,—In his review (*Journal*, May 1, p 919) of Dr A R Hollender's *Physical Therapeutic Methods in Otolaryngology* your contributor may convey a wrong impression when he says, with reference to the ionization treatment of vasomotor rhinitis, that 'it is emphasized that benefit is obtained at the expense of permanent destruction of the ciliated epithelium of the nose, and this is clearly demonstrated in a series of photomicrographs' May I point out

1 That the technique of ionization described by Dr Hollender (pp 73-175) involves the passage of a current of 15 mA for ten minutes to one side of the nose at a time As I pointed out in my book *Hay Fever* (Oxford University Press) a current density of this order will produce diffuse destruction and fibrosis whereas a current of 3 mA to both sides of the nose simultaneously with proper attention to the technique of packing will not.

2 That the photomicrograph of the control in Dr Hollender's book shows cilia in some areas and absent in others" and that it is not in my opinion, a representative picture of an established vasomotor rhinitis since the stroma is slightly infiltrated by small and large lymphocytes and a few plasma cells and the mucous glands have a normal appearance The tissue is not oedematous and eosinophil cells are not present

3 That numerous workers among others Hansel Coates and Ersner and Weille have shown that cell metaplasia occurs in true vasomotor rhinitis before any treatment by ionization and that one of the most characteristic features of allergic nasal mucosa is the appearance of stratified squamous epithelium in place of the columnar ciliated type My own (published) histological observations confirm this Now stratified epithelium will not grow cilia and it is therefore absurd to condemn ionization because cilia are not found in sections taken afterwards

Furthermore, since the casual reader is likely to be misled by your reviewer's summary of Dr Hollender's experience with ionization in vasomotor rhinitis I must point out that Dr Hollender states the enthusiasm with which ionization has been pursued as a remedy for seasonal hay fever seems thoroughly justified For my part however I cannot agree that the American technique which involves the use of excessive currents is the best method of applying this treatment—I am etc

CLIVE SHIELDS

London W 1 April 30

* The Reviewer writes The position of ionization for vasomotor rhinitis must be very precarious if it is unable to endure the mildest criticism Dr Shields resorts to the ancient sophistry of violently rebutting a charge which has not been made Ionization has been condemned neither by Dr Hollender nor by your reviewer

Birching of Children

SIR—It is easy to agree with the general conclusion of your leading article on the whipping of child delinquents but difficult to subscribe to the extravagant statements of some of your correspondents For instance, it is asserted by one that all who advocate the whipping of children are actuated by sadistic impulses One is left with an uncomfortable feeling that a very large number of parents, teachers, and others in charge of children a generation ago probably a majority of the nation, were sadists judged by this criterion Further, what is a poor remedy in general may be excellent on occasion While no one would advocate corporal punishment as suitable for all children or all delinquencies, years of close study of school children have forced on me the fact that some boys can be taught and benefited by such punishment, while many cannot

Most of us will agree that to birch a little boy of 8 is, if not barbarous certainly futile But six strokes to a healthy boy of 14 is not a terribly severe ordeal and there exist many who would think it an efficacious way of dealing with some delinquents of 14 to 18 years Lastly, apart from the victim, there is little doubt of its success as a deterrent to others The child who is put on probation too often regards it as having been 'let off' and comes back to his fellows to boast that he has been 'down to the court and has come back scathless The knowledge that such punishment was even occasionally employed by the children's court would keep many a child from its first delinquency

Magistrates have full power of inquiry and a wide discretion and the fact that out of many thousands of cases in the juvenile courts in 1935 only 200 were ordered a whipping proves that their discretion has not been abused—I am, etc,

Hastings May 8

E C DOWNER.

"What is Osteopathy?"

SIR—In the *Journal* of April-24 Sir Walter Langdon Brown states that it must be difficult for me 'to try to be a modernist and a fundamentalist at the same time' The fundamental which is under discussion is that normal function is dependent on structural integrity no more no less I maintain I think with justification, that it is easier to be in this respect a fundamentalist and yet a modernist than it was, say, thirty years ago It is still easier now than ten years ago and it is easier this year than last

Sir Morton Smart states "To maintain a tissue in a healthy state regular normal fulfilment of the functions of the arterial, venous and lymphatic circulations is essential and this is even more so when a tissue has been injured Much fun has been poked by Drs Hill and Clegg at the statement of Snell's that the rule of the artery is supreme but is the above mentioned statement so far removed from the following definition of osteopathy?

Osteopathy is a manual method of healing It is based on the fact that abnormalities in the human framework ultimately cause disease by interfering with the blood and nerve supply to the various tissues and organs of the body Further by obstructing the vessels which carry away waste products these abnormalities allow other factors in ill health to exert their influence unduly

Surely it is easier to substantiate that dictum now than it was when Langdon Brown brought out the first edition of *Physiological Principles in Treatment* I have compared the recent most excellent seventh edition of this unique work with the earliest edition in my possession the third The comparison is interesting and I would recommend those who are concerned with this argument to do the same

It may be of interest to your readers to know what the reactions are in osteopathic circles to the book *What is Osteopathy?* by two junior officials of the British Medical Association. This book will be answered in no uncertain terms and perhaps it would have been wiser if the Association had rested content with its recent legislative victory. It must be stated at once that no charge of deliberate unfairness can be brought against the authors. The book is written for the public, whose sense of fair play it would be unwise to offend. Yet one gathers the impression that the passages from the report of the Select Committee of the House of Lords, appointed to consider the Registration and Regulation of Osteopaths Bill are selected not to show what osteopathy is but to indicate the limitations of that system of practice.

H G Wells's preface is inconsistent and valueless. Is there anything in such books as *First Men in the Moon* and *Food of the Gods* that would indicate that the opinion of their author is of any more value than the readers'? It is certainly of less value than mine. It might be thought that such a visionary as H G Wells would be found arguing on the side of the osteopaths. We would rather have him where he is for all his excursions into science and in fantasies of seeming actualities. Yet his natural inclinations would have led him to support the osteopaths had he not so controlled the natural sentiments which he confesses to own. On the one hand he states that osteopathy considered "as anything more than the manipulative side of surgery is impudent balderdash," and on the other hand, he issues a warning to medical men and urges the medical profession "to take into itself as speedily as possible whatever good there is in manipulative healing. Few would argue that manipulative surgery is as comprehensive as manipulative healing. Osteopaths are manipulative healers and there is nothing in manipulative surgery that they do not use when the occasion arises. George Bernard Shaw's attitude is indicated in a typical Shavianism. 'No osteopath wants to be a doctor, but every doctor should be an osteopath.' Shall we leave it at that and call it all square?

Fifty pages of the book are given over to the ridicule of Still. He laid himself open to it. None of us belittle the discovery by Harvey of the circulation of the blood because some of his other works were not up to the standard of that epoch making discovery. Though Harvey left no immature compositions and, as it has been said, no juvenalia over which we may smile indulgently, nevertheless he did learn from Fabricius, as he leant over the railing in the windowless amphitheatre at Padua, that the renal valves are always directed toward the heart.

The most misleading chapter in the whole book is the chapter on "Osteopathic Education in America." It is either deliberately misleading or inexcusably out of date. The osteopathic profession is young, the first college being opened in 1892. To get a comparable stage in the development of medical education one would have to go back to the days before the passing of the Medical Act of 1858. The regular course for graduation as Doctor of Osteopathy in any one of the six colleges approved by the American Osteopathic Association consists of four years of nine months each. No reference is made to the fact that the College of Osteopathic Physicians and Surgeons, Los Angeles and the Philadelphia College of Osteopathy require two years of medical work in an approved college before beginning the osteopathic course. One would not gather from this book that there are at present ten thousand fully qualified practising osteopaths and that in the United States there is one osteopath to every twenty doctors of medicine and one per 17,000 of

the population. There is no word of the fact that there are more than two thousand students at present enrolled in the six approved American colleges.

The slogan of the book seems to be 'Get your name on to the Medical Register.' Such, at any rate, is the advice given to the British osteopath in search of State registration. It may be that the medical opposition in this country is so strong that that is the only practical course open, it may be that the general public would so wish it. Be that as it may, the qualified osteopaths in this country have already taken steps to carry out all the recommendations of the Select Committee of the House of Lords.

There are seven members of the British Osteopathic Association whose names appear on the Medical Register. The question might be asked. Why did Dr Hill or Dr Clegg not approach one of these gentlemen. Had they done so they would have been able to give a truer answer to the question, 'What is osteopathy?'

Yet there is a glimmer of hope, for the final sentence of the book is 'If it is found that osteopathic manipulation has something which medical manipulation has not, then this something else will have to be included in the therapeutic equipment of the practitioner of medicine. The warning of Wells has been taken to heart—I am, etc,

Edinburgh April 30

W KELMAN MACDONALD

* In the preface to their book, *What is Osteopathy?* Dr Hill and Dr Clegg state 'We would point out that the views expressed in this book are our own, and not necessarily those of the Association to which we belong,'—Ed. B.M.J.

Research in Mental Hospitals

SIR,—As an assistant medical officer in the L.C.C. Mental Hospital Service, may I endorse the letter headed 'Research in Mental Hospitals' (*Journal*, May 1, p. 942) by emphasizing the present understaffing in these hospitals. The average A.M.O. has over 500 patients of all types under his care, and it is not surprising that many doctors who enter the service with considerable enthusiasm and interest find that after a year of routine physical and mental examination and treatment of ordinary medical and surgical diseases they no longer have the time or inclination to carry out individual and psychological treatment of their patients. It has been said that the mental hospital doctor does little work and should have plenty of time to treat his patients. If he attempts to do this properly the magnitude of his task so appals him that he gives up his ideal of psychological treatment—providing he has had this ideal—and contents himself with the minimum of routine work, mental and physical notes, and records of casualties, etc.

Asylums in the past cared for their patients, but hardly thought of actively trying to improve their mental condition. Now it is realized that a great deal can be done by individual psychotherapeutic measures, but these take time. May I indicate the problem with reference to my own work. I have 500 patients in my wards, new admissions come in a slow but steady stream to replace those who die or are discharged. If I did no routine or administrative work, but confined myself to psychotherapy for fifty hours a week I could give each of my patients less than a minute a day!

Never has psychiatry presented so many obvious fields for research as at the present time. Research workers are needed and should be encouraged but until the number of patients under the care of each medical officer has been considerably reduced little treatment and no research can be usefully undertaken—I am, etc

May 1

A.M.O.

Obituary

H P FAIRLIE MD

Anaesthetist Western Infirmary and Royal Hospital for Sick Children Glasgow

We regret to record the death of Dr Harry Prescott Fairlie, the well known Glasgow anaesthetist. He studied medicine at the University of Glasgow and the London Hospital, and graduated MB Ch B Glas in 1905, proceeding to the MD., with commendation, in 1912. Dr Fairlie was honorary secretary of the Section of Anaesthetics at the Annual Meeting of the British Medical Association in Glasgow in 1922, vice president of the same Section at Manchester in 1929, and president at Eastbourne in 1931. He was also president of the Section of Anaesthetics of the Royal Society of Medicine in 1903-4, and at the time of his death was still a member of the council of the Association of Anaesthetists and of the editorial board of the *British Journal of Anaesthesia*. He wrote many papers on his specialty and collaborated with Dr J S Ross of Liverpool in the well-known *Handbook of Anaesthetics* which reached its third edition in 1929.

We are indebted to the Editors of the *Glasgow Medical Journal* for permission to print the following extracts from an appreciation by Professor Samuel J Cameron.

By the death of Harry Fairlie the medical profession in the West of Scotland lost one of its most distinguished members. Although his death was not unexpected it was regretted by all who knew him for it is granted to few to be the subject of such universal respect. My association with Fairlie covered a long period as I first met him when I was a demonstrator of anatomy in the University of Glasgow in the year 1902. Fairlie was a member of the class and I was attracted to the youth by his eagerness to acquire knowledge and by his modest demeanour, characteristics which persisted throughout his professional career. The friendship formed then continued to the end of his life, and during that time I have never heard Fairlie make an ungenerous remark. It may not be generally known that his professional life might have been passed elsewhere for soon after he started practice he was strongly tempted to apply for an anaesthetist's post at Dundee. When he consulted me I urged him to remain in Glasgow, as work would inevitably come with the years. This forecast proved accurate, for there came a time when his engagements were so numerous that one had to arrange operations for certain days if his services were to be secured. It is superfluous to refer to his skill as an anaesthetist; his ability was recognized by all who had the privilege to work with him. He was ever alert to test any innovation in his specialty and he possessed an unerring instinct for quickly assessing the value of new methods. During the thirty odd years I was associated with him he had only one anaesthetic death in my practice. This occurred when he had many years' experience in the administration of anaesthetics but such was the natural modesty of the man that the event not only gave him great distress but caused him to consider if he was adequately equipped for the specialty which he practised. It did not seem to impress him that so many members of his profession requisitioned his services for themselves or members of their families nor was he the least elated when he was elected president of the Anaesthetic Section of the Royal Society of Medicine. For some years he was anaesthetist

of the Royal Infirmary, but later he joined the staff of the Western Infirmary with which hospital he was associated until his death. He contributed many valuable articles to the literature of anaesthesia, and he reissued Stuart Ross's textbook on the same subject.

Apart from his profession he had many interests. Classical music gave him great pleasure, and so he regularly attended the concerts of the Scottish Orchestra. Whenever he could secure a few hours of freedom he would motor into the country so that he might enjoy a walk among the hills. He was greatly interested in bird life; he seldom returned from a fishing expedition (another favourite pastime) without having made observations relating to the arrival or behaviour of some of his feathered friends. A memory of Fairlie would be incomplete without a reference to the circumstance that his actions were governed by profound religious convictions. Throughout a long and painful illness his faith sustained him. Never did he question his lot, his sole concern being for the welfare of his family, to whom he was devoted.

To all who came in contact with Fairlie he will be remembered not merely as a perfect anaesthetist but as a quiet and heroic little figure who adorned his profession by the sterling qualities of his character.

S J C

BENNETT MAY, CBE, FRCS

Consulting Surgeon, Queen's Hospital Birmingham

Emeritus Professor Bennett May, who died on May 3, was the senior member of the medical profession in Birmingham and was in his time one of the leaders in surgery in the Midland counties. Bennett May was born ninety two years ago at Farnham in Surrey, and entered the Sydenham College School of Medicine in Birmingham in 1864. Sydenham College being the medical school attached to the Birmingham General Hospital. He became a Fellow of the Royal College of Surgeons of England in 1876, and was appointed resident surgical officer at the General Hospital. For a time after that he was assistant to Oliver Pemberton in his private practice. In 1880 he was appointed casualty surgeon at the Queen's Hospital and in 1881 became honorary surgeon there. He resigned his active association with the hospital in 1906 when he was appointed consulting surgeon. From 1887 to 1909 May was professor of surgery in the Birmingham Medical School. For many years he had been an active member of the British Medical Association having served on the council of the old Birmingham and Midland Counties Branch of which he was president in 1899 and on the Birmingham Branch Council. At the Annual Meeting in Belfast in 1884 he was secretary of the Section of Surgery and was a vice president of the same section at Birmingham in 1890.

Bennett May practised surgery before the advent of the extreme specialism which we find to-day. His interest in surgery was wide and his work was the engrossing factor in his life. If one were asked to say what were the characteristics of May as a surgeon one would answer that they were his diagnostic ability, his extreme care and his meticulous accuracy. As a teacher May was not impressive; he thought aloud too much but as a surgeon to intelligent students May was supreme. He taught by the excellence of his methods rather than by word of mouth. During his period of active work at the Queen's Hospital he had as his colleague that very exceptional man Jordan Lloyd. To the writer it was always interesting to watch the work of these two men who were so different in their methods and in their personal characteristics.

Lloyd—brilliant, original, swift in making his diagnosis and swift in operating, Bennett May—not what one would call original or brilliant, but extraordinarily thorough, painstaking, and careful. These two men by such different paths attained the same object—namely, results in their work, the excellence of which in that day could not be surpassed.

To strike a more personal note, May was a man much beloved by all those who knew him well. He was kind and generous, he had no malice, he spared no pains to help the young man who had surgical ambitions. He had many foibles and peculiarities absolutely clean and careful in his surgery, yet he never would admit that sepsis was due to organisms. He decried the usefulness of all such aids as the microscope and clinical chemistry, but the results which May obtained would stand investigation in any epoch. They showed what a man of character and ability could do without extraneous help. The force of May's language when he was expressing his opinions on people or on surgery often made his hearers smile, but never lessened their affection and respect for a very remarkable man.

The later years of Bennett May's life were clouded by illness, and his colleagues saw little of him. He was, in a way, a man of the past, but his death reminds us of the work of one who advanced surgery and who set an example in his efforts to attain excellence in his work that has been an inspiring force to all of us who were privileged to watch his surgical practice.

L G

The death of Dr JAMES CARRUTHERS occurred unexpectedly on April 29 at his residence, Hawthornlea, Uddington. Born at Newarthill over 65 years ago and educated at St John's School Hamilton he entered Glasgow University in the late eighties, and after graduating M.A. and M.B. Ch.B. embarked on a career in general practice. After a voyage as a ship surgeon to Rangoon he became assistant at Kilsyth and later for five years at Bothwell, where he gained an extensive experience of general practice under the late Dr William Grant Macpherson. In 1904 he entered into partnership with Dr Thomson of Uddington and his life's work has been associated with that district. Dr Carruthers was for many years public assistance medical officer and was a justice of the peace for the county of Lanark. His extensive practice did not permit him to take a large share in public affairs. He was deeply interested in general literature and was the proud possessor of many first editions. He was very conscientious and painstaking in his work and was deservedly held in high regard by the community which he had faithfully served for almost forty years. The interment took place on May 1 and was attended by a large and representative company. He is survived by his widow and two daughters.

The death occurred at a nursing home on May 4 of WALTER FLIGH MACKINNON, GOLDIE OBE FRCS, medical officer of health for Leamington Spa. Goldie was born at Simla on June 6 1879 was educated at Charterhouse and intended like his brother, for the Army, he passed for Sandhurst but defective eyesight prevented his following that profession. He then proceeded to the University of Edinburgh and afterwards to St Mary's Hospital. He qualified MRCS, LRCP in 1903, obtaining the FRCS(Eng) in 1906 and the DPH in 1910. After various clinical appointments in London at St Mary's Hospital Great Ormond Street Hospital, and Mount Vernon Goldie joined the Colonial Service and was in East Africa for three years. Severe malaria prevented his return for a further period of duty and he applied for and was appointed assistant medical officer of health and tuberculosis officer for the city of Norwich. On the outbreak of war he joined the Navy, and

continued in the Service till 1919. Practically all this time was spent at sea, and he received the O.B.E. (military). My first meeting with Goldie (writes H G W) was on his appointment as medical officer of health and school medical officer for Leamington Spa in 1920, and the friendship formed then has, I am glad to say, continued and increased during the years which have since elapsed. Professionally Goldie was a man of wide experience and ripe judgement, and his powers of observation were the envy of many of us. His long experience in the diagnosis of infectious disease was always at the disposal of colleagues, and his conclusions were expressed with a decisiveness, not to say forcefulness, which was characteristic of him. Beneath a somewhat reserved manner he had a great liking and understanding of young people and children especially seemed to discover this at once. To see his manner of dealing with them at his hospital or infant welfare centre was a revelation of kindness and understanding. In the untimely death of Goldie Leamington Spa has lost a devoted servant, medicine a worthy exponent, and his friends one-whom it will be impossible to replace.

Universities and Colleges

UNIVERSITY OF OXFORD

The Board of the Faculty of Medicine has elected the Hon. Mrs M A Jennings, M.A. B.M. of Lady Margaret Hall to the Schorstein Research Fellowship.

UNIVERSITY OF CAMBRIDGE

The Board of Research Studies has approved C. C. Okell M.A. M.B. Chir. for the degree of Doctor of Science.

The title of the degree of M.B. was conferred during the month of April upon G M Brown, C J Ormerod and E L Willis of Girton College.

UNIVERSITY OF LONDON

At a meeting of the University Court held on May 5 with the chairman (Lord Macmillan) presiding, two generous gifts to incorporated colleges were gratefully accepted—namely, two thousand £1 preference shares in the firm of Messrs H A Lewis and Co given to University College by Mr H L Jackson governing director of the firm and valuable scientific equipment for research presented to Kings College by the Halley Stewart Trust.

ROYAL COLLEGE OF PHYSICIANS OF LONDON

Dr Edwin Bramwell will deliver the Croonian Lectures on Clinical Reflections upon Muscles Movements and the Motor Path at the College Pall Mall East S.W., at 5 pm on May 25 and 27 and June 1.

At the meeting of the College held on April 29 licences to practise were granted to the following candidates:

E W O Adkins W C Aman, M S Ambrose E F Aubert, W C Baird T M Banham R O Barber P F Barwood J G Berry W D Benyon S L Biswas, R G Blackledge J Bleakley G Bourne Agnes Y Bowie J G Braddon R H F Brain, J H Briscoe Smith A E W Brooker K C Brown R S Bunney P J Burke J H Burkinshaw C S Cane C A G Cato, H W Chadfield A Chambers L R Chaperon Norah H C Clarke O W W Clarke May D C Clifford N F Coghill A Cohen S M Cohen J C A L Colenbrander D G Cracknell F M Crawshaw N C Creighton J A Currie J B Cuthbert Mary D Daley, A J Datzel Ward J B Dancer S B Darbishire A R Darlow C M Dickins Cecile R Doniger V Drosso Katherine W Dunn Pattison A E H Eades J D Ebbsworth Violet E Ellam, M El Said M El Shanawany G E Ennis P G L Essex Lopresti Kathleen J Evers, G A Farlie-Clarke Rachel D Fidler R D Flintan G A Fowler Audrey U Fraser R T R Freshwater H W C Fuller E Garland-Collins S Gannana Goonehorn, R G Gibson D S Gilson J C Gilson Dorothy M Gladwell M Glick, E G Godwin B H Goodrich C W C Gough G W V Gnegy A C Grey A Griffiths G L Grisperti, J A Guest D V Hague H Haigh S G Hamilton H E W Hardenbergh D W T Harris R W H G Harris G F C Hawkins M J McK Heap S H Heard J A Herd A J Heriot J Herman P S A Heworth A P Hick K R Hill G B Hollings J N Horne N C Horne J G Humble Sybil M Humphreys K K Hussain D L Isaac, D N

Jackman G James N E James D Jeffers S T H Jenkins
W H R Jeremy J G Jesson A W Johnson G M Johnson
J S Joly D W G Jones J D Jones R A Jones O Jordan
P T Joseph N Jungalwalla L C Kalra B K Kapur
J Kastelian J H H Keall Gladys E Keith P M Kelly G M
Kerr P Kidd J R Kilpatrick E J Lace H B Lal E V
Lambert L P Lassman N G Latey J M Lea A R Leask
A R Lee I Libman A E Loden Christina F Lucas G L St A
McClosky T O McKane M E Mankin A J Martin
D Matthews Maung E R Mck Miller D Moss S N Mukherjee
Winifred F G Murray B Mushin R H Neeve Elizabeth A
Nettall C P Nicholas M P Nightingale A J Nimmo W A
Owen L B Paling E A Pask R W J Patterson Constance E
Peaker C C S Pike C S Pitt G E J Porter H L Porter
H C Price S H Raza J A Rhind G R Richards I D Riley
R Roaf G M Robertshaw Annie I B Ross Mary C Rowe
K C Royes N Sacks A R Samuel F H Scadding C G
Scorer C W Seward Constance M B Shaw G Shnerston
R J Simms D A Slade J M Small A W Stewart J F Stokes
H Stoll W G Sutcliffe S Tarlovskis W Taylor I E J
Thomas J N Thomas L C Thomson R W Thomson G G
Thyne D J D Torrens R L Townsend J S Varma E Vernon
F H Vollam G M Ward S Ward R W Watts G V Webster
T Weiner R A White E H L Wigram O G R H Williams
S I Williams A D Willis I N Winer F A J Woodland
E Woolf A S Woolstone R O Yerbury

The following diplomas were granted jointly with the Royal College of Surgeons of England to the following candidates

DIPLOMA IN TROPICAL MEDICINE AND HYGIENE—H Akhtar
S Amarasinghe R H Barrett A H Booth J W Bowden J C
Busby K L Buxton Dorothy G Cowie G H Fisk A B
Gilroy S A Hasib A D Hodges W H Jeffrey A Muzrahi
P R Murphy V T Pasupati M G Pearson C Ponnambalam
J D Prasad J T Robinson M Roushdy C A Rumball A G
Rutter S Shrikhande L M de Silva M Singh D W Soman
A S Syed A L F Thomson G J Watson J G Webb

Diplomas in Child Health were granted jointly with the Royal College of Surgeons of England to the twenty successful candidates whose names were printed in the report of the meeting of the Royal College of Surgeons of England published in the *Journal* of April 17 (p 840)

ROYAL FACULTY OF PHYSICIANS AND SURGEONS

At a meeting of the Royal Faculty of Physicians and Surgeons of Glasgow held on May 3 with the president, Professor Archibald Young in the chair the following were admitted Fellows of Faculty Joseph Alexander Bell M B Ch B Haumbai Shaikh Abduljally Malik M B B S George Broughton Smart, M B D.P.H.

SOCIETY OF APOTHECARIES OF LONDON

The following candidates have passed in the subjects indicated

SURGERY—A A Beazeley N Bickford P H Denton S M M Niall W G Tillmann
MEDICINE—P H Denton G Howell L W La Chard J F Mason A P Moiley F L Skinner
FORENSIC MEDICINE—P H Denton G Howell L W La Chard J F Mason A P Moiley F L Skinner
MIDWIFERY—D R Daniel J B Good J F Mason F D Pitt Palmer

The diploma of the Society has been granted to N Bickford P H Denton L W La Chard S M M Niall and F L Skinner

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH

At a quarterly meeting of the College held on May 4 with the President Dr W T Ritchie in the chair Dr Douglas James Campbell (Grimshy) was introduced and took his seat as a Fellow of the College and Dr George Abeysinhe Weera Wickramasuriya (Ceylon) was elected a Fellow of the College The Freeland Barbour Fellowship was awarded to Mr Walter Tebrich B.Sc.

The Services

DIRECTOR OF MEDICAL SERVICES IN INDIA

The War Office announces that with the approval of the Government of India Major-General G C. Tabureau D.S.O., late R A F C Deputy Director of Medical Services Northern Command York, has been selected to succeed Major General E. A Walker C.B., I.M.S. as Director of Medical Services in India as from August 10 when the latter vacates the appointment

Medical Notes in Parliament

The House of Lords on May 5 received the Livestock Industry Bill from the House of Commons and read it a first time A first reading was also given to the South East Essex Joint Hospital District Bill On the same day further amendments were made in the Children and Young Persons (Scotland) Bill and the Maternity Services (Scotland) Bill was read a third time The latter with the Special Areas Amendment Act the Earsdon Joint Hospital District Act and the South Nottinghamshire Joint Hospital District Act, received the Royal Assent on May 6

The House of Commons is due to reassemble on May 24 and will that day discuss the Civil List The text of the Finance Bill is expected to be issued about that date There will be no change in the Cabinet during the recess

On May 4 the Livestock Industry Bill and the Diseases of Fish Bill were each read a third time the latter had also passed the House of Lords The Widows, Orphans, and Old Age Contributory Pensions (Voluntary Contributors) Bill passed through the report stage in the House on May 6 and was read a third time

Sir Francis Fremantle presided on May 5 at a meeting of the Conservative Health and Housing Committee, when Dr C F McCleary spoke on the menace of depopulation in the British Empire He showed that it had been established by Kuckynski's method of computation that if present conditions continued the death rate in the United Kingdom would exceed the birth rate within the next five years The same danger existed in Australia and New Zealand Dr McCleary urged that the public should be warned on this subject before the economic and social consequences became serious

Factories Bill in Committee

Clause 77 (Power to suspend certain provisions of Part VI—employment of women and young persons—in emergency) was discussed when the Standing Committee of the House of Commons resumed consideration of the Factories Bill on May 4 The clause was approved with the additional provision moved by Sir JOHN SIMON to ensure that the exemption should not conflict with an international convention restricting the employment of women or young persons in factories. On Clause 78 (Exceptions as to male young persons employed in shifts) Sir JOHN SIMON said the subject matter of the clause was difficult and was directed to industries which required to be carried on day and night He had come to the conclusion that it would not be right to make any exceptions at all as regards young persons under 16 although the Committee might have to do it in the case of youths between 16 and 18 He would amend the clause so that it should apply to young persons who had attained the age of 16 He had also put down other amendments Sir Ernest Graham Little had proposed an amendment to ensure that where young persons were to be worked in shifts in exceptional circumstances or in lat hours they should only so work when it was ascertained that they were physically fit for it his proposal was that there should be a preliminary medical examination Sir John Simon doubted whether it was good to put a young man who believed himself to be perfectly fit through that kind of trial beforehand He would prefer to insert in the clause a provision similar to one in Clause 92 enacting that the young person who had attained the age of 16 and was working at night should not remain in that employment after the expiration of such period as might be prescribed unless he had been examined by the examining surgeon and certified to be fit for that employment He would also add a provision by which there was to be a periodic examination it was not enough to be sure that the youth was fit at the beginning only Mr

SHORT said that the amendments were an improvement and could tend to relieve the pressure of discussion.

Sir JOHN SIMON'S amendment omitting young persons under 16 was agreed to but one from Mr. SHORT the effect of which would be to prohibit the employment of young persons on the shift system between 6 a.m. and 10 p.m. on Sundays was negatived. Other amendments moved by Sir JOHN SIMON were accepted, including the following:

A young person who is taken into employment in accordance with the foregoing provisions of this section in any factory shall not continue to be so employed after the expiration of such period not being less than seven days as may be prescribed by the Secretary of State unless he has in accordance with these regulations been examined by the examining surgeon and certified by him to be fit for such employment, and the regulations shall provide for the re-examination of young persons so employed at intervals not exceeding six months.

MEDICAL OPINION ON NIGHT WORK

On the motion that the clause stand part of the Bill Mr. DENMAN said it was clear there was no chance of abolishing at this stage night work for young persons. Medical evidence to show that night work was injurious to young persons was lacking but strain in early years injuriously affected them later on as adults. He had statements to that effect from a doctor at a London hospital who had experience of the night work referred to in this clause and from a factory inspector, who said that although no evidence could be brought of ill health among young persons the result could be seen in adults. An authoritative statement in the *Lancet* published after the second reading of the Bill argued that it was biologically unsound to subject young persons between 16 and 18 to the strain of night work and that there was less danger in allowing young girls to do it than in allowing youths of the same age to do it.

Sir ERNEST GRAHAM LITTLE said he would re-enforce the protest against working young persons at night by figures from a book just published by Dr. VERNON an experienced research worker whose conclusions had been accepted by the whole medical profession. He showed an extraordinarily high mortality rate in the age group of males between 15 and 19. His unit in this age group was 40,000 and the fatal accidents constituted one fifth of the deaths in that group. The departmental committee on the employment of young persons recently recommended a general prohibition of night employment for young persons for a period of eleven hours, including the hours of 10 p.m. to 6 a.m. Dr. VERNON said that on the whole accidents were more frequent during night work and in the iron and steel industry fatalities were sometimes 50 per cent higher.

The clause as amended was added to the Bill by 24 to 13.

Clause 79 (Exceptions as to simultaneous hours for meals and rest) and Clause 80 (Exceptions as to employment during intervals) were added to the Bill. Clause 81 (Exceptions as to use of rooms during intervals) was added to the Bill with an amendment. Clause 82 (Exceptions as to continuous employment of male young persons employed with men) Clause 83 (Exceptions as to male young persons employed on repairing work) and subsequent clauses to Clause 92 were added to the Bill.

MEDICAL EXAMINATION TO DETERMINE FITNESS

On Clause 92 (Certificate of fitness for employment of young persons) Sir ERNEST GRAHAM LITTLE had a series of amendments. He said all were attested by medical authorities. Sir JOHN SIMON said Sir ERNEST would bring within the clause girls up to 18 and leave it as it was in the case of boys up to 16. The clause required that every young person entering a factory under the age of 16 should be examined by the examining surgeon who would re-examine if there was any doubt as to fitness for employment. If the young person moved to another factory during the first two years there would be a further examination. Responsible medical authorities connected with the factory system advised him that these examinations were sufficient to secure that any young person under 16 who suffered from defects would be warned off that

employment. There was to be a liaison between the examining surgeon and the school medical officer, and in doubtful cases the examining surgeon would be able to obtain information from the latter. His medical advisers were satisfied there would be considerable feeling among older juveniles if it was said that if they chose to come into factory life they would by law be put under compulsory medical examination at intervals. The healthy young men of 17 did not regard themselves as children and the Committee would have to consider what was involved in legislating for female young persons if they had to be exposed to a compulsory examination by an examining surgeon. Sir ERNEST GRAHAM LITTLE said the objections indicated by the Home Secretary had not arisen in factories, and there had been no difficulty between the whole-time medical officers of large firms and the general practitioners in charge of factory workers outside. On the contrary the work had been harmonious. Remarkable improvement had resulted in the health of the workers from periodical and close examination by a full-time medical officer. He withdrew his amendment and the clause was added to the Bill.

When the Committee resumed on May 5 the clauses dealing with ships, docks, works of building, and engineering construction were added to the Bill. Mr. GIBBINS withdrew an amendment applying Clause 99 (Ships) to men engaged in disinfection of a ship. Mr. GEOFFREY LLOYD said the point was better covered by the Bill then before the House of Lords which dealt with hydrogen cyanide fumigation. Mr. GIBBINS said that men searching ships for rats which were the causes of plague should be included. Clause 102 (Employment of women and young persons in places other than factories in processes connected with lead manufacture or involving the use of lead compounds) was added to the Bill without debate.

FACTORY INSPECTORS

After discussion of administrative matters on subsequent clauses the Committee considered Clause 115 (Appointment and duties of inspectors and clerks and servants). Mr. ALFRED SHORT said the Committee would like to know the number of factory inspectors at the moment and the number of new factory inspectors who might be appointed in the future. The Memorandum issued with the Bill estimated that the increased cost would be in the neighbourhood of £25,000 to £30,000. He would also like to know the qualifications of inspectors and whether competent and practical men and women would be appointed as distinct from merely university trained people. These inspectors should be relieved from a mass of clerical work. They ought not to be employed in tabulating masses of figures and statistics when their job should be outside, in and around the factories examining the conditions, seeing for themselves that the provisions of the Act were properly and efficiently carried out and looking after the welfare of the people concerned. He would like to know the position of female inspectors and what was to be their number.

Mr. GEOFFREY LLOYD said the question of pay and other questions which had been raised were settled by the Treasury and the conditions laid down by the Civil Service Commissioners on general principles applicable to the whole of the Civil Service. Women factory inspectors were about 30 per cent. of the inspectorate, which corresponded roughly to the proportion of women in industry. They were treated from the point of view of seniority in the same way as men and in the Home Office there was a common seniority list. There was nothing technically to bar a woman becoming Chief Inspector of Factories. There were also two women superintending inspectors of factories. The financial resolution attached to the Bill would provide for thirty to forty more inspectors, but the amendments made in Committee might affect that number. The clause and the subsequent clauses dealing with the powers and certificates of inspectors were approved.

DUTIES OF EXAMINING SURGEONS

On Clause 119 (Appointment and duties of examining surgeons) Major NEVEN SPENCE moved to leave out a proviso the effect of which he said was to allow the Secretary of State to authorize a medical practitioner employed by the occupier of a factory in connexion with medical supervision to

act as an examining surgeon. Factory examining surgeons were specialists in regard to knowledge, experience and qualifications and ought to be whole-time men at the job. A medical practitioner in charge of welfare work in a factory had not necessarily any of the qualifications which he should have as an examining surgeon. If under Clause 67 the Home Secretary required an investigation and report in the case of death or injury due to exposure to fumes or in the case of any disease that should not be carried out by a paid employee of the occupier of the factory.

Mr GRAHAM WHITE and Mr RHYS DAVIES supported the amendment but Sir JOHN HASLAM said the factory inspector became a specialist in his own business in knowing the law and understanding adolescence. It was a wise move indeed for those progressive firms who had set an example to the whole of the country in looking after the health and welfare of their workers to call in the factory surgeon as their medical adviser not only in regard to certifying, but in every other aspect of their line. It was a slur on these medical men that they should be excluded by statute from occupying this position and the Home Office would be ill advised to exclude them from carrying on welfare work in the factories in addition to their ordinary certifying business.

Mr LLOYD said that when he first saw this provision he inclined to take the view that it was not right to put any man in a position in which there might be a conflict of duties or interests. Since then he had heard the other side of the question and it impressed him. This was only an authorization to enable the Home Secretary to allow this procedure in certain cases and for certain purposes and therefore it could be closely controlled by the Home Office. Most of these works doctors were keen on their job. In relatively progressive industries the employers had been sufficiently public spirited to go to the trouble and expense of having a special doctor for this purpose. That was a development that the Home Office would like to encourage. It did seem that it was not necessarily right always to forbid a works doctor, who knew so much about the conditions in the factory from performing some work under the Bill such as for instance the certification of the fitness of young persons. People might take a different view but under the safeguards provided in the Bill the Home Secretary might authorize this. If it were authorized improperly it might be liable to abuse but on balance it was wise to keep it in.

Mr SHORT suggested that the Home Secretary should insert words by which while it would be possible for a paid medical officer of a particular factory to be an examining surgeon he would not be permitted to investigate the cause of death or of some disease reported by the inspector which occurred in his own factory but some other examining surgeon would be called in to do that class of work. Sir JOHN SIMON said he liked the suggestion. He would be prepared to see the proviso run something after this fashion:

Provided the Secretary of State may authorize a medical practitioner to act as examining surgeon for that factory and instead of saying for such purposes as the Secretary of State may direct it might be sufficient to say "for the purpose of examining and certifying the fitness of young persons."

Major NEVEN SPENCE withdrew his amendment and that proposed by Sir John Simon was made.

On receiving from Mr Lloyd a promise that the subject would be considered at a later stage Mr RHYS DAVIES withdrew an amendment proposing that subject to the consent of the employed person concerned the examining surgeon shall have the right to inspect the medical records of the medical practitioner employed by the occupier of the factory.

SCHOOL MEDICAL HISTORIES

On the motion that Clause 119 stand part of the Bill Mr FLEMING SMITH said progressive education authorities were of opinion that the medical officers who administered the Education Acts ought to have jurisdiction also over the children until they reached the age of 18. These medical officers were already responsible for children up to the age of 16 in the

elementary schools and in the case of the secondary schools responsible for them until the age of 18. He asked the Home Secretary before the report stage to reconsider the whole of this clause in order that this developing scientific method of handling children up to the age of 16 might be continued until 18 years of age. Factory inspectors were fully occupied with their duties arising out of the Factory Acts, without having to concern themselves with children up to the age of 18. This specialized subject ought to be handled by specialists, and there was growing up in the schools a specialized method of dealing with it. Under the Education Act 1936 it would be the duty of education authorities to give beneficial employment certificates and in giving those certificates the education authorities would have regard to the health and physique of the children. These records having been obtained they should be used for the benefit of the nation and of the children themselves and progressive education authorities should have the right to look after the children until they reached the age of 18.

Mr LLOYD said if it was necessary to change the provisions of the Bill to make sure these medical histories would be available and if they could not be made available in any other way the case would be strong but even then there would be objections. A large number of school children—he had heard it estimated at 50 per cent—went to work in areas different from those in which they had grown up as school children. That would make the working out of this scheme if based on the educational medical system difficult. In any case these medical histories could be made available. There were elaborate provisions in Subsection (9) of Clause 92 for this. These provisions brought in the Education Act, and also rules that might be made by the Ministry of Health for securing the observance of the provisions.

The clause as amended was approved.

On Clause 120 (Fees of examining surgeons) Mr VIVANT moved an amendment which would have the effect of charging the Home Office with the expenditure in connexion with the administration of this part of the Act. Mr LLOYD replied that these medical examinations were on a similar basis to other precautionary measures which occupiers were required to take and of which they had to bear the expense. He did not see any reason why they should be relieved of this particular expense. The Government did not wish to add to the burdens of the State in this matter and there had been no general body of representations in favour of this change which would seem to be unnecessary.

The amendment was withdrawn and the clause ordered to stand part of the Bill. Clauses dealing with offences and fines were also approved and the Committee adjourned till May 25. It is hoped that a further two sittings may complete the committee stage.

World Opium Convention

On May 3 Mr A. HENDERSON asked the Secretary of State for Foreign Affairs whether any action had been taken at Geneva to set up a preparatory commission in anticipation of the World Opium Conference to be held in 1940. Mr EDEN said that preparatory work for the Conference for Limiting the Production of the Opium Poppy and of Raw Opium was among the items on the agenda of the next session of the Opium Advisory Committee which would open at Geneva on May 24. The Committee would consider the appointment of a preparatory committee to draw up a preliminary draft convention. Mr HENDERSON asked the Foreign Secretary whether in view of the need for drastic and effective action against the opium evil the Government would instruct its delegates to work in co-operation with the delegates of the United States of America to ensure that this Conference should be a success.

Mr EDEN: Yes I can give an assurance. Our delegates will do everything in their power to co-operate with those of the United States.

Malnutrition Discussed in the House of Lords

Viscount ASTOR in the House of Lords on May 5 drew attention to the report of the Advisory Committee on Nutrition to the Ministry of Health. He asked whether the Ministry of

Labour inquiry for the purpose of the cost-of-living index would include an inquiry into dietary surveys, and if so how many families would be concerned and what steps were being taken to ascertain the family incomes so as to correlate this inquiry with that proposed to be undertaken by the Registrar-General and an independent statistician. He also asked for details of this inquiry by the Registrar-General and of any dietary surveys conducted by local authorities in urban and rural areas of England and Wales and in Scotland. Lord Astor said that the main cause of malnutrition was poverty. By malnutrition he meant a degree of ill health or of subnormality due to malnourishment and in other cases bad physical development due to malnutrition in early youth. The problem was one of purchasing power, and the report of the Advisory Committee on Nutrition substantiated this contention.

The problem arose largely because of malnourishment in youth. A number of cases of maternal mortality were due to malformed pelvis from malnutrition of the woman when she was a child. They had to get into their minds an entirely new standard. At the beginning of last century medical officers in the large industrial cities were satisfied with the housing conditions to-day medical officers walking down the same streets unanimously agreed that those houses must be pulled down as slums. The House must bear that in mind when they saw quoted reports from medical officers of health to the effect that there was no problem of malnutrition. Those who made such reports were out of date and not acquainted with the new findings of science. Making all allowances for overstatements one could say that a real problem of malnutrition affected millions of people in this country. The questions he had asked the Government were based on recommendations of the Advisory Committee and in particular he wished to refer to page 26 of the report where reference was made to methods of clinical assessment. Did the Minister contemplate an investigation of the clinical aspects in direct correlation with the dietary surveys which he proposed to make? Other countries—Scandinavia and the United States of America—made surveys on a large scale. In America they made 700,000 family budget inquiries. A great opportunity would be missed if the Government did not insist that these surveys were adequate.

GOVERNMENT'S MILK POLICY CRITICIZED

The Advisory Committee's report indicated the importance of milk as an article of consumption in diet. Yet after four years of the Milk Marketing Scheme there was a low consumption of milk and retail prices were the second highest in the world. Dairy farmers were all discontented. There must be something fundamentally wrong with a scheme that had such results. The Milk Board had built up new industries of butter making, cheese making, and processed milk by imposing a tax of roughly 3d a gallon on this account. The Minister of Health as soon as the report of the Advisory Committee was published had circularized all local authorities drawing their attention to the recommendations of the committee and urging them to make more provision for supplying milk to mothers and children. Why should the Minister of Health ask ratepayers to spend money on buying milk which had been artificially put up in price?

The Minister of Health recently mentioned the provision made for giving the unemployed in a certain area milk at 2d a pint. Everybody ought to be able to get milk at 2d a pint without subsidy. Instead of 3d., which was the present cost. It was quite possible to do this. He would not say that an immediate drop of a penny in the price of milk was followed by an immediate rise in consumption but a considerable increase would follow over a long period. One of the difficulties was that many children got a taste for tea before they went to school and did not avail themselves of the cheap milk provided because their palates had become vitiated. Much could be done in persuading parents not to cultivate tea-drinking among very young children. The cost of milk affected not merely the lowest wage-earners but the "black-coated" section of the community and the hospitals. There was no reason why the nation should not control the wholesale distribution of milk. Last winter, when there was a

shortage of milk for liquid consumption it was going under contract to factories. There must be something wrong there. Even after the cost of milk had been reduced the Government would still have to subsidize milk for certain of the poorer sections of the community.

If details of income and standards of living of workers given in a book just published by Mr. Seebohm Rowntree were accurate as he had every reason to believe they were tens of thousands of children of to-day were being malnourished. Mr. Rowntree suggested some system of family allowances to ensure that where the number of children exceeded three a sum of 5s per child should be given but Lord Astor thought it would be better to help in kind. He did not advocate free meals for all children, but thought Parliament must contemplate subsidizing food and should not limit this to children of school age. If they were to spend five million pounds in subsidizing food supplies at maternity centres, nursery schools, and elementary schools they would at no distant date have a strong and happy race and a far more prosperous agriculture. The health foods were the perishable vegetables, fruits, and milk, and they should subsidize the consumption of these.

Lord SNELL supported Lord Astor, and said that when he spoke of malnutrition he did not suggest acute starvation but a deficiency in kind and in the quality of food that was necessary to give a balanced diet and vigorous health. Lord ELYSLEY defended the Milk Marketing Board and said it had saved 135,000 milk producers in the country from disaster. Lord NOEL-BUXTON stated that adequate nutrition could sometimes cure a severe case of impaired physique even when hospital treatment had failed. The BISHOP OF NORWICH said he was not sure that certain restrictions put upon the quality of milk were as necessary as the doctors said. He had never seen anything convincing on the relative value of plain milk, pasteurized milk and boiled milk. Lord DENMAN said milk in this country cost twice what it cost in Belgium and Holland nearly twice as much as it did in France and was much higher in price here than it was in Germany. Milk was sent to London and the other great cities and the agricultural worker was unable to pay the high price for his family. He hoped the Government would not give way to the pressure brought to bear upon it to make it impose tariffs on butter, cheese, and other milk products.

GOVERNMENT'S REPLY INVESTIGATIONS IN PROGRESS

Viscount GAGE replying for the Government said the average consumption per head of most foodstuffs had increased since before the war and with one exception there had been a general improvement in the quality of the national diet. The supply of energy giving foods available for the nation was more than the League of Nations considered adequate. Private investigators had attempted to show how the food was distributed according to various occupations, wages and incomes. The report of Sir John Orr was a document of considerable value and other reports were also available but the Government accepted the recommendation of the Advisory Committee on Nutrition that more information was desirable and was prepared to collect it.

People were willing to explain their outgoings and their budget but were very unwilling accurately to disclose their incomes. Incomes, therefore had to be estimated and related to the budget in a roundabout way. For the Ministry of Labour inquiry in connexion with the cost-of-living index figure it was hoped to procure weekly budgets of 10,000 families taken over four separate weeks in various parts of England, Wales and Scotland. To find the number of calories, vitamins, carbohydrates, and so forth that were consumed they proposed a quantitative dietary survey of a much more detailed character. This was already in progress and would eventually embrace 500 families, of which 200 would come from Scotland. A qualified investigator had to spend much time in the homes of these families weighing up all the food which came into the house and what was left over and estimating its composition down to the constituents of the puddings, and noting any wastage. He referred Lord Astor to the survey at Newcastle-on-Tyne affecting sixty nine

families the results of which had been published. The results of another inquiry affecting 205 families in the West Riding would probably be published by the end of this year. Inquiry had begun in the Isle of Ely, Surrey, Glossop, Aberdeen and certain industrial towns near Glasgow. It would be extended to Somerset, Glamorgan, Carmarthen, Cardigan, Aberdeen, County Banff, Kincardine, Dumfries and the Border Counties. Statistics would be compared with information in the possession of the Ministry of Labour on wages rates current in the occupations concerned.

Turning to the controversial question of how nutrition could be improved, Viscount Gage admitted that three-quarters of the problem turned on the capacity of people to buy the right food and therefore food must be cheap. During the Government's period in office the number of persons in employment had increased by about two millions whereas the price of essential foodstuffs had remained fairly steady during the last five years. The price of milk had not varied much since 1931. In 1931 the price per quart was 6d and in 1937 it was 6½d. In what had been called the health foods prices had been fairly steady. The Government had been active in ensuring a supply of milk on special terms to special classes of the community principally school children, expectant mothers, infants and unemployed in the distressed areas. The scheme for cheap milk was now helping 2,500,000 school children. Over 400,000 children received free milk last year, and 143,000 children received free meals. Last year about 7,000,000 gallons of milk were distributed free or at less than cost price according to the means of the applicant. The Government would press forward all these schemes to the best of its ability. There might be an improvement in the number of mothers attending ante-natal clinics although about 50 per cent of them attended now. Before the publication of the Government's conclusions on the Milk Reorganization Report upon which much depended he could not announce any new and remarkable extension of Government policy.

The Capitation Fee Court of Inquiry

In an answer on May 6 to Mr Rhys Davies, Sir KINGSLEY WOOD said that, put briefly, the object of the tribunal to inquire into the fees paid to panel doctors under the national health insurance scheme was to investigate whether any and if so what alteration ought to be made in the amount of the doctors' capitation fee having regard to any changes since 1924 in the cost of living, the working expenses of practice, the number and nature of services rendered to insured patients and other relevant factors. This Court of Inquiry had been appointed by Dr Elliot and himself. The services of the following as members of the Court had been secured: Lord Amulree (chairman), Mr Thomas Howorth and Mr D. H. Robertson. The terms of reference were set out in last week's *Supplement* (p. 272).

Answering Mr Will Thorne, Sir KINGSLEY WOOD said this appointment of a court was to be regarded as a friendly arrangement to have this matter dealt with by independent people. There were discussions upon it between the British Medical Association and himself and it was considered that this would be the best means of dealing with the matter.

Mr THORNE: Are we to take it for granted that if the committee puts up a recommendation similar to the Government's offer to the doctors that recommendation will be put into operation?

Committee on Corporal Punishment

Sir JOHN SIMON announced on May 6 that he had secured the services of the Hon. Edward Cadogan as chairman of the committee to examine the various provisions of the law authorizing corporal punishment for both adult and juvenile offenders. The committee would take account of the different considerations affecting different aspects of the problem. He hoped shortly to announce the names of the remaining members of the committee.

Cleanliness of Public Telephones—Answering on April 28 questions by Colonel GOODMAN about the cleansing of mouth

pieces in public telephone boxes, Sir WALTER WOMERSLEY said the mouthpieces and earpieces of telephones in call offices provided with an attendant were wiped with a clean cloth moistened with suitable disinfectant every morning. At other call offices the frequency depended on the location of the kiosk and the extent to which it was used. A full investigation had been made into this question by a committee on which medical men sat, and their decision was that the infection was more psychological than actual.

Post mortem Examinations for Inquests—Replying, on April 29, to Mr Cecil Wilson, Sir JOHN SIMON said that by Section 24 of the Coroners (Amendment) Act 1926 a coroner might for the purpose of a post mortem examination, order that the body be removed to any place which may be provided for the purpose either within his jurisdiction or within an adjoining coroner's jurisdiction, but he might not under that section order the removal to any place other than a place within his jurisdiction provided by a sanitary authority or nuisance authority except with the consent of the person or authority by whom the place was provided. Sir John promised to make any investigation which he could of cases in which Mr Wilson thought that the circumstances of examinations should be brought to his notice.

Cost of Health Services for Children—Sir KINGSLEY WOOD stated on April 29 that in the financial year 1935-6 the latest for which figures were available grants paid by the Board of Education to local education authorities and voluntary institutions in respect of health services for school children amounted to £2706,342. In addition the Exchequer grant towards the cost of the scheme for supplying milk at half price to school children amounted to £397,184 for the year ended September 30th 1936. Corresponding figures were not available in respect of health services for young children not yet at attendance at school.

Vaccination and Small-pox Statistics—On April 29 Sir KINGSLEY WOOD furnished the following statistics:

England and Wales			
	Number of Vaccinations expressed as a percentage of total births	Small-pox cases notified	Small-pox deaths registered
1926	44.8	10,146	18
1927	44.9	14,767	47
1928	42.6	12,420	53
1929	39.9	10,968	39
1930	40.1	11,839	28
1931	39.0	5,664	9
1932	38.2	2,039	3
1933	37.0	631	2
1934	36.1	179	6
1935	*	1	0

* Figures not yet available

Approved Societies Transfer of Members—On May 3 Mr RHYS DAVIES asked the Minister of Health whether in view of the statutory title of members of approved societies to freedom of choice of society and right to transfer he would cause inquiry to be made whether there was in existence any written or implied agreements between large approved societies or groups of such societies where such statutory freedom was restricted. Sir KINGSLEY WOOD said that few societies had agreed not to accept applications for transfer from members of certain other societies but since under the National Health Insurance Act an approved society was free to reject an application for membership on any ground other than age such an agreement did not contravene any provision of the Act.

Local Government Superannuation—In the House of Commons on May 4 Sir KINGSLEY WOOD introduced the Local Government Superannuation Bill. The measure makes further and better provision with respect to the payment of superannuation allowances and gratuities by local authorities and certain statutory undertakers and with respect to the persons entitled to participate in the benefits of a local authority's superannuation fund or scheme.

Experiments on Animals—On May 4 Mr LEACH asked the Home Secretary how many inoculations had been performed in contravention of the Cruelty to Animals Act, 1876 by the experimenter referred to in the Home Office Return of Experiments on Living Animals for 1935 and what period of time had been covered by the illegal inoculations. Mr LLOYD replied: Fourteen and all were given on the same day.

Typhoid Fever in Liverpool—On May 4 Sir KINGSLEY WOOD told Mr Groves that 123 cases of typhoid fever (including paratyphoid) had been notified in Liverpool during the present year up to April 24 the majority of which occurred in an outbreak of paratyphoid fever in January. That outbreak was regarded by the local authority as now at an end.

Voluntary Hospital Finance—Mr SORENSON on May 6 asked the Minister of Health whether in view of the report of the Voluntary Hospitals Commission and of the increasing contributions by public authorities to voluntary hospitals he would require that the finances of voluntary hospitals should be pooled and that greater co-ordination should be effected between voluntary and public hospitals. Sir KINGSLEY WOOD answered that he had noted with interest that the Voluntary Hospitals Commission while not recommending the immediate pooling of hospital finances suggested the creation of regional funds. He had no powers in this matter which was one for consideration by the governing bodies of the hospitals. He would continue to encourage co-operation between voluntary and public hospitals which was already increasing steadily.

Sir Kingsley Wood further said it would not be a fair assumption to say the time had come when State aid should be given to all hospitals.

Bomb proof Shelters—Replying on May 6 to Lord Castle reagh Mr GORTON LLOYD said it would not be practicable on grounds of cost to construct on any appreciable scale shelters proof against a direct hit by a large high-explosive bomb. Arrangements were being made with the help of local authorities for suitable places to be marked as refuges for those who might be caught in the street, and for such places to be given as good protection against blast and splinters and gas as possible. A handbook for householders on air raid precautions was in an advanced state of preparation.

Water Supply Investigation in Scotland—Answering Sir Archibald Sinclair on May 6 Mr ELLIOT said an investigation into domestic water supplies in Scotland was now being undertaken by the Department of Health for Scotland. Information provided by local authorities was now being considered with a view to securing as complete a survey as possible of actual and potential sources of supply and estimating the present and future requirements of the various localities. The investigation would show how the sources of supply could be used so as to secure a satisfactory system of distribution. The Department's engineers were also engaged on estimates of probable costs of water and drainage schemes for "landward areas." The special problem of the sparsely populated areas in the Highlands and Islands was under consideration in the light of the report of the Committee on Scottish Health Services.

Notes in Brief

In 1934 there were two cases of corporal punishment for prison offences; none in 1935 and six in 1936.

The number of deaths of infants under 1 year classified to vaccination or other causes of vaccination which were recorded by the Registrar General during the ten years 1926 to 1935 was forty-two.

A Departmental Committee has been set up in Tanganyika in many other parts of the Colonial Empire to study questions relating to human nutrition. The desirability of combining medical and anthropological inquiries will be given full weight by the committee.

Sir John Simon has consulted the Lord Chancellor on the question of amending the Infanticide Act of 1922 to define the type of child born. Examination of the problem showed a number of difficulties in amending the existing Act, and Sir John told the House of Commons on April 15 that he could not propose any legislation on this subject.

Medical News

The seventh John Mallet Purser Lecture will be delivered by Professor E. D. Adrian M.D., F.R.S., at Trinity College, Dublin, on Wednesday next, May 19, at 5 p.m., in the Department of Physiology (Medical School). His subject is "The Physiology of Sleep."

At a meeting of the Court on April 13 the Governors of Guy's Hospital decided, on the recommendation of the Medical Committee, that the ward previously called "Lazarus" should now be named Keats Ward, to commemorate the association of John Keats with the hospital.

A meeting of the Medico-Legal Society will be held at 26, Portland Place, W., on Thursday, May 27, at 8.30 p.m., when a paper will be read by Dr Alexander Baldie on "The Prevention and Treatment of Delinquency."

The next quarterly meeting of the Royal Medico-Psychological Association will be held at the Leicester-shire and Rutland Mental Hospital, Narborough near Leicester, on Friday, May 21, at 2.30 p.m., under the presidency of Dr M. Abdy Collins.

A meeting of the Society of Radiotherapists will be held at 11, Chandos Street, W., on Friday, May 21, at 5 p.m., when there will be a discussion on "Malignant Tumours of the Testis," to be opened by Drs Gordon Taylor, J. H. D. Webster Burrows, Payne, and Phillips.

The second congress for allergic diseases will be held at Düsseldorf on May 22 and 23 with Professor Otto of Frankfurt as president of honour and Professor Haag of Düsseldorf as president. The secretary is Dr Karrenberg, Fischengasse 45, Düsseldorf.

The second congress of the International Society of Gastro-enterology will take place in Paris from September 13 to 15 inclusive, during the Universal Exhibition and will be followed by the International Congress on Liver Insufficiency at Vichy from September 16 to 18. At the earlier of these the two subjects for discussion are the early diagnosis of cancer of the stomach and intestinal obstruction. The first will include clinical and serological diagnosis, gastroscopy, chemical tests, pathological anatomy and histology, and operative diagnosis. The second will be considered from the medical, surgical, pathological and radiological aspects and Sir David Wilkie is one of the openers. At Vichy the discussions will be medical and therapeutic, and deal with such topics as hepatic oedema, the malarial liver, hepatic enlargement in childhood, sulphur metabolism, surgical intervention, and specific medication. Dr A. F. Hurst is president of the British committee and Sir Walter Langdon Brown is a president of the congress on hepatic insufficiency. Special travel and accommodation facilities are available for British visitors, and full details of these and the programmes may be obtained from Dr T. C. Hunt, 49, Wimpole Street, W.1.

The second All-Indian Congress on Gynaecology and Obstetrics will be held at Bombay about Christmas time, when the chief topics for discussion will be the toxæmias of pregnancy and cancer of the cervix.

King Edward's Hospital Fund for London on May 7 received a special Coronation gift of £1,000 from an anonymous donor. No special appeal is being made on this occasion, but it is interesting to recall that when King Edward VII was crowned in 1902 over £100,000 was received by the King's Fund in Coronation gifts.

The April issue of the *Bulletin of Hygiene* contains a comprehensive review of recent work on drug addiction, by Dr E. W. Adams of the Ministry of Health.

The Lord President of the Council has appointed Professor W. L. Bragg, F.R.S., who now holds the Langworthy Chair of Physics in the University of Manchester, to be Director of the National Physical Laboratory.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

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QUERIES AND ANSWERS

Iodine in Pulmonary Tuberculosis

Dr JAMES PIRIE (Ashton House Harbury Leamington Spa) writes: Some years ago in Germany I was shown a method of treating tuberculosis by intensive nascent iodine sometimes used alone at other times in conjunction with tuberculin and contratoxin serum No. 4. I have employed this method ever since generally with very good and in some instances brilliant results. In order to check the progress made a count was taken of the polymorpho neutrophil nuclei. I shall be pleased to send any doctor details of how the treatment can be carried out.

Income Tax

Ground Rent and Property Tax Depreciation

S. L. is allowed to deduct one third of the rental value rates etc. of his house—Can he also deduct one third of the ground rent and property tax? He is allowed wear and tear only in respect of his car—Is that correct?

* The rental value deduction is in substitution for the "rent" deduction where rent is in fact paid. Ground rent and property tax would be included in the actual rent and no additional deduction can be allowed for those payments. Wear and tear is allowable only in respect of plant and machinery. Such minor necessities as surgical instruments are dealt with by the allowance of the cost of replacement as and when incurred but "wear and tear" is sometimes allowed in respect of major items of professional equipment such as x-ray apparatus or other electrical appliances.

Liability for Temporary Residence

SOJOURN arrived in this country for a temporary purpose in August 1935 but owing to a change of plans has become a resident here.

* He is liable to assessment as for the financial year ending April 5 1936 *et sequitur* as a British resident. (This would have been the case as regards income arising in or remitted to this country even if he had not changed his mind seeing that he spent six months of that year in the United Kingdom.) He is therefore liable (a) in respect of any earnings here and (b) in respect of income arising abroad as from the date of coming to this country. He is entitled to the usual married man's allowance (£180) the children's allowance (£60 × 3 = £180) for 1936-7—the amounts for 1935-6 are slightly larger—and to "relief" in respect of Dominion income tax. In all the circumstances "Sojourn" would probably be well advised to call at the office of the inspector of taxes explaining his circumstances, and complete the necessary forms of declaration.

LETTERS, NOTES, ETC.

Rheumatism and Tuberculosis in General Practice

Dr G. L. BUNTING (Crowborough) writes: In spite of the comprehensive surveys which from time to time appear in the medical journals on the subject of chronic diseases the general practitioner is still faced with the problem of treating these conditions in his practice. I have in mind two widespread diseases—rheumatism and tuberculosis—and with some trepidation venture to make the following suggestions. The special treatments such as baths light heat and electrical therapy for rheumatism with pneumothorax and sanatorium treatment for tuberculosis are of course the province of the large institutions. The bulk of cases cannot be treated in this way and therefore remain under the care of their own doctors. Vaccine and tuberculin treatments have been tried with disappointing results. Judging from the results obtained at the Charterhouse Rheumatism Clinic in the borough in recent years the reasons for previous failure seem obvious. The new and somewhat revolutionary system of dosage as taught by Warren Crowe points clearly to a sensitivity to much smaller doses than those formerly employed. The relief of pain and benefit to health which follow the employment of the new technique have to be seen to be believed. I was able to use it extensively in my last years of general practice with most gratifying results. Impatience and a refusal to discard all previous ideas of dosage are often to blame for apparent failures. The only sane way to test this is to visit the clinic with an open mind and be convinced or remain sceptical. During many years of practice I have never lost my faith in tuberculin and though reluctant to admit it there is I fancy an increasing number of sanatorium experts who make use of it. If confidence is established by success in the rheumatic field I venture to prophesy that the day is coming when tuberculin will also come into its own.

Sweet Chestnuts in Epidemic Jaundice

Dr E. A. ADDISON (Ipswich) writes: I practise in an agricultural district and I was for some years puzzled as to the cause of an epidemic jaundice occurring every autumn among the children attending the village school until I definitely traced the cause to eating chestnuts. I refer to the small sweet English chestnut of which there is an abundance in a neighbouring park. The children are fond of them and usually eat them uncooked and freshly gathered. I have also known the parents to suffer from jaundice after eating the chestnuts brought home by their children. I have never read that chestnuts were a cause of jaundice, presumably this sort of chestnut differs from imported chestnuts which have been some time in transit.

The Old English Inn

Miss M. L. SPACKMAN (Clitheroe) writes with reference to Dr A. A. Warden's letter in the *Journal* of April 3 (p. 732). According to De Quincey inns towards the end of the eighteenth century were extremely dirty and both he and Charles Moritz a German pastor who visited this country in 1782, found that pedestrians were greeted with "scowls" but Moritz discovered that some innkeepers could be conciliated by drinking with them. People who travelled in post-chaises were well received. De Quincey said that in the early nineteenth century matters had improved but we may be sure if the modern tourist could go back in time and visit them he would miss safe drinking water the works of the plumber and the present-day standard of cleanliness.

A Warning

Dr A. SCOTT (Pittingham near Wolverhampton) informs us that on May 4 he encountered and was responsible for having removed from his district a man who has been imposing on the medical and dental professions in the Midlands for some months past and may now transfer his activities to some other area. He purports to be either a dental surgeon or an old medical student who failed in his finals many years ago and has since acted as dispenser. He usually gives his university as Edinburgh and tells a typical hard luck story in the hope of eliciting alms. His description is age about 40 height about 5 ft 6 in hair partially bald sandy turning grey eyes blue arcus senilis present features large rubicund nose luxuriant sandy moustache turning grey respectably dressed talks quietly with a slight (real or assumed) Scottish accent.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

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Hydatid Disease

J KNEEBONE (*Med J Austral* February 6, 1937, p 201) describes sixty cases of hydatid disease in adults, and H B GRAHAM (*ibid*, p 206) seventy four in children. Both authors agree that the incidence of the disease in the State of Victoria is decreasing owing to propaganda, regulations pertaining to slaughtering and to the sale of meat, and better surgical facilities. In Kneebone's adult cases thirty-one had cysts in the liver and nine had cysts in the lung. Graham found only twelve cases of simple liver cyst in children under 7½, in whom multiple liver cysts, pulmonary cysts and cysts both in the liver and in the lung were more prevalent. Both authors agree that daughter cysts are less common in children than in adults and that they occur less often in the lung because of rupture than in the liver. The chief complications of hydatid cysts are rupture and sepsis. Kneebone noted fourteen cases of rupture in liver cysts and seven in pulmonary cysts, and four cases of sepsis following rupture of liver cysts. Graham states that rupture and sepsis frequently occur in children and he believes that rupture of the cyst precedes and causes the infection. Hydatid infantilism was a complication in one case. Of diagnostic methods the x rays are of greatest importance in the detection of pulmonary cysts. Kneebone used Casoni's test in twenty nine cases with twenty two positive results and Graham found it of value. The complement fixation test was used in five of Kneebone's cases with two positive results. Graham found that sera failed to fix the smallest amount of complement only when little or no leakage of antigen had occurred from cyst to host. After operative intervention, rupture or onset of infection the test was positive to a varying extent for many months but in the absence of further cysts negative reports were ultimately obtained. The general prognosis is good. Kneebone had six deaths from hydatid disease. Graham states that hepatic and pulmonary cysts have a good prognosis, especially in children over four years. Cysts in the brain (which are more common in children than in adults) accounted for three and cysts in the spine and kidney for two of Graham's ten fatal cases.

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Recklinghausen's Disease

Y. HIRAGA (*Jap J Derm Urol* January 1937, p 1) describes his findings in twelve cases of Recklinghausen's disease. Only one case showed the cardinal symptoms of skin and nerve tumours and large and small pigmented patches. One case occurred in a girl of 13. In two cases there were anomalies of hair and bone and in eight the condition was found in other members of the family. In eight cases the skin was thickened and abnormally elastic in those parts affected by pigmentation and tumour formation. The most common changes in the cerebrospinal fluid were an abnormal globulin reaction, protein increase and usually lymphocytosis. The fluid pressure was almost always raised. In four cases Hiraga obtained an encephalogram one of which was normal but in the remainder there was evidence of enlargement of the ventricles and the subarachnoid space. Nine cases in which the ear was examined all showed some abnormality. In six cases in which the vegetative nervous system was examined no aetiological relation between it and the disease could be demonstrated. Hiraga found sudanophil cells which are the phagocytes derived from the tumour cells in eight cases. He irradiated the spine in two cases with the hope of affecting the skin tumours but without any beneficial result. Hiraga believes Recklinghausen's disease to be a hereditary anomaly in the same sense as a naevus.

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Malignant Diphtheria

H KNAUER (*Med Klinik* February 26, 1937, p 289) does not agree that the occurrence of malignant diphtheria can be explained wholly on the grounds of different strains of bacilli with varying virulence. A mild and a severe diphtheria may result from the same source in two individuals. The diphtheria bacilli themselves can change their pathogenicity and toxicity during the course of the disease. It has been shown that in malignant diphtheria the bacilli produce more toxin than those in milder forms of the disease. In view of the fact that in a certain proportion of cases of clinically malignant diphtheria no diphtheria bacilli can be found in the early stages, but that in a third streptococci can be cultured from the blood, and that antitoxin is valueless in treatment, the author concludes that a symbiosis is responsible. He describes a typical case of malignant diphtheria which came under his care primarily with aphthous stomatitis. Diphtheria bacilli were never found, but on the third day streptococci could be cultured. Knauer advocates that in all cases of malignant diphtheria specific antitoxic therapy should be combined with the administration of anti-streptococcal serum and neosalvarsan. He has found the latter to be a potent bactericide for diphtheria bacilli and other organisms.

Surgery

381 Tumours and Ulcers of the Palate and Fauces

WALTER HOWARTH (*J Laring* January, 1937, p 1) describes a great variety of tumours and inflammatory lesions of the palate seen in the course of twenty-five years. The most common tumours in the substance of the palate are the 'mixed tumours'. They have a close resemblance to the mixed parotid tumours and probably arise from embryonic remnants. The embryology of this region is very complicated, and no part of the body suffers more than the palate from arrest and perversion of development. Mixed tumours are no longer classified as endotheliomata. They arise from fully developed glandular tissue, and are therefore epithelial in origin. Mixed tumours are comparatively benign in character, but if their capsule should be ruptured through trauma, or if an incomplete operation is performed, they may undergo malignant changes. Haemangioma and haemangio-fibroma are rare tumours of the palate. The diathermic knife is particularly valuable for the excision of these vascular tumours. Fatty tumours in the palate are extremely rare, and the author has only seen one case. Osteomata are occasionally described. A hard, oval, bony swelling under the mucosa of the hard palate in the mid-line is really an anatomical peculiarity called 'torus palatinus', and is not neoplastic in origin. Epitheliomata of the palate and fauces often begin in the tonsil and spread upwards into the palate or downwards into the base of the tongue. The author favours excision with the diathermy knife and block dissection of the glands of the neck. The end results of sixty one cases were as follows: 36 per cent died within the first year of operation, 39.5 per cent died between one year and five years, 24.5 per cent lived more than five years. Among the ulcerations Mr Howarth describes 'pre-cancerous epitheliomatosis' which he believes is a definite clinical entity. The shallow ulcers with raised whitish plaques yield readily to light diathermic cauterization but the lesions reappear after an interval of sometimes as long as three years. Ultimately the condition becomes malignant. The histological picture resembles certain forms of dermatosis with chronic atypical epithelial proliferation.

382 Acute Osteomyelitis of the Spine

A CHINAGLIA (*Arch ital Chir*, vol 44 p 517) describes a case of acute osteomyelitis of the first two cervical vertebrae in a young man aged 18 a fortnight after discharge from hospital following a month's treatment of suprahyoid abscesses of dental origin. Death occurred eight days later from bulbo pontine meningitis four days after a retropharyngeal abscess (containing *Staphylococcus pyogenes aureus* in pure culture) had been opened from the mouth. A full account is appended of the 266 well authenticated cases in the literature. It would appear that acute osteomyelitis of the spine is commonest in the second decennium affects males chiefly and is most often due to *Staphylococcus pyogenes aureus*. The lumbar spine is most commonly affected the disease usually attacks only one vertebra, and the arch rather than the body. Radiology appears to have given very little diagnostic help. Operative treatment is justified in all regions of the spine, and is especially indicated when the body, as distinct from the arch is affected results are worse in the cervical and thoracic than in the lumbar zone. The mortality of collected cases has been 46 per cent.

383 Traumatic Nephritis

D CIDDIO (*Policlinico Sez. Chir.*, March 15, p 121) states that contusions of the kidney are not frequent, as is shown by the fact that Gérard in 1930 could find only sixty five cases of renal trauma among 136,246 surgical lesions. The existence of traumatic nephritis has indeed been denied by many writers, in the case of both the affected kidney and its fellow. As the subject is not only of surgical but also of medico-legal interest as regards the question of estimating incapacity resulting from such lesions Ciddio carried out experiments on rabbits with the following results. In fifteen animals subcutaneous contusion of one kidney did not produce any lesions in its fellow but in one case in which suppuration had taken place in the contused kidney degenerative lesions in the convoluted tubules were found in the opposite kidney. The lesions, however, were not comparable to those found in Bright's disease.

Therapeutics

384 Ambulant Treatment of Lupus Vulgaris

G HOPF (*Z. Tuberk.* 1937 Bd 77 Heft 4, p 269) states that there is no ideal treatment of lupus vulgaris. Each case has to be considered individually. The ambulant method is contraindicated in cases of widespread and rapidly increasing lupus. Foci which can be treated surgically must be removed in hospital, but in lupus of the face a better cosmetic result is obtained with conservative treatment. Dietetic treatment is of the utmost importance. The author recommends a rigid modified Gerson diet which is rich in mineral salts and avoids a harmful over dosage of sodium. The poorer the diet is in protein the more certain is the effect on the inflammatory process. Ultra-violet light therapy is valuable when combined with dietetic treatment. Local tuberculin administration may also be of value. The author's ambulant treatment is as follows: A salt free diet rich in vitamins is instituted and potassium, calcium and magnesium salts are added. General ultra-violet ray treatment and cod liver oil improve the patient's general condition. After three to six weeks dietetic treatment local irradiation is begun and repeated every week. In chronic cases local tuberculin treatment is instituted at once but in acute cases it is contraindicated. Ektebin ointment is massaged into the nodules for two to five days. The local reaction is treated on subsequent days with moist fomentations. On its disappearance one to three further courses of irradiation are given at weekly intervals. Of forty six patients

treated on these lines the majority were cured or the condition greatly improved. The disadvantages of ambulant treatment are that it takes a long time, that the diet is often irksome and that ultra-violet therapy is costly.

385 Liver Extract in Pemphigus Vulgaris

W. BADE (*Derin Wschr.* March 27, 1937, p 389) states that in spite of a vast amount of research the aetiology of pemphigus vulgaris is still obscure. The number of recommended treatments of the condition has only proved that pemphigus may or may not be cured with different therapeutic measures. The author is of the opinion that pemphigus is due to some form of toxin, but he is not prepared to say whether it is derived from metabolic disturbances or from secondary sources which originally have nothing to do with the pemphigus. It is known, however, that detoxication occurs through the liver, and the healthier the liver the sooner will the condition clear up. Bade assumed in two cases that the liver was at fault, and sought to raise its detoxicating function by administering liver extract. Both patients were completely cured and have remained free from the condition, in one case for nine months in the other for six months. In both cases liver was given by intramuscular injections every other day for three to four weeks.

386 Improved Specific Anti streptococcal Sera

M. GUNDEL, J. WÜSTENBERG and W. HEINE (*Klin. Wschr.*, March 20, 1937, p 417) distinguish six types of haemolytic streptococci. Their differentiation is not difficult, and is described in detail. They each produce a specific pathological condition which can be influenced only by the administration of a specific serum corresponding to the particular strain of streptococcus. This fact explains the frequent failures of the usual stock anti streptococcal sera. Improved results could only be achieved if in every streptococcal infection the specific strain was established and the appropriate serum given.

Anaesthesia

387 Ephedrine in Spinal Anaesthesia

M. L. SALKOW (*Anaesth. and Analges.* January-February, 1937, p 51) discusses circulatory collapse with falling blood pressure during spinal anaesthesia and considers that it is due to vasomotor dilatation both in the anaesthetized segments and in the rest of the body. Ephedrine is commonly given to combat this fall and acts by vasoconstriction in the splanchnic and somatic areas by increasing the rate and strength of the heart beat and possibly by increasing the coronary flow. Unfortunately it also tends to cause or aggravate fibrillation. When given in the usual way—that is, hypodermically or intramuscularly in doses of 1/2 to 1½ grains—it is apt to be unsatisfactory and unreliable but its effect is striking and immediate when given intravenously. The author reports a series of seventy cases in which the blood pressure was controlled during operation by the continuous infusion into a vein of a dilute solution of ephedrine hydrochloride 1 grain in 100 or 200 ccm of normal saline. This was begun immediately after the spinal injection the initial rate of 100 to 120 drops a minute being maintained until the blood pressure showed signs of rising above normal. The rate was then reduced to that needed for the maintenance of pressure usually 40 to 50 drops a minute. Young persons and those with good heart muscle generally needed the more dilute solution and a slow rate of administration. The amount of solution mentioned was usually enough but if necessary half a grain of ephedrine in 100 ccm was added. In fifty one of the seventy cases there was no fall in blood pressure and only a slight drop in twelve. In only four cases was there a severe fall with the usual symptoms there were no deaths in

the series Auricular fibrillation, already present in two patients was increased by ephedrine, but the former rhythm was restored on its cessation in a third case fibrillation began during operation but caused no inconvenience and was followed by uneventful recovery. The general appearance of the patients in this series was much better than that usually seen with spinal anaesthesia, and there were no post operative headaches

388

Vinesthene

L. BRINGS (*Schmerz Narkose anaesth* February 1937 p 177) describes his experience with the new inhalation anaesthetic vinesthene in 119 cases. Vinesthene is a pure vinyl ester having the formula $\text{CH}_2=\text{CH}-\text{O}-\text{CH}_2-\text{CH}_3$. The anaesthetic was used without a mask, it was poured over several layers of gauze and inhaled. Sleep followed rapidly and the awakening was equally rapid when the gauze was removed. The quantity used varied between 10 and 30 c.c.m., and the length of the anaesthesia between two and ten minutes. The pulse, blood pressure and respiration remained unchanged throughout the anaesthesia. When small doses were given there was no vomiting at the awakening. There was no post operative sleep. In one case the anaesthesia was extended to thirty minutes without any ill effect. Owing to insufficient muscular relaxation the anaesthetic is not suitable for laparotomies.

389

Collapse During Spinal Anaesthesia

W. DIETER (*Schmerz Narkose anaesth* April 1937 p 1) has for long considered spinal anaesthesia the best method for gynaecological surgery except in Caesarean section or other operations in the later months of pregnancy since at that time the splanchnic pool of blood is already greatly augmented and further increase owing to vasomotor paralysis may lead to dangerous shortage of blood elsewhere. The chief drawbacks of the method are the frequency of post-operative headaches and of circulatory collapse and although pentocain L, which he has been using recently gives otherwise excellent results it has so often caused a more or less serious drop in blood pressure that he is now having the latter investigated before, during and after operation. In healthy persons he has commonly found a fall in systolic pressure of 20 to 40 mm Hg and of 40 to 60 mm Hg in less favourable cases. For prophylaxis and treatment he recommends eardiazol-ephedrine which acts both centrally and peripherally. He reports cases in which this was successfully given in doses of 1 c.c.m. intramuscularly twice daily for a few days before and after operation and upon the table at the beginning of operation or when indicated by a falling blood pressure. A case of sudden and severe circulatory collapse after an hours anaesthesia was successfully treated by immediate slow intravenous injection of 2 c.c.m. eardiazol-ephedrine.

390

Evipan Narcosis

G. VIDILI (*Nord med Tidskr* January 30 1937 p 161) has given evipan by intravenous injection in 1720 cases. His one certain and one possible evipan fatality were both at the beginning of his series when his knowledge of the dosage was still imperfect. Since February 1934 he has had no deaths. In a few cases however when the narcosis seemed too deep he has found it desirable to restore the patient quickly to consciousness by an intravenous injection of coramine. He finds evipan particularly suitable in those cases in which ether narcosis is more or less contraindicated by the condition of the respiratory tract. Evipan is also particularly useful for patients over the age of 45 (as many as seventy were over 70) for the debilitated and for sufferers from general infections or bronchitis. On the one hand some and robust patients are apt to be violent on regaining consciousness and to need two or three assistants to keep them in bed. This difficulty may

be overcome by repeated doses of morphine. After the age of 45 to 50 such excitation is increasingly rare, being practically unknown among elderly patients. The author has given from only a few c.c.m. up to 30 c.c.m., and he insists that it is as necessary to individualize and to avoid rule of thumb dosage with evipan as with ether. Indeed the range of sensitiveness of different patients to evipan is very wide and two patients of the same age, muscular development and weight may require very different doses. But if the anaesthetist individualizes strictly and is careful with his dosage, he can graduate his narcosis with practically the same nicety that he can with ether.

Obstetrics and Gynaecology

391

Colporrhaphy and Ventrofixation

E. TRIER MØRCH AND S. MULLER (*Hospitaltidende* February 23, 1937, p 219) have undertaken a follow up study of the seventy-five patients operated on for prolapse of the uterus in a Danish hospital between 1924 and 1933. The observation period ranged from two and a half to twelve years. The treatment consisted in most cases of colporrhaphy followed after a fortnight by fixation of the uterus to the anterior abdominal wall in such a way that should the uterus recede and part company with the abdominal wall a complete septum would still unite the two instead of a single band offering opportunities for intestinal obstruction. Both the vaginal and the abdominal operations were performed under spinal anaesthesia. The seventy-five patients were classified according to their age and the degree of their prolapse, only two were under 40, twenty were between 40 and 50 and the remainder were over this age. It was instructive that of the twelve patients who had died in the interval as many as ten had suffered from total prolapse although there were only twenty-four such cases. Among the sixty-three survivors there were only four whose uterus had again prolapsed in all the other cases these had become firmly adherent to the abdominal wall. There were however three cases of rectocele and one of cystocele. In the latter case in intermittent incontinence of urine and in two other cases frequency of micturition were noted. In as many as six cases ventral hernia was found. It was however, so slight in three cases that the patients had not detected it. The authors express surprise and disappointment over the number of these hernias, having hoped that the precautions taken to prevent them at the time of operation would have been more effective.

392

Lutein Cysts After Hydatidiform Mole

M.-A. WEIL (*Bull Soc Obstet Gynec Paris*, February, 1937, p 135) describes the case of a 5 para aged 22 who on the third day after the insertion of laminaria tents and extraction of a hydatidiform mole weighing 11 kg (after three months amenorrhoea) had a rigor and signs of acute peritonitis. Operation showed the abdomen to contain free streptococcal pus and two large lutein cysts of the ovaries one cyst twisted through 360 degrees on its pedicle being partially gangrenous and ruptured. Death followed in twelve hours. COUVELAIRE (*ibid* p 136) has seen a case of hydatidiform mole in which no adnexal abnormality could be detected when the patient left hospital six weeks later hysterectomy was performed for acute torsion of a lutein cyst. An untwisted lutein cyst was present on the other side and the uterus was seen to contain a small nodule of chorion epithelioma. There was no recurrence. L. GERNETZ (*ibid.*, p 150) describes the case of a 2 para aged 25 from whom a hydatidiform mole was extracted, the uterus after four months amenorrhoea had exceeded the size of a six months pregnancy. A small cyst (the size of an egg) palpated in the posterior fornix attained within a month the size of the uterus at term. Considerable anxiety was felt as to the possible presence of a chorion epithelioma, but operation

was rejected by reason of a diminishing titre of gonadotropic hormone in successive blood tests. Six months after the expulsion of the mole the cyst had disappeared and a final blood test gave a negative pregnancy reaction. Gernez states that while some two thirds of moles are associated with lutein cyst formation large cysts may exist with no chorion epithelioma and this may follow in the absence of cyst the biological tests constitute a safe guide in prognosis and after treatment.

393

Ergometrine

L. WIRTH (*Munch med Wschr* February 26 1937 p 324) reports fifteen months trial of ergobasine. Ergobasine is the name suggested by Stoll and Burckhardt for the water-soluble, small molecule ergot alkaloid isolated by Moir and Dudley (*Brit med J* 1935, 1 520) and called by them ergometrine and by others ergotocin or ergostetrine. Wirth used either a solution of ergobasine tartrate (containing 0.2 mg in 1 ccm for injection or 0.25 mg in 1 ccm for oral administration) or a mixture containing 0.125 mg ergobasine tartrate and 0.25 mg of gynergen (that is, ergotamine tartrate) in 1 ccm. He reports that these preparations act more quickly than others on the uterus during Caesarean section their effect on its contraction was notable within 10 to 20 seconds of intramural or intravenous injection. Given orally after labour (about 0.5 ccm ergobasine solution twice or three daily) they appeared to lessen the incidence of lochial stasis and subinvolution. They were satisfactory also in treatment of puerperal haemorrhages and in accelerating expulsion of the placenta. No toxic symptoms appear to have been noted.

Pathology

394

Erythrocytes in Acholic Jaundice

J. C. HAWKESLEY (*J Path Bact* November 1936 p 565) records investigations into the changes in the erythrocytes in eight cases of familial acholic jaundice both before and after splenectomy and blood transfusions. In one case at the age of 36 hours there was a reduction in mean diameter of the erythrocytes and increased fragility but a normal blood count and an absence of clinical signs of the disease. There is apparently therefore some erythropoietic abnormality at birth to which is added later the morbid influence of splenic overaction. In other cases blood transfusion temporarily raised the mean cell diameter. After splenectomy there was neither significant change in the mean cell volume nor statistical evidence of the presence of two populations of cells. The mean red-cell diameter however moved towards normal, but swung back later, and the ultimate Price Jones curve was of normal variability, microcytic in type but less so than before operation. These changes were not accompanied by fresh haemolytic activity, and demonstrate some persistence of abnormality. The disease is to be regarded as due neither entirely to a primary abnormality of erythropoiesis nor entirely to primary splenic over activity; there is a more complex interconnection of these two factors, which varies from case to case.

395

Pneumonias of Infancy

L. K. VIKTOROFF and his co-workers in Moscow (*Ann Inst Pasteur* March 1937 p 253) have isolated a pneumococcus from the sputum in 84 per cent. of cases of lobar pneumonia and 74 per cent. of cases of bronchopneumonia in a series of 350 children. The aetiological significance of the strain isolated was confirmed in those cases in which the blood pus and necropsy specimens were examined bacteriologically or the immunological reactions of the serum were tested in convalescents. Using Cooper's thirty-one sera they had no case in which the pneumococcus could not be identified. The micro-agglu-

tion technique simplified by the use of mixed sera, was adequate. They found that lobar pneumonia—the most frequent form (78 per cent.) in children over 3 years—was caused in 77 per cent. of cases by Types I and II bronchopneumonia (100 per cent. of pneumonias up to 1 year, 86 per cent. from 1 to 3 years) by Type III and by the organisms of Group A in 78 per cent. of cases. In infancy Types VI and I were most common (each 10 per cent.) and 51.5 per cent. of cases were caused by Types VI I, III II and XIX in that order of frequency. Types XXIV, XXIX, XXX, XXVII and XVI were very rarely met with (less than 1 per cent.) and XXIII XXXI and XXXII not at all. Types VIII X XXIX and XXX always produced localized pneumonia. Toxic forms were usually due to XVIII XIX, III, VI, XV XVI and I and septic forms to IV, XIV, V, XIII XVII and XIX. Bronchopneumonia due to Types VII, X, XV, XII, or XXIX took in general a benign course but pneumonia from Types IV, I II V, XIV, XVII, or XI had a mortality of 40 to 50 per cent. or even more. Only 60 per cent. of convalescents had specific antibodies in the blood; these are produced to only a slight extent in children aged less than 3 years, and even in those aged from 3 to 12 to a considerably less extent than in adults. There was little correspondence between strain virulence, as tested by inoculation in mice and the clinical form or the prognosis of pneumonia in the patient concerned—the course of the malady depending chiefly on non specific defence measures.

396

Agglutinins of Typhoid Carriers

A. PIJPER AND C. G. CROCKER (*S Afr med J* February 27, 1937, p 113), with sixteen years of close co-operation between their laboratory and the public health service, regard the typhoid carrier as the chief source of infection in Pretoria. Few cases of typhoid remain undetected and in all notified ones an exhaustive inquiry is made by an efficient inspector. When a clue as to the source of the infection is found blood tests are performed for the detection of carriers. The authors completely ignore the Widal test with H agglutination only for they have found manifest carriers with no H agglutinins. They use a complement-fixation test and O agglutination in a serum dilution of 1 in 100 with the sensitive strain of Ty 901 or Q 901. Persons showing marked O agglutination (+ +) are investigated further. There is in the authors' opinion no evidence against their assumption that all carriers have O agglutinins. There are however a large number of persons who are not carriers (proved by the particularly fortuitous conditions prevailing in Pretoria) but who have O agglutinins left behind after oral vaccination subcutaneous inoculation or Grasset's endotoxin vaccine. In examining for Vi agglutination the authors believe they have found a new and efficient method of narrowing down the field for cultural examinations. Blood serum is diluted ten times and to it is added an equal quantity of thick suspension of strain Ty 901 killed at 56°C. The mixture is incubated for two hours and centrifuged. Tubes containing 1 ccm are put up in dilutions of 1 in 20 1 in 40 1 in 80, and 1 in 160 in two rows. To one row are added drops of a live saline solution of Ty 2 to the other drops of a locally isolated non-agglutinable strain. Readings are taken after two hours in the incubator and eighteen hours on the bench. Vi agglutinins are much less common than O agglutinins in normal persons typhoid patients and convalescents. In fourteen carriers examined for Vi agglutinins four were manifest carriers and possessed significant quantities of Vi; three were chronic stool carriers in whom no bacilli were demonstrated but who had large quantities of Vi; five had been chronic carriers but at the time of examination no bacilli or Vi agglutinins were discovered; two had been temporary carriers in whom on examination neither bacilli nor Vi agglutinins were discovered. The authors believe that typhoid carriers are characterized by the possession of significant quantities of Vi agglutinins.

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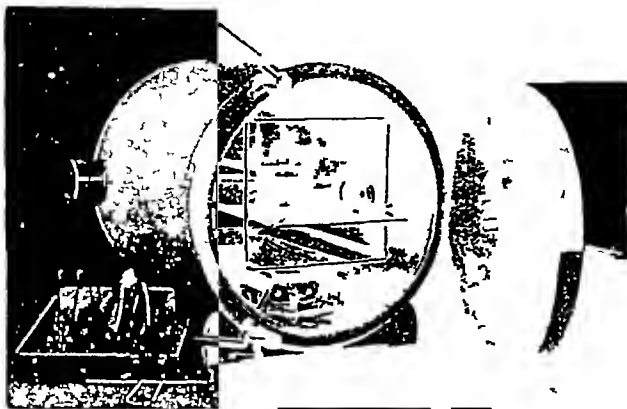
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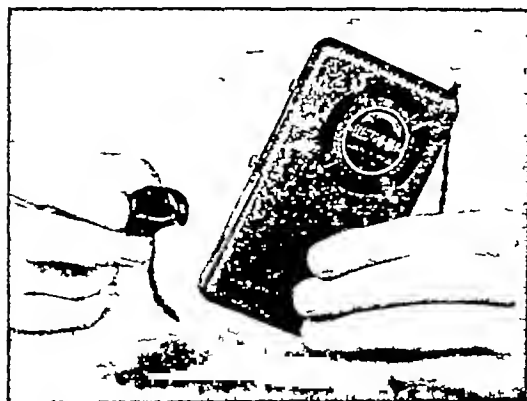


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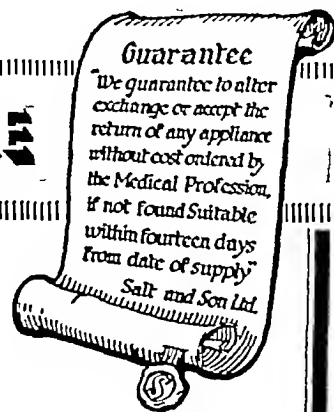
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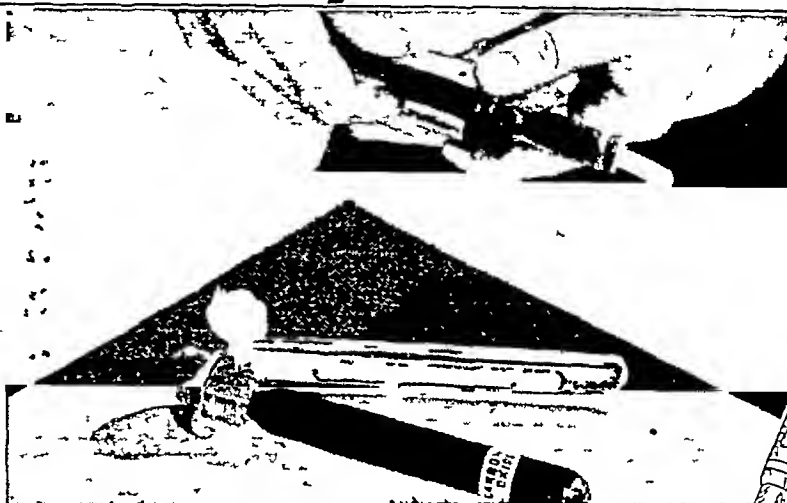
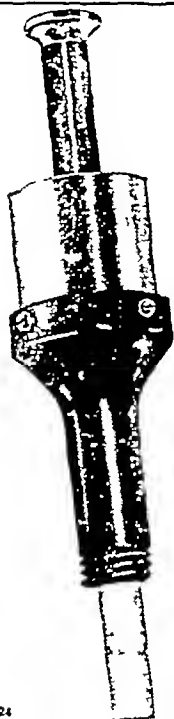


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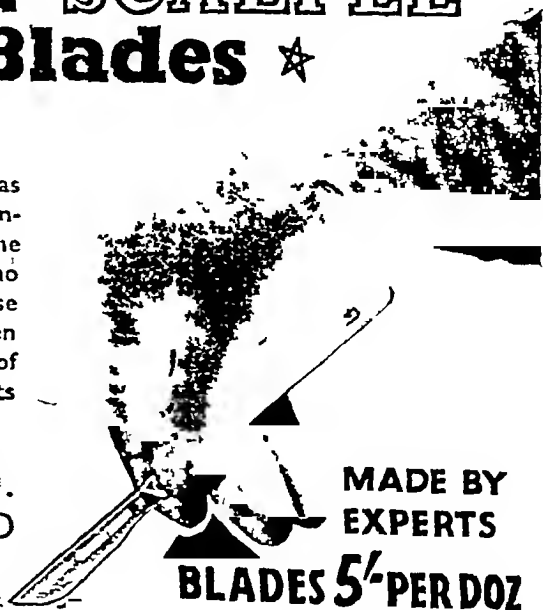
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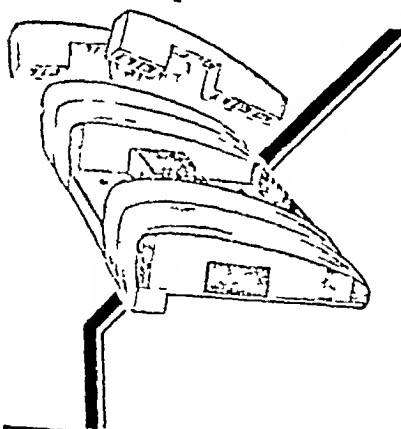
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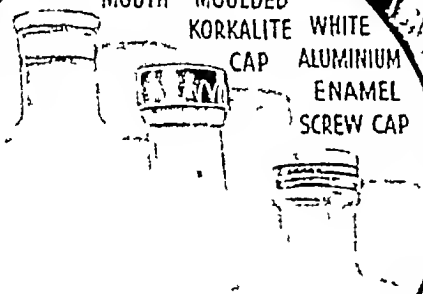
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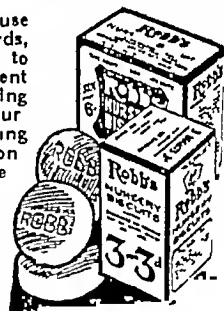
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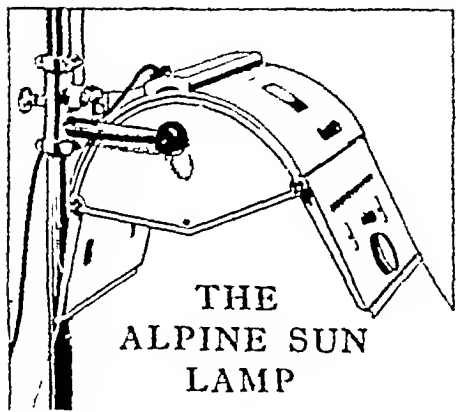
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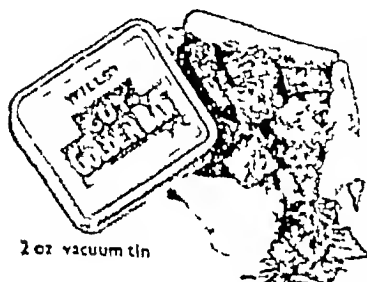
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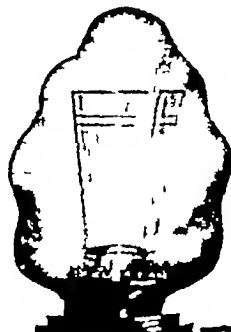
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1937	10.30 to 1.0	Conducted by—	2.0 to 4.30	Conducted by—
Monday 31st May	Principles of the Examination of Patients.	Prof. THOMAS BEATTIE, M.D., F.R.C.P.	Hæmorrhoids, Fissula and Fissure in Ano.	Mr. C. L. NAUNTON MORGAN, F.R.C.S.
Tuesday 1st June.	Rheumatoid Arthritis	The Staff of the Red Cross Clinic for Rheumatism.	Dyspepsia	Dr. T. C. HUNT, D.M., F.R.C.P.
Wednesday 2nd June.	Surgery of the Colon.	Prof. G. GARY TURNER, D.Ch. M.S. F.R.C.S., F.A.C.S.	Common Respiratory Diseases	Dr. JAMES MAXWELL, M.D. F.R.C.P.
Thursday 3rd June.	New Therapeutic Agents.	Dr. E. R. CULLEN, M.D., F.R.C.P.	Common Types of Anaemia, Their Diagnosis and Treatment.	Dr. JANET M. VAUGHAN, D.M., M.R.C.P.
Friday 4th June.	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital, Gray's Inn Road, W.C.1.	Diagnosis of Nervous Diseases.	The Staff of the National Hospital, Queen Square, W.C.1.
Saturday 5th June.	Eye Conditions in General Practice	The Staff of the Royal London Ophthalmic Hospital, City Road, E.C.1.	—	—
Monday 7th June.	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1.	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1.
Tuesday 8th June.	The Acute Abdomen	Mr. R. J. McNEILL LOVE, M.S., F.R.C.S.	Common Gynaecological Conditions.	Dr. J. CHASSAN MOIR, M.D., F.R.C.S. F.C.O.G.
Wednesday 9th June	Diseases of the Skin.	Dr. R. T. BRAIN, M.D., F.R.C.P.	Infectious Fevers.	Dr. W. GUNN, M.A., M.R.C.P., D.P.H. North Western Hospital, Lawn Road, N.W.3.
Thursday 10th June	Demonstration of Local Anæsthesia	The Staff of the School	Injuries of the Ankle and Wrist.	Mr. ST. J. D. BUXTON, F.R.C.S.
Friday 11th June	Heart Attacks	Dr. D. E. BEDFORD, M.D., F.R.C.P.	Thyroid Dysfunction	Dr. H. GARDNER HILL, M.B.E., M.D., F.R.C.P.
Saturday 12th June	Psychiatry in General Practice.	Dr. J. R. REES, M.D. M.R.C.P.	—	—

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CLEMENT COBBOLD, Secretary

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Salary according to scale—£500 per annum
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Applications, stating age, and giving full par-
ticulars regarding training, qualifications, and
appointments held since qualification, should be
forwarded to the Medical Officer of Health along
with copies of two recent testimonials so as to
reach him not later than Thursday May 20th 1937

COUNTY COUNCIL OF MIDDLESEX ASSISTANT DENTAL OFFICER

Applications are invited for the above appoint-
ment on the pensionable staff. Applicants must be
fully qualified and registered Dental Surgeons.
The duties of the post include the dental inspec-
tion and treatment of school children and of women
and young children under the Maternity and Child
Welfare Act.

The officer appointed will be required to devote
whole time to the duties of the post, and will not be
allowed to engage in private practice, and will work
under the supervision of the County Medical
Officer and the Senior Dental Officer.
Salary £500 per annum rising by annual incre-
ments of £25 to £700 together with out-of-pocket
travelling expenses while on duty.

The appointment will be held during the pleasure
of the Council and terminable by one month's
notice on either side.

Applications stating age, qualifications, and ex-
perience together with copies of not more than
three recent testimonials must be received by the
undersigned not later than May 31st.

Relationship to any member or officer of the
Council must be disclosed in the application. Appli-
cation forms are not provided. Envelopes must be
endorsed "Assistant Dental Officer."

Canvassing directly or indirectly will be a dis-
qualification.

C W RADCLIFFE, Z
Middlesex Guildhall Clerk of the County
Westminster S W 1 Council
May 5th 1937

COUNTY BOROUGH OF BARNSELY ST HELEN MUNICIPAL GENERAL HOSPITAL. (150 Beds.)

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Applications are invited for the above whole
time appointment at an inclusive salary of £650
per annum rising by annual increments of £25 to
£700 per annum.

The Hospital was appropriated for administra-
tion under the Public Health Acts on April 1st,
1936.

The officer appointed will be on the staff of the
Public Health Department, and the appointment
will be determinable by three months' notice on
either side. The successful applicant will act also
as Medical Officer for the adjacent Institution and
for the Municipal Maternity Home, and may be
called upon to act in a consultant capacity for the
maternity services of the Borough. He will for the
first instance be permitted to reside outside the
hospital precincts within such reasonable distance
as the Council may agree.

Candidates must have held resident appointments.
A high medical qualification wide obstetrical ex-
perience and experience in hospital administration
are desirable.

It is contemplated that the hospital will be de-
veloped mainly for medical and obstetrical cases
and that in the near future there will be made an
appointment of Resident Medical Superintendent
when the Medical Officer will then be considered
for promotion to such appointment.

Applications stating age, qualifications etc.
together with copies of not more than three recent
testimonials, must be sent to reach me not later
than first post on Thursday May 20th 1937, and
should be endorsed "Medical Officer St Helen
Hospital."

Canvassing in any form will be a disqualification.
Town Hall Barnsley
April 26th 1937 A E GILFILLAN Town Clerk

TIPTON URBAN DISTRICT COUNCIL MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Council invite applications for the appoint-
ment of Medical Officer of Health and School
Medical Officer for the Urban District of Tipton
at a salary of £800 per annum.

Applicants must be duly qualified Medical
Practitioners and must hold a Diploma in Sanitary
Science, Public Health or State Medicine.

The person appointed will be required to de-
vote the whole of his time to the duties of the
office and will not be allowed to engage in private
practice. He will be responsible for carrying out
all the duties imposed on a Medical Officer of
Health and School Medical Officer by the various
Acts Orders and Regulations relating to public
health, maternity and child welfare, education,
housing and infectious diseases and such other
duties as may from time to time be prescribed by
the Council.

The appointment will be subject to the approval
of the Minister of Health and the Board of
Education and to the person appointed agreeing to
give three months' notice in writing before
terminating the office.

Applications (in forms to be obtained from the
undersigned) accompanied by copies of not more
than three recent testimonials, must reach the
undersigned not later than May 31st 1937.
Canvassing will be disqualified.

KENNETH W. MADIN
Municipal Buildings Clerk of the Council
Sedgley Road West Tipton.
May 7th 1937

COUNTY COUNCIL OF MIDDLESEX WEST MIDDLESEX COUNTY HOSPITAL ISLEWORTH

CASUALTY MEDICAL OFFICER (non-resident)

Applications are invited from registered Medical
Practitioners for the above appointment. Can-
didates must have held the posts of both house
physician and house surgeon at a general hospital
and have had considerable all round experience.
Salary £350 per annum with a cash allowance
in lieu of board and residence at the rate of £100
per annum. No other emoluments.

The officer appointed will be required to deal
with casualties and admissions to the hospital and
to carry out such other duties as may be allotted
to him. The hours of duty are 10 a.m. to 6 p.m.
daily with Saturday afternoons and Sundays free.

The appointment is for a period of six months
in the first instance may be extended for an ad-
ditional six months and is terminable by one
month's notice on either side.

The officer appointed will work under the con-
trol of the Medical Superintendent and will devote his
whole time to official duties and will have no
rights under the Council's superannuation scheme.

Applications stating age, qualifications, and ex-
perience together with copies of not more than
three recent testimonials must be received by the
undersigned not later than May 29th. Application
forms are not provided. Envelopes must be en-
dorsed "Casualty Medical Officer West Middlesex
County Hospital." Relationship to any member
or officer of the Council must be disclosed in the
application.

Canvassing directly or indirectly will be a
disqualification.

C W RADCLIFFE, Z
Middlesex Guildhall Clerk of the County Council
Westminster S W 1
May 3rd 1937

COUNTY COUNCIL OF MIDDLESEX ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment on
the pensionable staff of an ASSISTANT MEDICAL
OFFICER in the Public Health and School Medical
Department. Salary £600 per annum rising after
two years service by annual increments of £30 to
£750 together with out-of-pocket travelling ex-
penses.

Applicants must be duly qualified registered
Medical Practitioners and should have had special
experience of ante-natal work. The possession of
a degree or diploma in Public Health will be an
additional qualification.

The duties of the post are the medical inspection
of school children, the supervision of treatment of
minor ailments, the carrying out of work under the
maternity and child welfare scheme and such other
duties as may be required by the Council.

The officer appointed will devote whole time to
the duties of the post, and will work under the supervision
and control of the County Medical Officer of
Health and reside in such district as may be
required.

The appointment will be held during the pleasure
of the Council and terminable by one month's
notice on either side.

Applications stating age, qualifications and pre-
vious experience together with copies of not more
than three recent testimonials must be received
by the undersigned not later than May 31st.
Relationship to any member or officer of the
Council must be disclosed in the application.
Application forms are not provided. Envelopes
must be endorsed "Assistant Medical Officer."

Canvassing directly or indirectly will be a dis-
qualification.

C W RADCLIFFE, Z
Middlesex Guildhall Clerk of the County
Westminster S W 1 Council
May 5th 1937

CORPORATION OF DUNDEE—PUBLIC HEALTH DEPARTMENT

DEPUTY MEDICAL OFFICER OF HEALTH (Pre-School and School Medical Services)

Applications are invited from medical practitioners
(male) for the post of DEPUTY MEDICAL
OFFICER OF HEALTH (PRE-SCHOOL AND
SCHOOL MEDICAL SERVICES). Age must not
exceed 45 years on the date of appointment. Salary
will be at the rate of £750 per annum rising
subject to satisfactory service by annual increments
of £20 to £850 per annum.

The appointment is subject to the provisions of
the Local Government and Other Officers Super-
annuation Act 1920, and the successful candidate
will be required to pass a medical examination.

Further particulars may be obtained from the
Medical Officer of Health 9 West Ball Street,
Dundee.

Canvassing directly or indirectly will be a dis-
qualification.

Applications stating age, experience etc. with
copies of three recent testimonials must reach the
undersigned on or before WEDNESDAY June 2nd
1937.

City Chambers Dundee
May 10th 1937 DAVID L. ITO
Town Clerk.

SURREY COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an Assistant Medical Officer (male). Applicants must possess a qualification in Public Health and have had experience in the Medical Inspection of School Children, Maternity and Child Welfare, and the conduct of a Venereal Diseases Clinic. The officer appointed will be required to undertake such other Public Health Duties as may be allocated to him. He will be on the staff of the County Medical Officer of Health must reside in the County of Surrey and devote his whole time to the work. Salary £600 per annum rising by annual increments of £70 to £700 per annum. Travelling expenses in accordance with the Council's scale will be allowed.

The appointment will be subject to the approval of the Ministry of Health and of the Board of Education to the successful candidate passing a medical examination, to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and to the Staffing Regulations of the Council which provide *inter alia* that appointments may be determined at any time by three months notice.

Applications, stating age, qualifications and experience together with copies of three recent testimonials, should be made on the prescribed form and sent to the County Medical Officer of Health, County Hall, Kingston-upon-Thames, from whom copies of the application form may be obtained and to whom any enquiries relating to the appointment should be addressed.

Last day of receipt of applications May 15th 1937

Canvassing directly or indirectly will disqualify
DUDLEY AUKLAND
County Hall, Clerk of the County Council
Kingston-upon-Thames
May 3rd 1937

SURREY COUNTY COUNCIL

DENTAL SURGEON

Applications are invited from qualified registered dental surgeons, preferably under 35 years of age, for whole time dental work in the County.

The officer appointed will be required to act under the supervision and control of the County Medical Officer and to live at some centre to be approved by the Council.

The appointment will be subject to the staffing regulations of the Council and to the provisions of the Council's Superannuation Scheme.

The commencing salary will be at the rate of £500 per annum, rising, subject to approved service by annual increments of £20 to a maximum of £600 per annum.

A form of application, together with further particulars, may be obtained from the County Medical Officer, County Hall, Kingston-upon-Thames and must be returned duly completed not later than May 20th 1937, endorsed "Dental Surgeon".

Canvassing either directly or indirectly will disqualify.

County Hall, DUDLEY AUKLAND
Kingston-upon-Thames, Clerk to the Council
May 5th 1937

CITY OF MANCHESTER

WITHINGTON HOSPITAL. (1,293 Beds)

The Public Health Committee invites applications from registered medical practitioners for the post of RESIDENT ASSISTANT MEDICAL OFFICER at the above-named hospital.

The salary for the appointment is £200 per annum with board, residence, and laundry in addition subject to the Manchester Corporation conditions of service.

The appointment will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter.

Full information and forms of application may be obtained from the Medical Officer of Health, Sunning House, Quay at the above hospital and applications for this post must be received by him not later than May 20th 1937.

F. E. WARBRECK, HOWELL,
Town Hall, Manchester 2, Town Clerk
May 6th, 1937

CITY OF SHEFFIELD-CITY GENERAL HOSPITAL.

JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified medical men for the appointment of Junior Assistant Medical Officer at the above hospital. The Medical Officer appointed will be required to take duty in the Medical Surgical or Maternity Departments as directed by the Medical Superintendent.

The appointment will be for one year only and the salary offered is £200 per annum with the usual residential allowances.

Previous hospital experience is desirable. Applicants, stating age, qualifications and experience, and accompanied by not more than three recent testimonials of recent date, should be sent to the Medical Superintendent, City General Hospital, Sheffield.

COUNTY BOROUGH OF WEST HAM

Applications are invited by the Council for the post of SECOND ASSISTANT RESIDENT MEDICAL OFFICER (male) at Central Home, Union Road Leytonstone E.11. Salary £350 per annum rising by annual increments of £25 to a maximum of £450 per annum together with apartment board and laundry valued for superannuation purposes at £150 per annum. The salary is inclusive and all fees received from whatever source must be paid to the Council. The successful candidate must be prepared to serve in any of the Council's other institutions and to carry out any other duties which may be assigned to him.

This institution accommodates chronic sick, aged and infirm patients.

Candidates must be qualified registered medical practitioners preference being given to candidates who have had in addition to a general hospital appointment experience in Poor Law Institutions.

The successful candidate will be required to pass a medical examination, and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, or to the Poor Law Officers Superannuation Act, 1896, and the statutory contributions will be deducted from the salary.

Forms of application must be obtained from the Deputy Medical Officer of Health, Municipal Health Offices, Romford Road Stratford E.15 or will be forwarded on receipt of a stamped addressed envelope and returned to the undersigned not later than May 20th 1937.

Canvassing members of the Council is prohibited and will disqualify.

CHARLES E. CRANFIELD, Town Clerk.

Public Assistance Offices, Union Road Leytonstone E.11

April 28th 1937

LANCASHIRE COUNTY COUNCIL

PARK HOSPITAL, DAVYHULME, NEAR MANCHESTER

APPOINTMENT OF SECOND RESIDENT MEDICAL OFFICER

Applications are invited from registered male Medical Practitioners for the appointment of Second Resident Medical Officer at the above hospital. Candidates must be unmarried.

The appointment will in the first instance be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Salary £225 per annum together with the usual residential allowances.

The hospital comprises 500 beds for acute cases and is fully equipped in every respect.

The duties will include in addition to medical work those of House Surgeon and preference will be given to candidates who have had or who desire, experience in Ear, Nose and Throat work.

The hospital is recognised as a complete Training School for Nurses.

Forms of application may be obtained from the County Medical Officer of Health, Hospital and Medical Department, County Offices, Preston to whom all applications, accompanied by copies of not more than two recent testimonials must be forwarded so as to be received not later than 11 o'clock on May 26th 1937.

County Offices, GEDRGE ETHERTON
Preston, Clerk of the County Council.
May 3rd 1937

GLANDRIGAN COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE.

LLWYNPIA HOSPITAL (RHDVDDA)

APPOINTMENT OF RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners under 35 years of age for the appointment of Resident Assistant Medical Officer at Llwynpia Hospital (182 beds).

Applicants must have held resident hospital appointment and experience in treatment of diseases of children is desirable. Previous experience in Orthodontics will be of advantage.

Salary £350 per annum rising by £25 annually to £450 per annum with residential emoluments valued for superannuation purposes at £75 per annum.

The appointment, which will be terminable by two months notice on either side, is a designated post under the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass an examination as to physical fitness.

Applications, stating age and qualifications, and accompanied by copies of not more than three recent testimonials, must be received by the County Medical Officer, Glamorgan County Hall, Cardiff, not later than the first post on Thursday May 14th 1937.

HENRY ROWLAND, Clerk of the County Council.
Glamorgan County Hall, Cardiff
May 14th 1937

COUNTY BOROUGH OF CROYDON

CROYDON MENTAL HOSPITAL, UPPER WARRINGHAM, SURREY

APPOINTMENT OF ASSISTANT MEDICAL OFFICER

The Visiting Committee of the Croydon Mental Hospital is prepared to receive applications from medical men for the appointment of Assistant Medical Officer at the Croydon Mental Hospital. No married quarters are provided.

The salary will be at the rate of £350 per annum rising by annual increments of £25 each to a maximum of £450 per annum and the area of the candidate should not exceed 35. A further £50 per annum will be paid in possession of the D.P.M.

Furnished apartments will be provided with board and washing and for the purpose of superannuation will be valued at £150 per annum.

Candidates must be registered under the Medical Act, and preference will be given to those candidates who have held the post of House Surgeon or House Physician at a General Hospital.

The appointment will be subject to the provisions of the Asylum Doctors Superannuation Act 1907.

Applications to be made up to 10 a.m. to be obtained by sending a stamped addressed foolscap envelope to the undersigned with copies (not originals) of not more than two testimonials of recent date not later than 11 o'clock in the forenoon of Wednesday May 19th 1937, endorsed "Croydon Mental Hospital Assistant Medical Officer".

Canvassing in any form is prohibited.
Town Hall, NEW HAMPSHIRE
Croydon, Clerk to the Visiting Committee
May 17th 1937

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners for the post of AREA ASSISTANT TUBERCULOSIS PHYSICIAN (3 vacancies). Salary £500 per annum rising by annual increments of £25 to £700 per annum together with travelling and subsistence allowances when away from base.

Preferably candidates should have had at least six months special training in tuberculosis, with eighteen months experience in general clinical work, of which six months should have been spent in a hospital not confined to the treatment of tuberculosis.

Knowledge of Welsh desirable. A medical examination and to contribute 5 per cent. of their salary to the Superannuation Fund of the Association. Applicants not already in the service of the Association must be under 45 years of age.

Applications, stating age, qualifications, experience, etc. together with copies of three recent testimonials should reach the undersigned not later than TUESDAY May 18th 1937.

Memorial Offices, D. A. POWELL,
Westgate Street, Principal Medical Officer
Cardiff

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners (male single) for the following posts at the SULLY HOSPITAL, SULLY GLAN (300 beds for the treatment of pulmonary tuberculosis) situated in the town of Penarth and Barry (a RESIDENT MEDICAL OFFICER (twelve months appointment)).

Salary £350 per annum plus maintenance.

Preference will be given to applicants who have held the post of House Physician or House Surgeon at a general hospital and have had institutional experience in the treatment of pulmonary tuberculosis.

(b) ASSISTANT RESIDENT MEDICAL OFFICER (twelve months appointment).

Salary £200 per annum, plus maintenance.

Applications, stating age, qualifications, experience, etc. together with copies of three recent testimonials should reach the undersigned not later than Friday May 21st 1937.

Memorial Offices, D. A. POWELL,
Westgate Street, Principal Medical Officer
Cardiff

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from duly registered medical practitioners (male single) for the post of Assistant Resident Medical Officer at the SULLY HOSPITAL, SULLY GLAN (300 beds for the treatment of pulmonary tuberculosis) situated in the town of Penarth and Barry (a RESIDENT MEDICAL OFFICER (twelve months appointment)).

Salary at the rate of £200 per annum plus maintenance.

Applications, stating age, qualifications, and previous experience, together with copies of three recent testimonials should reach the undersigned not later than Friday May 21st 1937.

Memorial Offices, D. A. POWELL,
Westgate Street, Principal Medical Officer
Cardiff

May 15, 1937

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate Study

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director-General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than May 31st, 1937

COUNTY BOROUGH OF EAST HAM AND SOUTHEAST-ON-SEA.

RUNWELL HOSPITAL
nr Wickford Essex.
(1 032 Beds)

ASSISTANT RESIDENT PHYSICIAN

Applications are invited for the post of Assistant Physician to the above new hospital for mental and nervous disorders

Salary £340 rising by annual increments of £25 to £470 per annum plus furnished quarters board attendance and laundry valued for superannuation purposes at £140. An additional £50 will be given to any candidate who holds or obtains the D.P.M. Should the successful candidate be married permission may be given him to live out and he would then be allowed the value of his emoluments in cash.

The hospital is built on modern lines and on the villa system and offers unusually good opportunities for research and post-graduate work.

Forms of application together with further particulars are obtainable from the Physician Superintendent, Runwell Hospital near Wickford Essex to whom they should be returned with copies of three recent testimonials, as soon as possible, and in any case not later than the first post on Tuesday May 18th 1937. Envelope to be marked "Physician."

H. J. WOODWARD
Clerk to the Committee.

NOTTINGHAMSHIRE COUNTY COUNCIL, PUBLIC HEALTH DEPARTMENT

ASSISTANT SCHOOL MEDICAL OFFICER (MALE).

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and must have had at least three years' experience since qualification.

The salary will be at the rate of £500 per annum, rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's scale.

Forms of application and conditions of the appointment may be obtained from me and applications, accompanied by copies of not more than three recent testimonials should be forwarded to the County Medical Officer, Shire Hall Nottingham, not later than May 17th 1937.

Shire Hall, N. TWEEDALE MEABY
Nottingham Clerk of the County Council
April 2th 1937

ESSEX COUNTY COUNCIL

LADY ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH.

The County Council of the Administrative County of Essex invite applications for the above appointment from duly qualified Registered Medical Practitioners holding a Diploma of Public Health and not over 45 years of age.

The Officer appointed must have had experience as a medical Officer of an ante-natal clinic.

The salary will be £500 per annum and will rise, subject to satisfactory service by annual increments of £.5 to £700 per annum and travelling expenses will be allowed.

The appointment will be held by the successful candidate during the pleasure of the Council and will be determinable by the Officer by three months notice in writing.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under the Local Government and Other Officers Superannuation Act, 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of not more than three testimonials (which will not be returned) should be addressed to me and delivered at the County Hall, Chelmsford not later than 10 a.m. on MONDAY May 24th 1937.

County Hall, Chelmsford E. S. HOLCROFT
May 3rd 1937 Clerk of the County Council.

KENT COUNTY COUNCIL

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited for the post of Resident Assistant Medical Officer at the Farborough Public Assistance Hospital (900 beds).

The salary is at the rate of £250 a year with residential emoluments valued at £10 a year. A superannuation scheme will be applicable to the appointment, and the successful candidate will be required to pass a medical examination.

The appointment is a whole-time one and will be for a period of one year only and not renewable. Forms of application can be obtained from the Public Assistance Officer, Tonbridge Road Maidstone to whom applications must be sent by 10 a.m. on Monday May 24th 1937.

W. L. PLATTS
Clerk of the County Council.
Sessions House, Maidstone May 5th 1937

COUNTY BOROUGH OF OLDHAM EDUCATION COMMITTEE.

Applications are invited from qualified and registered medical men for the position of whole-time ASSISTANT SCHOOL MEDICAL OFFICER. Salary £500 per annum rising by annual increments of £25 to £700 per annum.

The duties of the appointed Officer will be principally connected with the work of the School Medical Department but the Officer will be called upon to undertake any other duties under the School Medical Officer who is also the Medical Officer of Health.

The applicants must have had three years' experience since qualifying. Any experience in excess of this or similar service under another Authority will be taken into consideration when fixing the commencing salary. The Officer appointed will be required to devote his whole time to the duties and will not be allowed to engage in private practice and will be required to reside within the County Borough. All fees and emoluments of any kind whatsoever must be handed over to the Corporation.

Forms of application may be obtained from the undersigned and must be returned to this Office immediately.

Canvassing strictly prohibited.
Education Offices W. KERSHAW
Oldham Director of Education.
April 28th 1937

CITY OF SHEFFIELD NETHER EDGE HOSPITAL.

Applications are invited from duly qualified medical women for the appointment of ASSISTANT MEDICAL OFFICER at the above hospital.

The Medical Officer appointed will be required to assist in the general work of the hospital but her principal duties will be in the Maternity Section. She will also be required to assist at the Maternity and Child Welfare Clinic as directed.

Candidates should have previous hospital experience, and post-graduate experience in Midwifery and Ante-natal work is essential.

The salary offered is £350 per annum, rising by £25 to £470 with the usual residential allowances.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and deductions will be made under this Act.

Applications stating age, qualifications, and experience, accompanied by three recent testimonials, should be sent as soon as possible to the Medical Superintendent, City General Hospital Sheffield 5

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

Shadwell London E.1

(Formerly East London Hospital for Children)
(135 Beds)

A HOUSE PHYSICIAN is required on July 1st, 1937 by the above Hospital. Candidates are invited to send in their applications addressed to the Secretary by noon on Thursday June 3rd at the latest, accompanied by copies of not more than three recent testimonials and particulars of previous appointments. If any. The appointment is for six months. Salary at the rate of £125 per annum, with board residence and laundry. Candidates must be properly registered in this country.

Forms of application and copies of the rules can be obtained from the Secretary.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

SHADWELL LONDON E.1

(Formerly East London Hospital for Children.)
(135 Beds.)

A CASUALTY OFFICER is required on July 1st 1937 by the above Hospital. Candidates are invited to send in their applications addressed to the Secretary by noon on Thursday June 3rd at the latest, accompanied by copies of not more than three recent testimonials and evidence of having held a responsible Hospital appointment. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry. Candidates must be properly registered in this country.

Forms of application and copies of the rules can be obtained from the Secretary.

THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN

SHADWELL LONDON E.1

(Formerly East London Hospital for Children)
(135 Beds)

A HOUSE SURGEON is required on July 1st, 1937 by the above Hospital. Candidates are invited to send in their applications addressed to the Secretary by noon on Thursday June 3rd at the latest accompanied by copies of not more than three recent testimonials and evidence of having held a responsible Hospital appointment. The appointment is for six months. Salary at the rate of £150 per annum with board residence and laundry. Candidates must be properly registered in this country.

Forms of application and copies of the rules can be obtained from the Secretary.

HOSPITAL OF ST JOHN & ST ELIZABETH

60 Grove End Road N.W.8

Applications are invited for the post of OPHTHALMIC SURGEON to the above Hospital. Candidates must be Fellows of a Royal College of Surgeons or Masters of Surgery in a recognised University and must be engaged exclusively in the practice of ophthalmic surgery. The duties include the charge of beds. Applications will be expected to call on members of the Medical Committee.

Applications with copies of three testimonials, should reach the undersigned from whom further particulars may be obtained on or before June 7th 1937.

F DUDLEY HOBBS B.A.
Secretary

THE INFANTS HOSPITAL

Vincent Square Westminster

Applications are invited from qualified Medical Practitioners for appointment as CLINICAL ASSISTANTS (Honorary) in the Outpatient Department.

Applications, stating previous experience must be delivered not later than May 31st to the Secretary from whom further information may be obtained.

ALFRED J SMALL, Secretary

THE INFANTS HOSPITAL

Vincent Square, Westminster

Applications are invited for the post of HOUSE PHYSICIAN (either sex). Salary at the rate of £100 per annum with board residence and laundry.

The appointment is for six months from July 1st. Applications with copies of testimonials to be forwarded to the undersigned not later than May 31st.

ALFRED J SMALL, Secretary

CHELSEA HOSPITAL FOR WOMEN

Arthur Street S.W.3

There will be a vacancy for a JUNIOR HOUSE SURGEON (male) on July 1st 1937. Appointment for 6 months. Salary £100 p.a. He will be expected to proceed to the Senior Post 6 months later. Salary £120 p.a. at the end of his term of office. Candidates must be duly registered and preferably unmarried.

Applications accompanied by copies of three testimonials, should be received not later than Friday May 27th by the Secretary.

WOOLWICH AND DISTRICT WAR MEMORIAL HOSPITAL

Shooters Hill London S.E.18

General Hospital. (112 Beds)

There are vacancies for three HONORARY ANAESTHETISTS on the Staff of the Hospital and for which the Board of Management invites applications. The candidates appointed will be required to attend the following sessions respectively.

- (a) Wednesdays 2 p.m. and Fridays 9.30 a.m. (General Surgical)
- (b) Tuesdays 8.30 a.m. (Ear Nose and Throat)
- (c) Tuesdays Noon (Gynaecological)

Candidates are requested to state the particular appointment for which they are applying—(a), (b) or (c).

The Board also invites applications for the post of SURGICAL REGISTRAR for a period of one year from June 1st 1937. An honorarium of £100 per annum will be paid in respect of this appointment.

Applications accompanied by copies of not more than three recent testimonials should be addressed to the Secretary (at the Hospital) to reach him by Monday May 17th 1937. Short listed candidates will be required to attend for interview with the Appointments Committee on Friday May 21st.

THE LONDON LOCK HOSPITAL.

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the MALE DEPARTMENTS (Out Patients, Day-Surgery, In-Patients, Harrow Road). Candidates must be doubly qualified and duly registered.

The appointment is for 6 months commencing June 9th. Salary at the rate of £175 p.a. with furnished rooms at the Harrow Road Hospital full board and laundry. Applications, enclosing copies (only) of 3 recent testimonials, must be in the hands of the undersigned by Thursday May 27th and from whom a copy of the Bye-laws relating to the appointment or any further particulars can be obtained.

283 Harrow Road W.9 J F MORTON
May 6th 1937 Secretary

ROYAL FREE HOSPITAL

Gray's Ina Road W.C.1

Applications are invited from duly qualified medical men for the post of SENIOR RESIDENT MEDICAL OFFICER vacant June 1st 1937 and tenable for one year.

Candidates must have had at least one year's resident hospital experience. Salary £150 per annum, with board and residence. Intending candidates should submit applications, stating age and experience, accompanied by copies of three recent testimonials, to the undersigned on or before May 21st 1937.

RICHARD T BARTLEY
Secretary

ROYAL FREE HOSPITAL, GRAY'S INN

ROAD W.C.1

Applications are invited from duly qualified and registered medical men for the following post—

RESIDENT CASUALTY OFFICER.

Duties to commence July 1st 1937 for six months.

Salary £150 per annum.

Application forms may be obtained from the undersigned on or before June 5th.

RICHARD T BARTLEY
Secretary

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN

Waterloo Road S.E.1

There will be a vacancy on June 1st 1937 for a HOUSE SURGEON (male) at the above Hospital. The appointment is in the first instance for a period of six months. Salary at the rate of £100 per annum with board and residence. Applications, with copies of testimonials, should be forwarded not later than Tuesday morning May 18th, to the Secretary at the above address from whom further particulars can be obtained.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS

Victoria Park E.9
(Bus Tram, and Rail Cambridge Heath
L & N.E. Railway)

A vacancy for a HOUSE PHYSICIAN (male) will occur on July 1st. Six months appointment. Salary at the rate of £100 per annum. Board residence and laundry provided.

Applications with copies of testimonials (three) should be sent to the Secretary on or before Wednesday June 9th 1937.

THE HOSPITAL FOR WOMEN

Soho Square, W.1

Applications are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months commencing July 1st 1937. The salary is at the rate of £100 per annum with board residence and laundry.

Applications and testimonials must reach the undersigned by Tuesday June 8th 1937.

J P HENNING Secretary

ST BARTHOLOMEW'S HOSPITAL

ASSISTANT PHYSICIAN

and
ASSISTANT DIRECTOR TO THE MEDICAL
PROFESSORIAL UNIT

Notice is hereby given that a meeting of the Election Committee will be held on Tuesday June 8th 1937 at four o'clock in the afternoon to elect an ASSISTANT PHYSICIAN, which office is held in conjunction with that of ASSISTANT DIRECTOR TO THE MEDICAL PROFESSORIAL UNIT.

Candidates must be Fellows or Members of the Royal College of Physicians of London.

Provisional copies of applications and testimonials should be left with the undersigned on or before Saturday May 29th 1937.

THOMAS HAYES,
Clark to the Governors.

May 4th 1937

THE VICTORIA HOSPITAL FOR CHILDREN

The Street Chelsea S.W.3

(138 Beds.)

The Committee of Management invite applications for the post of PHYSIO-THERAPIST to attend the Hospital two half-days per week (Artificial Light Massage and Orthopaedic Departments). Candidates are expected to call on members of the Honorary Medical Staff and to send in their applications with testimonials to the Secretary at the Hospital not later than Friday June 4th. There will be an honorarium of £20 per annum attached to the post.

D ST JOHN BARNFORD Secretary

MILLER GENERAL HOSPITAL

Greenwich Road S.E.10

Applications are invited for the following posts:
TWO HOUSE PHYSICIANS (male) unmarried salary £100 per annum
HOUSE SURGEON (male) unmarried salary £100 per annum

Board residence and laundry are provided. The appointments are for six months from July 1st 1937. There are six Resident Officers.

Application forms can be obtained from the Secretary and must be returned not later than May 24th 1937.

May 4th 1937

EAST HAM MEMORIAL HOSPITAL

Shrubbery Road E.7

(100 Beds)

Applications are invited for the post of HOUSE SURGEON to Special Departments and CASUALTY OFFICER (male) for six months commencing July 1st 1937.

Salary at the rate of £120 per annum, with board residence and laundry. Applicants stating age, nationality, experience and full particulars together with copies of three recent testimonials should reach the undersigned by May 20th.

REGINALD PERRY
Secretary

EVELINA HOSPITAL FOR SICK CHILDREN

Southwark S.E.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from June 12th (first two months in the Casualty and Out Patient Department). Salary at the rate of £120 per annum with full board and residence.

Applications, with copies of three recent testimonials should be sent to the undersigned from whom particulars can be obtained not later than first post on Monday May 24th.

W H SIDNELL
House Governor

GORDON HOSPITAL FOR RECTAL DISEASES

Vauxhall Bridge Road S.W.1

A RESIDENT HOUSE SURGEON is required for six months from June 7 next. Salary at the rate of £150 per annum with board and laundry.

Applications with particulars of age, qualifications and experience, and copies of three recent testimonials, to reach the undersigned not later than May 24.

R. S. RECAN
Secretary

HOSPITAL FOR TROPICAL DISEASES

Gordon Street W.C.1

(Seamen's Hospital Society)

HOUSE PHYSICIAN (male) required immediately until September 30th. Salary £170 per annum with board, residence and laundry. Applications to be sent in to the undersigned.

Seamen's Hospital
Greenwich S.E.10

F A LYON
Secretary

HOSPITAL FOR EPILEPSY AND PARALYSIS

4 Masda Vale W.9

Applications are invited for the post of HONORARY ANAESTHETIST to which post is an Honorarium attached. They should reach us by June 17th.

H W BURLINGH
Secretary and Ophthalmic Specialist

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRYMain Hospital 307 Beds.
Convalescent Hospital 40 Beds.

Applications are invited for an HONORARY ASSISTANT SURGEON who must be a qualified practitioner and have held the post of House Surgeon for six months in a hospital containing at least 50 beds.

Candidates shall be resident in the City of Coventry or within six miles thereof or shall take up their residence within that radius within six months from date of appointment.

Canvassing either directly or indirectly will be deemed a disqualification.

Application with original testimonials and registration certificates must reach the undersigned on or before May 31st, 1937.

Candidates will in due course receive notice of their eligibility or otherwise from the Secretary and after receipt of such notice eligible candidates are at liberty to send through the post printed copies of their application and testimonials to Members of the Board of Management of the Hospital a list of whose names and addresses will be furnished by the Secretary. No such application or copies of testimonials shall be sent until receipt of such notification from the Secretary.

The appointment shall be made for twelve months and the candidate appointed shall be eligible for re-election at the end of that period.

The appointment may be terminated at any time by the Board of Management.

By ORDER OF THE BOARD

(MISS) R. HOOPER Secretary

May 3rd 1937

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRYMain Hospital 307 Beds.
Convalescent Hospital 40 Beds.

Applications are invited for the posts of RESIDENT HOUSE SURGEON CASUALTY OFFICER and RESIDENT HOUSE SURGEON FOR THE AURAL AND OPHTHALMIC DEPARTMENTS at salaries of £1.5 per annum with board residence attendance and laundry.

Candidates must be duly qualified and registered. Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately.

(MISS) R. HOOPER Secretary

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital 191 beds now in course of extension to 225 beds.)

RESIDENT MEDICAL OFFICER (male) required to commence duty June 1st, 1937.

The appointment is for one year including a three months probationary period with the option of extension.

Candidates must have held at least one appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist, either separately or in conjunction with the former.

He must reside in the Infirmary and devote his whole time to the service of the Infirmary. Salary £250 per annum with board-residence. Applications with copies of testimonials to be sent to the House Governor and Secretary by May 25th 1937.

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital 191 beds now in course of extension to 225 beds.)

HOUSE PHYSICIAN (male) required to commence duty as soon as possible.

The appointment is for six months with the right of applying for reappointment for a further period of six months. Candidates must be unmarried fully qualified and registered.

Salary £1.5 per annum with board-residence. Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained.

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN

(Usually known as the Children's Hospital) St Michael's Hill.

Applications are invited for the position of HOUSE PHYSICIAN. Salary £1.5 per annum with board, rooms attendance, and laundry.

Applicants should state age qualifications experience, and send testimonials to the undersigned on or before May 1st.

REYNOLD C. THOMAS

Secretary

STROUD GENERAL HOSPITAL, Stroud, Glos.

RESIDENT MEDICAL OFFICER required. Candidates must be fully qualified and registered. Six months appointment from June 1st. Salary £160 per annum, with board and laundry.

Applications stating nationality together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

C. FORD SPENCER

Secretary

THE PRINCE OF WALES'S HOSPITAL PLYMOUTHIncorporating
South Devon and East Cornwall Hospital
Greenbank Road
Royal Albert Hospital Devonport
Central Hospital Lockyer Street

Applicants are invited for the following posts on the Honorary Medical Staff:

(1) HONORARY PHYSICIAN (A member of the Assistant Staff is a candidate for this post.)

(2) HONORARY PHYSICIAN WITH CHARGE OF OUT PATIENTS

Candidates for both the above posts must be Doctors of Medicine of a University of the United Kingdom or Fellows or Members of the Royal College of Physicians of London or Edinburgh.

(3) HONORARY OPHTHALMIC SURGEON (Department at Devonport Hospital.)

Candidates must be masters of surgery of the United Kingdom or Fellows of the Royal College of Surgeons of England or must hold the special diploma in Ophthalmology.

Applicants must send twelve copies of their application and testimonials to the undersigned by May 21st 1937. Canvassing disqualifies.

Greenbank Road ARTHUR R. CASH
Plymouth. Gen Supt and Secretary

May 4th 1937

THE PRINCE OF WALES'S HOSPITAL Greenbank Road Plymouth

(Formerly South Devon and East Cornwall Hospital) (264 Beds.)

Applications are invited for the post of RESIDENT SURGICAL OFFICER (male). Salary £225 per annum with board residence and laundry.

Appointment tenable for six months and subject to renewal. Duties to commence June 6th.

Candidates must be registered under the Medical Acts and it is desirable they should possess the FRCS England or Edinburgh.

Applications stating age and qualifications together with copies of three recent testimonials to reach the undersigned by May 21st.

ARTHUR R. CASH
May 3rd 1937 Gen Supt and Secretary**ANCOATS HOSPITAL, MANCHESTER 4**

EAR NOSE AND THROAT DEPARTMENT

HONORARY REGISTRAR required to ASSIST the Honorary Aural Surgeon at the clinic on Thursday afternoons and to do such other work in the in-patient department as may be delegated to him by the Honorary consultant.

ORTHOPAEDIC REGISTRAR REGISTRAR required to ASSIST the Hon. Orthopaedic Surgeon in the out-patient department clinics on Tuesday afternoons and Thursday mornings. Honorarium £50 per annum.

The above appointments are for twelve months and are renewable on January 1st each year.

Applications from duly qualified Medical Practitioners together with copies of three recent testimonials to be forwarded to the undersigned on or before May 19th next, from whom further particulars can be obtained on request.

By Order of the Board

HERBERT J. DAFFORNE

Gen. Supt. and Secretary

ANCOATS HOSPITAL, MANCHESTER 4

RESIDENT SURGICAL OFFICER.

Applications are invited for the above post, which will become vacant on July 1st next.

The appointment is for twelve months. Salary £200 per annum with board apartments laundry etc.

Candidates holding the FRCS degree will be preferred.

Applications, stating age qualifications and experience with copies of three recent testimonials to be forwarded to the undersigned on or before June 3rd next.

By Order of the Board

HERBERT J. DAFFORNE

Gen Supt. and Secretary

BEDFORD COUNTY HOSPITAL.

Wanted at once to take over the duties of SECOND HOUSE SURGEON for a term of six months at a salary of £150 per annum. He must be fully qualified male, unmarried and with previous hospital experience. Board lodging and laundry.

Applications stating age nationality qualifications together with three recent testimonials to be sent to the Hon. Secretary Hon. Medical Staff Committee.

BRADFORD CHILDREN'S HOSPITAL.

HOUSE SURGEON (lady) required immediately. Fully qualified. Salary £100 with board residence, and laundry.

Applications, with recent testimonials and stating age to

J. W. LONOLEY Secretary Supt.

CITY OF LONDON MENTAL HOSPITAL NEAR DARTFORD KENT

APPOINTMENT OF JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (unmarried) commencing salary which will be subject to statutory deductions under the provisions of the Superannuation Act, 1909 will be £350 rising by annual increments of £25 to a maximum of £450 per annum together with emoluments valued for superannuation purposes at £150 per annum. The person appointed will be paid in addition a sum of £50 per annum if holding a diploma in psychological medicine. Those not holding such a diploma must agree to obtain the same within a reasonable period. The person appointed will be required to undergo a medical examination and the appointment will be subject to a satisfactory period of probation.

Applications must be submitted not later than Monday 17th instant to the Medical Superintendent.

DEWSBURY AND DISTRICT GENERAL INFIRMARY DEWSBURY

The Senior post is recognized by the Royal College of Surgeons (England)

Applications are invited for the post of SENIOR HOUSE SURGEON (male). Salary £200 per annum with board residence and laundry.

Also for the post of SECOND HOUSE SURGEON (male). Salary £150 per annum with similar emoluments.

The Infirmary is a new Voluntary Hospital of 100 beds and has the usual Special Departments with Visiting Consulting Specialists in attendance.

Applications stating for which post, age and hospital experience, together with copies of recent testimonials to be sent as immediately as possible to my office.

FRED SMITH Secretary-Superintendent

ROYAL MATERNITY HOSPITAL, BELFAST

The Committee of Management invites applications for the post of RESIDENT HOUSE SURGEON in charge of Rea Block (Isolation) of above hospital for a period of six months from June 1st 1937. Salary at the rate of £100 per annum.

This post offers special facilities for those seeking to qualify for the M.C.O.G. Previous hospital experience is essential. Candidates must be members of a recognised organisation for medical defence.

Applications with copies of not more than three testimonials must reach the Superintendent, from whom further particulars may be obtained not later than May 20th, 1937.

J. V. FORREST

Hon Secretary

Canvassing forbidden (By Order)

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL.

Tunstall Stoke-on-Trent.

Applications are invited for the post of RESIDENT HOUSE SURGEON salary £175 per annum with board residence and laundry. The appointment is for six months in the first instance reappointment may be applied for.

Applications, stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

C. E. LOWNDES

Secretary

VICTORIA HOSPITAL, WORKSOP (92 Beds.)

A SENIOR RESIDENT and a JUNIOR RESIDENT are required to take up duty on July 1st. Salary at the rate of £150 and £120 per annum respectively with board residence and laundry.

Applications, stating age qualifications, nationality with copies of three recent testimonials to be sent to the undersigned. The appointments are for six months renewable.

JAMES BOOTHROYD

Secretary Superintendent

THE ROYAL GWENT HOSPITAL NEWPORT MON (210 Beds.)

HOUSE SURGEONS MALE (2). Salary at the rate of £135 per annum together with board quarters and laundry. Both appointments terminating on October 31st, 1937.

Applications together with copies of any testimonials should be addressed to the undersigned immediately.

S. CECIL HILL

Secretary Superintendent

BIRMINGHAM AND MIDLAND HOSPITAL FOR WOMEN

HOUSE SURGEON (man or woman) wanted for six months from July 1st 1937. Salary to be at the rate of £100 per annum. Applications with full particulars and copies of testimonials to be sent not later than May 31st to HUGH C. ASTON 45 Newhall Street, Birmingham 3.

BOROUGH OF ILFORD

RESIDENT MEDICAL OFFICER AT MATERNITY HOME

Applications are invited for the above whole time appointment from registered women medical practitioners at a commencing salary of £400 per annum rising by annual increments of £25 to £500 per annum with board lodging and laundry.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922, and to formal agreement and the selected applicant will be required to pass a medical examination to the satisfaction of the Medical Officer of Health. The appointment will also be subject to three months notice on either side.

Applications on the prescribed form obtainable from my office must be received by me at the Town Hall Ilford not later than Wednesday May 26th 1937.

Canvassing directly or indirectly will be a disqualification.

Town Hall
Ilford
May 10th 1937

CHARLES N ROBERTS

Town Clerk

THE ROYAL BOROUGH OF KENSINGTON

APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Deputy Medical Officer of Health. Applicants must possess the qualifications prescribed by the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations 1930 for a Tuberculosis Officer and must hold the Diploma in Public Health.

The appointment will be a whole time one and the successful candidate will be required to act as Clinical Tuberculosis Officer for the Borough and to carry out other duties in the Public Health Department under the direction of the Medical Officer of Health.

Salary £900 per annum rising by biennial increments of £50 to £1100 per annum plus an annual travelling allowance of £50.

The age limit for candidates is 45 years.

Canvassing will be a disqualification.

Terms and conditions of appointment may be obtained from the undersigned.

Applications with copies of three recent testimonials must be submitted not later than 3 p.m. on Wednesday May 26th 1937 to:

Town Hall
Kensington W 8

May 1937

F WEBSTER

Town Clerk

THE OXFORD EYE HOSPITAL WALTON STREET OXFORD

Applications are invited for the post of HOUSE SURGEON to the OPHTHALMIC DEPARTMENT of the above Institution. The post is tenable for 12 months from July 1st.

It is desirable that candidates should have some knowledge of refractions.

Salary is at the rate of £150 per annum, with free board residence and laundry and share of hospital clinic fees amounting to from about £70.

Applications with copies of three recent testimonials should be sent to the undersigned:

April 23rd, 1937

MILES IRVING

Honorary Secretary

ROYAL EAST SUSSEX HOSPITAL, HASTINGS

Applications are invited for the post of JUNIOR HOUSE SURGEON (female) vacant May 21st. The appointment is for a period of six months.

Salary at the rate of £150 per annum with board and residence.

Candidates must be duly registered Medical Practitioners.

Applications with copies of recent testimonials, to be addressed to the Secretary:

WILFRID G KENSLEY

Secretary

HERTFORD COUNTY HOSPITAL (169 Beds)

Applications are invited for the post of HOUSE SURGEON (male) (Three residents).

Salary £160 per annum, with board residence and laundry. The appointment is for six months in the first instance.

Applications with three recent testimonials should be sent to the undersigned not later than May 4th 1937.

PERCY G BROOKS

Secretary

TALTON AND SOMERSET HOSPITAL TALTON (104 Beds)

HOUSE PHYSICIAN required June 1st for a six months appointment. Senior RMO and a House Surgeon also on staff. Salary at rate of £160 p.a. and the retention of certain fees.

Applications with copies of three recent testimonials, to be sent to the Secretary by the 15th inst.

SOUTHWICH NORWOOD HOSPITAL

RESIDENT MEDICAL OFFICER wanted. Salary £115 per annum. Ample time for study. Apply to the Secretary Medical Committee the Hospital, Southwark, London.

ROYAL SALOP INFIRMARY SHREWSBURY (150 Beds.)

APPOINTMENT OF RESIDENT HOUSE PHYSICIAN

Applications are invited from fully qualified unmarried gentlemen for the appointment of Resident House Physician vacant immediately.

Salary £160 per annum, with board residence, etc. The appointment is for six months subject to reappointment. Resident Staff comprises Resident Surgical Officer, Resident House Physician and two Resident House Surgeons.

The Resident House Physician is Resident Officer to the Medical Ward of the Hospital under the direction of three Honorary Physicians, and is also Resident Officer to the Maternity Department for difficult cases under the direction of the Honorary Obstetrician.

Applications stating age, qualifications, experience, nationality and accompanied by copies of three recent testimonials to be sent to the Under signed not later than April 20th 1937.

Board Room
April 2nd 1937

J W NOBLE

Sec. Superintendent

ROYAL BERKSHIRE HOSPITAL READING (213 Beds.)

Applications are invited for the following real dent appointments:

ONE CASUALTY OFFICER (male)
ONE HOUSE SURGEON TO THE SPECIAL DEPARTMENTS (Eye, Ear, Nose and Throat) (male)

Appointments are for six months and candidates must be fully qualified and registered.

Remuneration at the rate of £150 per annum with board residence and laundry.

Applications, stating age and experience, with copies of testimonials to be sent to the under signed as soon as possible.

H E RYAN

Secretary and House Governor

GENERAL HOSPITAL NOTTINGHAM (386 Beds)

TWO RESIDENT CASUALTY OFFICERS (Male) are required at the above Institution. The appointments are for six months with salary in each case at the rate of £150 a year with board residence and laundry.

Candidates are desired to send applications stating age, qualifications and experience together with copies of testimonials to the undersigned. Duties to commence in one instance as soon as possible and in the other on July 1st. Will candidates please state for which post they wish to apply?

PETER M MACCOLL

House Governor and Secretary

GENERAL HOSPITAL NOTTINGHAM (386 Beds.)

A HOUSE SURGEON is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out Patient Department. The appointment is for six months, with salary at the rate of £150 a year with board residence and laundry.

Candidates are desired to send applications stating age, qualifications and experience together with copies of testimonials to the undersigned without delay. Duties to commence early in May.

PETER M MACCOLL

House Governor and Secretary

ROYAL INFIRMARY BLACKBURN (244 Beds. Five Residents)

RESIDENT HOUSE SURGEON (male) required at a salary of £175 per annum with board residence and laundry etc. To commence duties as soon as possible.

Applications, with testimonials, stating age, nationality, experience etc. to be sent to the undersigned as early as possible.

Royal Infirmary
Blackburn

T DEWHURST

General Supt. and Secretary

This Institution is recognised for the Surgical practice required for the F.R.C.S. examination

ALTRINCHAM GENERAL HOSPITAL (100 Beds.) 2 Residents.

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS. Salaries £140 and £120 respectively with board washing etc., to commence duty on June 1st 1937.

Six months appointment. The Junior resident is eligible for the senior post at the end of that period. Applications stating age, nationality, experience etc. to be addressed to the undersigned not later than May 31st 1937.

E A BIDEN

Secretary

VICTORIA HOSPITAL FOR SICK CHILDREN PARK STREET HULL

The Board of Management of the above Hospital requires a RESIDENT HOUSE PHYSICIAN (Lady) at a salary of £100 with Board Residence and Laundry. Applications with copies of recent testimonials stating age, qualifications and when at liberty to be sent to the Secretary.

April 16th 1937

ST BARTHOLOMEW'S HOSPITAL, ROCHESTER (126 Beds) FOUR RESIDENTS

The House and Finance Committee invite applications for the post of CASUALTY OFFICER with charge of orthopaedic beds which will become vacant on July 1st 1937.

Candidates must be unmarried qualified and registered medical men. The appointment is for six months. Salary at the rate of £140 per annum with board residence and laundry.

Applications, stating age, qualifications, experience etc. accompanied by copies of three recent testimonials must be received by the Secretary not later than May 21st 1937.

Canvassing the Honorary Staff will disqualify

ST BARTHOLOMEW'S HOSPITAL, ROCHESTER (176 Beds) FOUR RESIDENTS

The House and Finance Committee invite applications for the post of HOUSE PHYSICIAN which will become vacant on July 1st 1937.

Candidates must be unmarried qualified and registered medical men. The appointment is for six months. Salary at the rate of £150 per annum, with board residence and laundry.

Applications stating age, qualifications, experience, etc. accompanied by copies of three recent testimonials must be received by the Secretary not later than May 21st, 1937.

Canvassing the Honorary Staff will disqualify

THE ROYAL INFIRMARY SUNDERLAND (290 Beds)

2 HOUSE SURGEONS (male) required to commence duty immediately. Salary £170 per annum with board residence, laundry etc.

Applications stating age and qualifications and accompanied by copies of testimonials, to be sent to the undersigned. The Infirmary possesses modern equipment and has up-to-date Pathological and X-ray Departments. The Resident Medical Staff consists of a RMO and six others. The surgical appointments are recognised by the Royal College of Surgeons of England for the six months training required of candidates before admission to the Final Examination for the Fellowship.

J A BEARDSALL

House Governor and Secretary

THE ROYAL INFIRMARY SUNDERLAND 290 Beds.

HOUSE PHYSICIAN (Male) required for June 1st. Salary £170 per annum with board residence, laundry etc. Applications stating age, qualifications and accompanied by copies of testimonials to be sent to the undersigned by May 2nd. The Infirmary possesses modern equipment and has up-to-date Pathological and X-ray Departments. The Resident Medical Staff consists of a RMO and six others.

J A BEARDSALL

House Governor and Secretary

YORK COUNTY HOSPITAL (204 Beds)

Applications are invited for the post of HOUSE SURGEON to the EYE, EAR, NOSE AND THROAT DEPARTMENT. Duties include part time Casualty and General Hospital work. Salary £150 per annum with board residence, and laundry.

Applications, stating age and previous experience together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Wednesday May 19th 1937.

J R MACRILL

Secretary

SALFORD ROYAL HOSPITAL (63 Beds.)

A vacancy occurs for a PSYCHIATRIST for one weekly session. Honorarium £5 per annum. Further particulars may be obtained from the undersigned to whom applications should be addressed before Friday June 4th.

By Order of the Board
General Superintendent and Secretary

BRIDGWATER GENERAL HOSPITAL Bridgewater Somerset

RESIDENT HOUSE SURGEON required for duty immediately. Salary £130 (increased to £170 after six months) with board and laundry and retention of certain fees.

Applications with copies of three recent testimonials stating age, nationality and qualifications to be sent to the Secretary.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL REGIONAL RADIUM CENTRE

LOCAL TENNIS RADIUM OFFICER required for period August 1937 to October 1937. Experience in radium treatment essential. Remuneration £100 per week. Applications to be sent to the House Governor and Secretary.

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE (contd.)	CONTRACT PRACTICE (contd.)
ABERTISSEW MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA CLYDACH VALE. PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OAKDALE, MON. (Medical Officer for Medical Aid Association)
BLACKPOOL AND FYLDE FRIENDLY SOCIETIES COUNCIL. (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	OGMORE VALLEY GLAMORGAN (W. Graham Colliery Medical Aid Society) (Workmen's Medical Scheme)
GILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	PUBLIC HEALTH
		FLINTSHIRE COUNTY COUNCIL. (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1

Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch
NEW SOUTH WALES (All Friendly Society Appoint- ments.)	The Medical Secretary New South Wales Branch 135 Mac quarie St., Sydney, N.S.W.	VICTORIA (All Institute or Medical Dispen- saries)	The Honorary Secretary Victorian Branch British Medical Asso- ciation, Medical Society Hall Albert St. East Melbourne Victoria	WESTERN AUSTRALIA (Contract and Lodge Practices)	Hon. Sec. Western Australian Branch British Medical Asso- ciation Shell House 205 St. George's Ter- race Perth Western Australia.
QUEENSLAND (Brisbane Asso- ciate Friendly Societies Institute)	The Hon. Sec. Queens- land Branch, British Medical Association B.M.A. Building 35 Adelaide St Brisbane				

May 11, 1937

By Order of the Council

G C ANDERSON, Medical Secretary

BURY INFIRMARY (LANCS)

(1-7 Beds)

APPOINTMENT OF CASUALTY OFFICER (MALE)

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of an R.S.O. a House Surgeon a House Physician, and a Casualty Officer.

In addition to his duties in the Casualty Department the Casualty Officer is also responsible for the In-patient and Out-patient work in connection with the Eye and Ear, Nose and Throat Departments.

The appointment is for six months at a salary at the rate of £140 per annum with board residence and laundry and the successful candidate will be expected to commence duties immediately.

Applications, stating age, qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible, endorsed "Casualty Officer".

Further particulars may be had on application,
H. WILKINSON, Supt.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

(3 Beds. Five Residents)

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary at the rate of £140 per annum with board residence and laundry.

The appointment is for six months which may be extended for similar periods by re-election from time to time.

Applications, stating age, qualifications, and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than Thursday May 14th.

The elected candidate will be required to enter upon his duties on June 4th.

April 29th, 1937

F. J. SYMONS
Secretary

DOWN COUNTY MENTAL HOSPITAL, Downpatrick Northern Ireland

JUNIOR ASSISTANT MEDICAL OFFICER (male)

The Committee of Management will at its meeting on May 29th 1937 consider applications for the above post. Salary £350 per annum rising by annual increments of £25 to £450 per annum plus £50 per annum if the applicant possesses or obtains the Diploma in Psychological Medicine with emoluments of furnished apartments, rationals, laundry fuel light and attendance, valued for pensionable purposes at £130 of which the present ration allowance £52 per annum is commuted for cash. A deduction of 3 per cent. will be made from the salary and allowances under the Asylum Officers Superannuation Act 1909.

Candidates must be registered unmarried and not more than 30 years old. Previous Mental Hospital experience not necessary. Proficiency in bacteriological and pathological technique a recommendation.

Forms of application giving further particulars, may be obtained from the Resident Medical Superintendent up to May 22nd 1937.

MANCHESTER AND SALFORD HOSPITAL FOR DISEASES OF THE SKIN

Two ASSISTANT MEDICAL OFFICERS wanted. Fully qualified and registered. To attend three mornings per week each. Salary £100 per annum. The appointments are for twelve months from July 1st. Applications with copies of three testimonials to be sent to the undersigned on or before May 24th.

JOHN NALL Secretary

LIVERPOOL HEART HOSPITAL, 34 Oxford Street Liverpool

Applications are invited for the position of HONORARY ASSISTANT PHYSICIAN to the above Hospital. Applications to be sent to the Secretary at the above address.

EAST SUSSEX COUNTY MENTAL HOSPITAL, HELLINGLY SUSSEX

APPOINTMENT OF SENIOR ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Senior Assistant Medical Officer (registered and qualified) at the above Mental Hospital. Salary £600 per annum (which includes £50 for D.P.M.) together with the usual emoluments of board lodging and washing valued for superannuation purposes at £90 per annum. Arrangements can be made for a married Medical Officer.

Candidates must possess the Diploma in Psychological Medicine, and be interested in PSYCHO THERAPY. The hospital possesses a well-equipped laboratory and four out-patient clinics are held in voluntary hospitals in East Sussex. The appointment will be subject to the provisions of the Asylum Officers Superannuation Act 1909 and may be terminated by one calendar month's notice on either side.

Applications with copies of three recent testimonials, stating age and full particulars to be sent to the Medical Superintendent not later than May 21st 1937.

ROYAL DEVON AND EXETER HOSPITAL, EXETER

HOUSE SURGEON (male) to the EAR, NOSE AND THROAT DEPARTMENT

Applications are invited for this post, which is now vacant.

The appointment is for six months but candidates are eligible for re-election.

Salary at the rate of £150 per annum with board lodging and washing.

Applications giving particulars as to age and qualifications together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

May 3rd 1937

S. S. COLE,
Secretary and Manager

(Appointments continued on p. 56.)

BRITISH MEDICAL JOURNAL

Phone Euston 2111

B.M.A. HOUSE,
TAVISTOCK SQUARE, W.C.1

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ASSISTANCIES

WANTED ASSISTANT FOR JUNE 1ST male East London working-class practice Salary £350 p.a. and room and attendance Excellent prospects for man wishing to settle permanently -Address No 3568 B.M.A. House Tavistock Square W.C.1

WANTED JUNE 1ST YOUNG SINGLE male ASSISTANT Good anaesthetist and able to drive car Large interesting varied practice London suburb £31 p.a. all found use of car Good prospects in right man -Address No 3481 B.M.A. House Tavistock Square W.C.1

WANTED AT ONCE INDOOR ASSISTANT Midlands work light. Some experience of panel practice desired Salary to commence £300 p.a. Car and chauffeur provided for professional duties -Address No 3493 B.M.A. House Tavistock Square W.C.1

WANTED AT ONCE SINGLE MALE IN DOOR ASSISTANT industrial practice West Riding second assistant kept ample time off £31 p.a. with £50 p.a. car allowance all found Suit recently qualified -Address No 27... B.M.A. House Tavistock Square W.C.1

WANTED FOR NINE PRACTICE IN Birm ham suburb experienced male ASSISTANT outdoor English or Scottish preferred Salary £400 Car allowance £5 yearly Good prospects Testimonials and photo if possible -No 3576 B.M.A. House Tavistock Square W.C.1

WANTED - ASSISTANT EYE, EAR, NOSE, Throat practice in S. Africa Commencing salary £700 Must have D.O.M.S. and D.L.O. or F.R.C.S. Good appearance, temperate experienced View later partnership Address with photo references No 3459 B.M.A. House Tavistock Square W.C.1

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WANTED - YOUNG RECENTLY QUALIFIED male ASSISTANT for mixed practice Lancs town Good salary and accommodation to suitable man -Address No 3574 B.M.A. House Tavistock Square W.C.1

AN INDOOR ASSISTANT WANTED IMMEDIATELY in bracing South of England sea side resort £300 all found Great scope and early increase to acceptable man Photo and testimonials returnable -Address No 3594 B.M.A. House Tavistock Square W.C.1

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A Course of Training in Dispensing and Pharmacy is given at GORDON HALL SCHOOL OF PHARMACY and Secretary Dispensers can be supplied to Doctors Sevens January April and September -Apply Principals School of Pharmacy Drayton House Gordon Street, W.C.1 Phone Museum 3930

A LADY DISPENSER BOOKKEEPER supplied immediately on request qualified and with practical experience in private practice and dispensary work also trained in Bacteriological Laboratories of the LONDON COLLEGE OF PHARMACY FDR WOMEN Preparation for Examinations -Write wire or phone (Bayswater 2693) Secretary 7 Westbourne Park Road W.2

DOCTOR AGE 4 WITH SMALL PRACTICE in Brighton desires PART TIME WORK or LOCUMS near Brighton -Address No 347 B.M.A. House Tavistock Square W.C.1

DOCTORS REQUIRING QUALIFIED Dispensers Nurse Dispensers Secretary Dispensers or Chauffeurs-Dispensers, are invited to write wire or phone Temple Bar 5553 THE DISPENSER'S BUREAU 3 Lindsay House 171 Shaftesbury Avenue, London W.C.2

GDSWELL WOMEN'S WELFARE CENTRE, 159 Sevenoaks Street E.C.1 invite applications for a MEDICAL OFFICER. Monday evening sessions. Applicants must have good experience in contraception -Apply to the Secretary

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THE ROYAL ARMY MEDICAL CORPS ASSOCIATION 85 Eccleston Square S.W.1 (Telephone Victoria 2777) supplies qualified Dispensers Bookkeepers Laboratory Assistants Sanitary Assistants Male Nurses Mental and Special Treatment Orderlies Dental Clerk Orderlies Porters Caretakers etc with out charge to prospective employers

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WANTED LOCUM FDR 5 WEEKS, commencing July 3rd Experience in panel, and own car essential Near Manchester -Address, No 3596 B.M.A. House Tavistock Square W.C.1

WANTED LOCUM TENENS ABOUT 1 days, early in June. Seaside convenient London Car advantage -Address No 3597 B.M.A. House, Tavistock Sq W.C.1

WANTED LOCUMS DR ASSISTANTSHIP temporary or permanent by Medical Woman Several years experience private and panel practice, dispensing Own car if required -Address No 3599 B.M.A. House, Tavistock Sq W.C.1

WANTED PATHOLOGIST TO ACT AS LOCUM TENENS from August 1st for three weeks. Particulars of duties may be obtained from Pathologist Royal Infirmary Huddersfield Fees £12 12s per week and hospitality

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WANTED BY WOMAN AGED 35 PARTNERSHIP in provincial or country town Income about £800 Short preliminary assistantship if necessary -Address, No 3405 B.M.A. House Tavistock Square W.C.1

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E MIDLANDS - PARTNERSHIP IN PLEASANT and prosperous town Panel 7000 Receipts £7500 increasing Half share at £1250 purchase -The Western Medical Advertiser South Molton Street W.1 and 2 Clare Street Bristol 1

KEEN YOUNG MARRIED MAN SCOTLAND preferred PARTNERSHIP North London Private and Panel One-third SHARE worth £500 Income later Preliminary Assistantship 10 pence kept Particulars etc -Address No 3592 B.M.A. House Tavistock Square W.C.1

PARTNERSHIP - HALF SHARE (ABOUT £1,000) nice type old-established practice in famous old city Panel and P.M.S. worth £600 p.a. Public School and University Grad. in Medicine 77/8 preferred Premium £1000 good house to rent Full details and photo -Address No 3574 B.M.A. House Tavistock Square W.C.1

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WANTED—PRACTICE IN SMALL TOWN. South or South-West England £1,500-£1,800 Panel 1,500-2,000 Small hospital—Address No 3571 B.M.A. House Tavistock Square W.C.1

WANTED—PRACTICE IN SOUTH COAST with income £1,700 upwards Good house essential—Address No 3582, B.M.A. House Tavistock Square W.C.1

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DEATH VACANCY DURHAM—GOOD working-class PRACTICE, producing about £640 per annum capable of considerable expansion Panel 650 House on main road two reception rooms four bedrooms garage, surgery and waiting room Apply 1 E. Brown-Humes and Co Solicitors, Bishop Auckland

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HARLEY STREET CONSULTING-ROOM PART TIME with plate £100 a year Room redecorated and usual facilities—Address No 3238, B.M.A. House Tavistock Square W.C.1

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OPPORTUNITY TO RENT COMPLETELY redecorated modern CORNER HOUSE in the main Wandsworth Road Marketing position. Busy and thickly populated area Reasonable rental only wants viewing—Apply HOLDINGS 60 High Holborn

PARK LANE—DENTAL PRACTITIONER with high-class practice has one or two CONSULTING ROOMS to let in modern building Rent includes use of waiting room and usual services—Address No. 26.7 B.M.A. House, Tavistock Square, W.C.1

QUEEN ANNE STREET—ONLY £40 PER annum secures excellent CONSULTING ROOM part-time with USE OF WAITING ROOM ATTENDANCE, plate on door and all services The room is well furnished and fully equipped for any kind of medical practice. Although part-time the room is available for use whenever required. To view—Address No 3551 B.M.A. House, Tavistock Square, W.C.1

TO LET—PART TIME AND WHOLE TIME CONSULTING ROOMS to Brook Street W.1—Write Box 4621 Scripps, South Molton Street, W.1

WIMPOLE STREET PART TIME CON- SULTING ROOM one of the best houses in this street £50 p.a.—Address No 2705 B.M.A. House, Tavistock Square, W.C.1

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to MEMBERS of the MEDICAL PROFESSION

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The invaluable Practical Experience and Advice of our 14 Expert West End Cutters and Fitters is all yours at disposal.

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APPOINTMENTS—Contd

QUEEN MARY'S HOSPITAL FOR THE EAST
END STRATFORD E.15

Applications are invited from fully qualified and registered medical men (only) for the following posts—

	Salary
1 RESIDENT MEDICAL OFFICER	£150 p.a.
2 HOUSE SURGEONS	£120 p.a.
1 HOUSE PHYSICIAN	p.a.
1 OBSTETRIC	p.a.
1 RESIDENT	p.a.
HOUSE	p.a.
2 CASUALTY	p.a.
OFFICERS	£150 p.a.

In addition to his salary the Resident Medical Officer receives certain sums paid by the National Health Insurance.

The Hospital contains 219 beds including 50 for Maternity patients

Candidates who must be single and who should previously have held hospital appointments should send applications, accompanied by testimonials to the undersigned not later than Thursday May 27th 1937

The appointments will date from July 1st, 1937 and will be for six months.

RAPHAEL JACKSON Major Secretary

PRINCESS LOUISE KENSINGTON HOSPITAL
FOR CHILDREN

St Quintin Avenue W.10 (81 Beds)

HOUSE SURGEON (male) required immediately for 6 months. Salary at the rate of £120 p.a. for the first 3 months and £140 p.a. for the second 3 months with board residence and laundry
Applications with copies of 3 recent testimonials, should be sent to the undersigned not later than Thursday May 20th

H. J. ELEY Secretary

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE

The House Committee by Resolution declare vacant the office of HONORARY ASSISTANT in the Throat and Ear Department

According to statutory provision every candidate must be a registered Graduate in Surgery of any University recognized by the General Council of Medical Education and Registration of the United Kingdom or a Registered Fellow Member or Licentiate of one of the Royal Colleges of Surgeons of the United Kingdom provided that he is practising as a Surgeon and not as a General Practitioner

Applications should state age and appointments held at present time, and must be received by the House Governor and Secretary Royal Victoria Infirmary Newcastle-upon-Tyne not later than Thursday May 27th 1937

The appointment will be made on June 3rd 1937

Personal canvassing will be considered a disqualification for office

S DUNSTAN
House Governor and Secretary

May 10th 1937

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE

The House Committee by Resolution declare vacant the office of HONORARY ASSISTANT SURGEON

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The appointment will be made on June 3rd 1937

Personal canvassing will be considered a disqualification for office

S DUNSTAN
House Governor and Secretary

May 10th 1937

ROYAL VICTORIA INFIRMARY NEW CASTLE UPON TYNE

(758 Beds)

Applications are invited for the post of whole-time JUNIOR SURGICAL REGISTRAR

These appointments are intended for Graduates who desire to gain surgical experience and who have already held a post as House Surgeon. The post offers opportunity for post graduate study.

The appointment which will commence on August 1st 1937 will in no case extend beyond three years and will be for one year in the first instance renewable for two further periods

The rate of remuneration is £150 per annum. Applications with copies of not more than three recent testimonials must be received on or before Saturday May 29th 1937 by the undersigned from whom further particulars may be obtained

S DUNSTAN
House Governor and Secretary

May 10th 1937

SOUTHEAST-ON-SEA GENERAL HOSPITAL

(235 Beds 6 Residents)

(Hon. Specialist Staff of 19 members)

Applications are invited for the post of SURGICAL REGISTRAR to commence on or about July 1st. The appointment will be for one year with eligibility for annual re-election for a further maximum period of two years, and will be resident, with board etc provided. Commencing salary £275 per annum

Applicants should possess the qualification of F.R.C.S.(Eng.) and must have held resident appointment as House Surgeon of a General Hospital

Application forms with copies of the Regulations and duties of the post may be obtained from the undersigned and must be returned with copies of three recent testimonials not later than May 31st

P H CONSTABLE
Secretary

THE HOSPITAL FOR SICK CHILDREN

Great Ormond Street London W C 1

A RESIDENT HOUSE PHYSICIAN (male) and a RESIDENT HOUSE SURGEON (male) are required. Duties to commence on July 1st 1937

The appointments are tenable for six months. Salaries at the rate of £100 per annum

Candidates must be unmarried, possess a legal qualification to practise and have held a responsible resident appointment at a General Hospital

Applications must be received by noon on Monday May 14th 1937 and candidates must be prepared to attend for interview by the Joint Committee at 4.45 p.m. on Wednesday June 2nd 1937

Further particulars and forms of application are obtainable from the undersigned

HERBERT F. RUTHERFORD
Secretary

April 1937

WEST LONDON HOSPITAL, HAMMER SMITH ROAD W 6 (241 Beds)

Required one HOUSE PHYSICIAN and two HOUSE SURGEONS (MALES). These appointments are tenable for 6 months from July 1st next subject to one month's notice on either side. The duties of the House Physician include some work in the Neurological and Dermatological Departments. The duties of one House Surgeon include some work in the Gynaecological Department and of the other some work in the Deep X-Ray Therapy Department. Salary at the rate of £100 a year with board lodgings and laundry allowance

Candidates must be registered under the Medical Act. Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday June 10th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a Medical Council Meeting at 4.30 p.m. on Friday June 18th and the House Committee Meeting at 5 p.m. the same day when the appointments will be made

H A MADDOE
Secretary

WEST LONDON HOSPITAL, HAMMER SMITH ROAD W 6

Required one JUNIOR ASSISTANT MEDICAL OFFICER (male) for work in the VENEREAL DISEASES DEPARTMENT. Salary at the rate of £350 a year. The appointment is subject to three months' notice on either side. Candidates must be registered Medical Practitioners of British nationality and have had special experience in the diagnosis and modern treatment of venereal diseases

Applications accompanied by copies of testimonials must reach me not later than first post on Thursday June 10th. Candidates must send copies of their application and testimonials to each member of the Medical Council. Selected candidates will be required to attend a meeting of the Medical Council on Friday June 25th at 4.30 p.m. and prior to that date to call upon such members as directed. The appointment will be made by the House Committee at 5.15 p.m. the same day. Further details with regard to the duties can be obtained from the undersigned

H A MADDOE
Secretary

CONNAUGHT HOSPITAL

Walthamstow E 17

(118 Beds with four Resident Medical Officers)

HOUSE PHYSICIAN (male) required

Salary £110 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications, stating age, nationality qualifications and experience accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st

KENELM S ELLISON Gen Sec

CONNAUGHT HOSPITAL

Walthamstow E 17

(118 Beds with four Resident Medical Officers)

CASUALTY OFFICER (male) required

Salary £110 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications, stating age, nationality qualifications and experience accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st

KENELM S ELLISON Gen Sec

CONNAUGHT HOSPITAL

Walthamstow E 17

(118 Beds with four Resident Medical Officers)

HOUSE SURGEON (male) required

Salary £110 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications, stating age, nationality qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st

KENELM S ELLISON Gen Sec

CONNAUGHT HOSPITAL

Walthamstow E 17

(118 Beds with four Resident Medical Officers)

SENIOR RESIDENT MEDICAL OFFICER (male) required

Salary £175 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications, stating age, nationality qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st

KENELM S ELLISON Gen Sec

ROTHERHAM HOSPITAL

Wanted — CASUALTY HOUSE SURGEON (male) qualified. Salary £150 per annum with board residence and laundry. To have charge of Out Patients (110 beds)

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ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON (Beds 7)

HOUSE PHYSICIAN (male) required July 1st next. Charge of beds. Salary £150 per annum with board residence and laundry. Candidates must hold a Medical and Surgical qualification of the British Empire and be duly registered under the Medical Acts

They must be unmarried and when elected under thirty years of age

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L. L. W. LANCASTER-DALE

Secretary-Superintendent

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Applications are invited for the following posts: RESIDENT MEDICAL OFFICER and SECOND RESIDENT MEDICAL OFFICER (male). Salaries £160 and £140 respectively with board residence and laundry. Candidates must be fully qualified

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O W JACKSON

Secretary-Supt.

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Applicants must be Fellows of the Royal College of Surgeons. Duties to commence on appointment in early June. Candidates are requested to apply to the undersigned for particulars of the posts and to forward before Thursday June 3rd 1937 fifteen copies of application with copies of three recent testimonials

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Secretary

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LONDON E 2—Old-established middle and working-class PRACTICE in thickly populated locality. Well-appointed lock-up surgery in large building rented at £150 p.a. and sub-let at £275 p.a. Receipts £850 p.a. Panel 1,150. Premium £2,250 or near offer.

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3. MIDLANDS—LARGE TOWN—Old-established PRACTICE. Receipts last year £1,475 p.a. including panel 850 increasing. Very good house garden etc. Premium for practice and house £3,700 or offer.

4. A number of small PRACTICES at low premiums excellent opportunities for practitioners wishing to get a practice with scope.

5. NEAR STRATFORD E—Old-established PRACTICE. Receipts last year £880. Panel 740. Very nice house, rent £52 p.a. Densely populated district. Premium £1,500 or very near offer.

6. KENT—WELL KNOWN COAST TOWN—Old-established good-class PRACTICE. Receipts last year nearly £1,500 including select panel of 500. Excellent premises on rental. Premium £3,000.

7. SURREY—10 MILES VICTORIA—Well-established mixed-class PRACTICE, steadily increasing. Receipts last year nearly £700. Panel over 300. Very nice house, rent £85 long lease. Premium only £600.

8. MIDLANDS—LARGE TOWN—Old-established PRACTICE. Receipts average £500. Very small recently started panel but excellent scope. Splendid house, 4 or 5 bedrooms. Rent £60 p.a. Vendor wants larger practice. Premium only £300 for quick sale.

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HANTS—COAST TOWN—OLD estab. Vendor retiring. Nearly £1,200 p.a. scope. Panel 1,192. Nice house garden, etc. for sale or rent. Premium 1½ years purchase.—3

LONDON W—AVERAGE £1,735 and scope. Panel about 1,950. Good-class 10/6 fees, and panel. Small appt. Large house 4/5 bed. For sale or rent. Premium £3,500.—4

EAST YORKS—CLEAN TOWN—SHARE worth about £1,200 after preliminary Assistance. Middle and working-class and panel of 2,600. Premium 2 years purchase. Choice of houses.—5

LONDON W—SEMI-CONSULTANT and Electro-therapeutic PRACTICE. £700/£800 p.a. Old estab. No panel. 2 appts. Fees 10/6 up. Good house, 6/7 bed etc. and garage. 2nd floor could be easily sublet. Premium £500. House to rent or would sell.—6

S WALES—£1,400 P.A. INCREASING. 98 per cent panel and contract. Very little midwifery. Good house, 5 bed. 2 recep. surgery etc. Rent only £40 p.a. Premium £2,000. Includes drugs, fittings etc.—7

SOUTH EAST COAST—POPULAR Resort. Over £1,450 p.a. Panel 500 or more. Visits 3/6 to 2/1. Premium 2 years purchase. 2 recep. 3 bed consulting room etc. to rent.—8

ESSEX SUBURB—ABOUT £880 P.A. Panel 750. Visits 3/6 surgery 2/6 up. House 4 bed garage, and garden. Rent only £55 p.a. Premium £1,700 including lease fixtures, etc.—9

SURREY—SHARE OF £2,100 P.A. steadily increasing PRACTICE. Visits 2/6 Midwifery. Large panel. Premium £1,350. Choice of houses to rent or buy.—10

LONDON SE—SUBURBAN, GOOD last non-panel non-dispensing. Over £800 p.a. Fees 5/ up. Imposing corner family house to rent at £95 p.a. Premium £1,250.—11

WITHIN 10 MILES OF TOWN S OF Thames. Over £300 p.a. increasing. Growing panel now 3,000. Scope. Would suit two partners. Premium £7,500. Large house to rent smaller one for sale.—12

MIDDLESEX—NUCLEUS ESTD 21 months. Receipts last year £350. Panel 70. Detached house, 3 bed etc. Rent £90 p.a. Premium £350.—13

URGENT SALE—KENT COAST—Favourite Resort. Very old estab. Vendor retiring through ill-health. Average over £600 p.a. Better class non-panel non-dispensing. Visits 2/1. Surgery 10/6. Good house, 6 bed. Sell or let. Premium £1,000 or offer.—14

SPA PRACTICE—ABOUT £1,400 P.A. Old est. Fees £1 1/- upwards. Premium 2 years purchase. Excellent detached house, 3 reception conv. 8 bed etc. Close to chief hotels and Pump Room. £3,000 Freehold.—15

MIDLANDS—PARTNERSHIP SHARE producing about £1,250 p.a. In large Practice increase later surgical scope. Premium 2 years purchase. Choice of house.—16

S MIDLANDS—ABOUT 60 MILES from Town. £1,000—£1,100 p.a. Increasing panel and appts. worth over £600. Very old estab. country PRACTICE. Good sporting district. Premium £2,500 to include fittings etc.—17

DEVON—COUNTRY UNOPPOSED About £1,000 p.a. Panel over 400. Fees 2/6 to 10/6. Premium £1,500. Charming house. 2 recep. 6 bed surgery etc. 1 acre. Price £2,300.—18

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Practices and Partnerships for Disposal

Full particulars sent free

- 1 S COAST—PARTNERSHIP in very old-established good middle-class Practice £4 690 p.a. in rapidly growing watering place Panel 4 000 Visits range from 3/6 to £1 1s Suitable house obtainable Scope One fourth share would be sold at first at two years purchase
- 2 NE COAST—Old-established and easily worked middle and better working-class PRACTICE averaging over £1 150 p.a. in seaport town No panel—a few contracting out patients Visits 5/- to 15/- Rent of consulting rooms £26 p.a. A suitable residence could be obtained Good scope much building going on Premium £1 500 (Contents of consulting rooms—including X Ray plant and electrical apparatus—about £130)
- 3 N DEVON—PARTNERSHIP in old-established Practice averaging £2 050 p.a., in delightful country district Panel 1 350 Visits 3/6 to £1 1s House (6-7 bedrooms), garage and good garden Rent £60 p.a. Good hospital and scope for surgery One-third share would be sold for £1 300 and up to one-half later
- 4 W WALES—PARTNERSHIP in first-class country Practice near sea coast Good house available to rent Facilities for country sport and for golf tennis and bathing Premium for share of £1 200 to £1 500 one and a half years purchase Knowledge of Welsh desirable
- 5 ESSEX—PARTNERSHIP in old-established Practice in populous suburban district Panel about 3 000 Practically no Midwifery Semi-detached corner house (6 bed and dressing rooms) with garage and small garden to rent Plenty of scope for increase Premium for share worth about £800 p.a. £1 400 (by instalments if desired) Further share after about 18 months
- 6 LONDON N W—Old-established and increasing good-class non-dispensing PRACTICE in one of the best residential districts Cash receipts last year £1 400 Select panel 300—could be greatly increased if desired Fees 7/6 to 10/6 Semi-detached house in first rate quarter containing 7 bedrooms etc Rent £240 p.a. on lease Scope Premium £2 500
- 7 N WALES—Old-established PRACTICE in growing district with beautiful surrounding country Receipts average £1 550 p.a. including over £800 from panel Visits 5/- to 15/- Nice private residence which can be bought or rented on lease Professional accommodation rented at £45 p.a. on lease Premium two years purchase or near offer Knowledge of Welsh an advantage though not essential
- 8 SCOTLAND—Good-class PRACTICE in Dundee Receipts average over £1 300 Panel 1 350 House (4 public rooms 5 bedrooms waiting and consulting rooms) which must be purchased Price about £1 500 Premium £2 000
- 9 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London Panel 1 000 in rising Semi-detached house (2 bed and dressing rooms) with garage and garden Rent £125 p.a. inclusive Rent of Branch Surgery £50 p.a. inclusive Scope for increase Premium £500
- 10 SW OF ENGLAND—FAVOURITE WATERING PLACE—THIRD PARTNER required in old-established

and increasing middle-class non-dispensing Practice about £3 000 p.a. Panel over 1 800 Detached house (7 bedrooms, etc.) with garage and good garden to rent on lease Considerable scope especially in Midwifery One-third share at two years purchase with prospect of further share in two years

11 YORKSHIRE (N R)—Very old-established and steadily increasing country PRACTICE between £1 400/£1 500 a year including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden for sale Good schools and sport Scope Premium one and a half years purchase

12 LONDON SW—Well-established PRACTICE averaging £1 735 p.a., including about £130 from eye work Panel 1 940 Private residence with ample accommodation and garage for sale or rent Net rent of surgery premises about £10 p.a. Scope for increase Premium £3 500

13 WESTERN AUSTRALIA—Old-established PRACTICE, averaging £1 235 p.a., in small town in centre of one of the best and most prosperous pastoral areas Brick built house (4 bedrooms) electricity and water Rented on lease Premium £640 sterling Two Hospitals in town

14 LONDON SE—Increasing PRACTICE in populous outlying suburban district Receipts last year £1 120 Panel nearly 1 200 Large house for sale or rent Two Branch Surgeries Scope for increase Premium £2 000

15 CANARY ISLANDS—Small compact PRACTICE in one of the healthiest and pleasantest parts Cash receipts 1936 over £500 Fees 10/6 and £1 1s Excellent scope Premium 300 guineas

16 OPHTHALMIC PRACTICE in S Rhodesia—Locum Tenens required immediately with view to purchase Gross receipts 11 months ended March 31st 1937 £1 536 Possibilities of expansion for man with D.O.M.S. or D.O. and operative experience Good well-equipped Hospital

17 DEATH VACANCY—BOURNEMOUTH DISTRICT—Old-established PRACTICE doing about £250 p.a. but offering good scope Panel recently started with 20 patients Excellent non-basement house (6 bedrooms etc.) with garage and small garden Price freehold £3 150

18 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village Cash Receipts last 12 months £1 240 Panel over 500 Small expenses Detached house (5 bedrooms) with electric light main water etc garage and garden for sale Premium £2 100

19 EAST ANGLIA—PARTNERSHIP in old-established country practice about £3 700 p.a. Law distance of the coast Panel over 2 000 House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale freehold Premium two-fifths share two years purchase Partner must be married aged 35-40 Preliminary Assn tank p

20 LONDON N W—Increasing PRACTICE of £725 p.a. in growing district 30 minutes from Piccadilly Panel about 500 No midwifery or night work Semi-detached double fronted freehold corner residence (4 bedrooms) etc and garden for sale Scope Premium £14 000

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Practices and Partnerships for Disposal (continued)

- 21 SCOTLAND—PRACTICE averaging over £1,300 p.a. in Edinburgh. Panel over 900 Good house for sale
- 22 LANCS.—Rapidly increasing mixed-class PRACTICE of £3 800 p.a. in manufacturing town Panel about 2 670 Two houses to be purchased or rented at first Alternatively a one half share would be sold at two years purchase.
- 23 S COAST—Good middle-class non-dispensing PRACTICE about £1 100/£1,200 in popular watering place. Panel about 200 Fees 3/6 to 10/6 Very attractive detached residence (3 bedrooms etc.) with garage and garden Price £3 000 Freehold Scope Premium £2,250
- 24 EASTERN COUNTY—PARTNERSHIP (after short preliminary Assistantship) in very old-established Practice in market town in hands of Medical Woman Receipts £2,000 House available Applicant must be Medical Man aged 30-35 and graduate of Cambridge or London preferred
- 25 E. ANGLIA—Partnership in Country PRACTICE in agricultural district with good appointments and substantial panel Visits 3/6 to 10/6 Charming old country house (6 bedrooms and dressing room) garage and 3½ acres of ground for sale Premium for share of about £1 700 p.a., two years purchase
- 26 LONDON SW—Well-established mixed PRACTICE of £1,725 including about £130 from appointments and a panel between 1 600/1 650 Rent of flat £105 p.a. and surgery £91 p.a. inclusive Premium £4,500 to include drugs, etc., etc
- 27 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2,500 p.a. Panel 1 790 House with 4 bedrooms and separate surgery accommodation garage and garden to rent at £55 p.a. Scope Premium one third share two years purchase
- 28 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London Panel 900 Well built house (5 bedrooms etc.) available for sale. One third or two fifths share at two years purchase
- 29 S OF ENGLAND—Well-established Practice averaging nearly £1,200 p.a. in a seaside resort Panel over 700 Visits 3/6 to 10/6 mostly 5/ Very little midwifery Good corner house (5 bedrooms) with central heating, garage and small garden for sale Well-equipped Cottage Hospital Good scope Premium 2 years purchase
- 30 LONDON W 2.—Practice averaging over £800 p.a. including panel 165 Consultations 5/ upwards Private residence to rent at £120 p.a., and surgery premises at £60 p.a. Scope for increase Premium two years purchase.
- 31 LONDON SW—Partnership in well-established working-class Practice nearly £3 150 p.a. in Favourite Suburban District. Panel 3 000 One half share would be sold at two years purchase.
- 32 LONDON W—Practice of about £700 p.a. in residential district Panel 500 Large corner house (7 bedrooms) with separate surgery entrance and good garden. Price of lease £1,350 Scope Premium £1,250
- 33 MIDLANDS—Partnership in old-established increasing Practice in pleasantly situated Country Town Good appointments and panel Visits 3/6 to £1 11s 6d., medicine extra Suitable house obtainable Incoming partner must be good Surgeon—English or Scottish—aged 30-35 Small well-equipped Hospital Share worth £1,250 p.a. at first at two years purchase
- 34 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town Receipts average £750 p.a. including P.M.S. worth £125 p.a. and panel about 750 Pleasantly situated house (5 bedrooms, aircs etc.) on main road Price (freehold) £3,200 Ample scope Premium one and three-quarter years purchase
- 35 E ANGLIA.—Partnership in old-established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town Panel 1 850 Good society and sport Scope One-third share at first. Premium two years purchase
- 36 N DEVON—Old-established Practice averaging over £1 050 p.a. in small Watering Place Panel about 400 Well built semi-detached house (3 bedrooms etc.) garden for sale Beautiful surrounding country All kinds of sport Scope Premium two years purchase
- 37 TASMANIA—Practice doing £1,500 a year, including good appointments Fees range from 10/6 to £1 1s House with 2 bedrooms etc., and garden for sale Par chaser should be able to do major surgery Premium £900
- 38 LONDON, N—Well-established Practice averaging £450 p.a. in pleasant growing District. Panel about 600 Well-situated house on main road to rent at about £65 p.a. Good scope—building going on Premium £600 or offer to include surgery fittings and drugs
- 39 SURREY—Increasing middle and working-class PRACTICE in thickly populated Suburban District Receipts 1936 £1 720 Panel 660 Small house Rent £78 p.a. (branch £55 p.a.) Ample scope Premium £2,600
- 40 SOUTH SUFFOLK—Partnership in sound old established Practice over £6 000 p.a. in most desirable Country Town Good appointments and panel over 3 000 Not much midwifery Choice of suitable houses One sixth share at first at two years purchase.
- 41 LONDON N—Medical Woman's Practice in populous district. Receipts average £560 p.a., including panel 470 House (4 bedrooms) to rent at £100 p.a. Premium £850
- 42 EASTERN COUNTIES—Partnership (after six months Assistantship) in very old-established middle-class Practice averaging £3,300 p.a. in Market Town No panel Fees 5/ to £1 1s Suitable house obtainable Premium one half share two years purchase
- 43 CO DURHAM—Well-established Practice about £1 100 p.a. in Residential Colliery District within easy distance of Newcastle Appointments worth £85 p.a. and panel 840 Desirable freehold house (3 bedrooms and 2 attic rooms) with garage, for sale or rent Premium one and a half years purchase
- 44 N WALES WATERING PLACE—Good-class non panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden Scope for panel work if desired Prem one year's purchase
- 45 HOME COUNTIES—Old-established Practice of £500 p.a. in first rate town 20 miles from London Panel over 500 Visits 5s No midwifery Modern nine roomed house with garage and attractive garden—about quarter of an acre Premium freehold house and Practice £2,000
- 46 S OF ENGLAND—Partnership (after Preliminary Assistantship) in old-established Practice of about £3,500 p.a. in an important town. Appointments £250 Suitable house available to rent. A one third share would be sold at two years purchase to a suitable man preferably one holding the M.D. or M.R.C.P.
- 47 LONDON SE.—Old-established Practice of about £1 000 p.a. in outlying residential district. Panel 100 Detached house (4 bedrooms etc.) for sale Premium two years purchase
- 48 LONDON, N—Old-established Practice in sub urban district. Cash receipts 1936 (10 months) £1 450 Panel 1,240 increasing Fees 2/6 upwards Suitable house (9 rooms) to rent at £160 p.a. Premium £3 400

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- 1 ESSEX COAST TOWN—PARTNERSHIP—A share producing about £1,250 p.a. is offered in a very sound and increasing mixed-class Practice at present bringing in about £4,000 p.a. with substantial Panel. Suitable house with 2 reception, 5 bedrooms, etc. Small garden, garage. Rent £120 p.a. Premium 2 years purchase.
- 2 SOUTHERN COUNTIES—Well established non-Panel PRACTICE, producing about £3,000 p.a. Fees from 5/. Suitable house can be rented.
- 3 NORTH EAST COAST—Old established PRACTICE producing about £900 p.a., but stated to be capable of considerable increase. Choice of houses Partnership introduction given as vendor retiring.
- 4 EAST COAST TOWN—PARTNERSHIP—A share worth about £1,000 p.a. is for disposal in an old-established Practice (the gross cash receipts of which are about £4,000 p.a.). House containing 3 or 4 bedrooms with garden and garage can be rented at £90 p.a. Premium 2 years purchase.
- 5 MIDLANDS—FAVOURITE RESIDENTIAL TOWN—Chiefly better class non-dispensing PRACTICE, producing for last 12 months over £1,600 p.a. Panel of 560 and one appointment worth £150 p.a. Fees 3/6 to 2/1. Very nice house with ample accommodation, garden and garage. Freehold for sale. Premium 2 years purchase.
- 6 SOUTH EAST COAST—RESIDENTIAL TOWN—Old-established non-dispensing better-class PRACTICE averaging for last 3 years about £1,450 p.a. Selected Panel of 500. Fees 3/6 to 2/1. Ground floor flat containing large hall consulting room 2 reception 3 bedrooms, etc. Inclusive rent £190 p.a. Premium 2 years purchase.
- 7 CENTRAL LONDON—PRACTICE is worked as a Lock-up and averages about £1,000 p.a. Fees from 2/6. Suitable accommodation can be obtained. Premium 2 years purchase.
- 8 CROYDON AREA—Recently established PRACTICE. Receipts for last 12 months over £660 including Panel of 350. House with 3 bedrooms, etc., garden and garage can be rented at £85 p.a. Premium £750.
- 9 OUTLYING NORTHERN DISTRICT—Mixed-class PRACTICE, receipts last 12 months £1,290 including Panel of 1,000. Suitable flat above surgery premises. Inclusive rental £104 p.a. Premium 2 years purchase.
- 10 HOME COUNTIES—PARTNERSHIP—A SEVEN SIXTEENTHS SHARE with succession to the whole eventually is offered in sound old established Practice in growing district within each reach of London. Gross cash receipts for immediate past 12 months approximately £2,700. Panel of 2,400. Moderate expenses and appointments worth over £200 p.a. Detached house on main road, containing 4 bedrooms etc. with garden. Rent on lease £80 p.a.
- 11 SUSSEX—ATTRACTIVE DISTRICT NEAR SEA—PARTNERSHIP—A ONE FOURTH SHARE is offered (after preliminary assistantship of 6 or 12 months) in old-established Practice having good scope. Gross cash receipts for last 12 months approximately £3,275. Panel of about 1,300. Appointments worth over £300. Choice of houses on rental for incoming partner. Premium 2 years purchase.
- 12 SURREY—RAPIDLY DEVELOPING AREA—Recently established PRACTICE producing for last 12 months £720 including Panel of 680. Suitable house can be purchased. Moderate premium. Ill-health reason for sale.
- 13 CO. DURHAM—Mixed-class PRACTICE producing about £937 p.a. including Panel of 1,350 and club bringing in about £5 per week. Suitable house available.
- 14 NORTH LONDON—Sound mixed class PRACTICE. Established over 40 years, producing last 12 months nearly £2,900. Substantial panel. Nice house in good repair. Rent £104 p.a.
- 15 LONDON S.W. 2 DISTRICT—Well established mixed class PRACTICE. Gross cash receipts for last 12 months approximately £800 including panel of 1,200 to 1,300. Fees from 2/6. Suitable house stated to be in good repair. Premium £1,600.
- 16 NORTH LONDON—Old-established PRACTICE producing about £700 p.a. including panel of nearly 600 patients. Suitable house ample accommodation and good garden, garage to rent at £100 p.a. Premium £1,200.
- 17 DEATH VACANCY—SOUTH COAST TOWN—PRACTICE producing about £250 p.a. Five years ago it was doing £1,000 p.a. but has decreased owing to ill-health. Modernised house with ample accommodation. Price for freehold and practice £3,150.
- 18 WEST OF ENGLAND—Seaside resort combined with lovely country—good middle and better working-class PRACTICE, established over 50 years. Gross cash receipts a year £1,670 approximately. About £650 is derived from panel and P.M.S. Fees 3/6 to 2/1. Well-built house with 3 sitting rooms and 6 bedrooms, good garden, tennis lawn and garage. Can be rented on lease.
- 19 LONDON WESTERN AREA—Mixed class PRACTICE in populous district. Gross cash receipts for last 12 months about £700 but capable of increase. Panel of 500. Well situated house with ample accommodation will be put into thorough repair. Good garden. Price for Practice and house £2,500. £500 down.
- 20 WELSH BORDERS—Unopposed chiefly agricultural PRACTICE in beautiful district. Average gross cash receipts £913 p.a. (last year £938). Panel produces about £3 0 p.a., and appointments worth about £132 p.a. Very low expenses. Suitable house in own grounds with tennis court, etc. containing 2 reception, 6 bedrooms, etc. Freehold for sale. £1,200. £700 on mortgage. Premium £1,500.
- 21 WEST COAST OF SCOTLAND—Old-established mixed class non-dispensing PRACTICE held by vendor many years. Gross cash receipts average about £1,000 p.a. Panel of 1,213. Appointments worth about £30 p.a. Fees 2/6 to 15/. Purchaser can choose his own house. Good golf and other sport. Premium 1½ years purchase.
- 22 CUMBERLAND—Old-established unopposed PRACTICE held by vendor who is retiring for 30 years. Gross cash receipts average about £807 p.a. including panel worth over £250 p.a. and appointments worth nearly £55 p.a. Suitable 8-roomed house with bathroom surgery dispensary etc. garden, garage. Rent £30 p.a. Shooting, fishing, golf etc. Premium 1½ years purchase.
- 23 SOUTHERN RHODESIA—Hospital Town on Railway. Beautiful climate and country. Good-class prescribing PRACTICE, easily run. Visits 7/6 to 10/6. Midwifery £10 10s. 0d. Average income for past 5 years £1,900 p.a. Well appointed house with tennis court garage surgery etc., can be rented or bought. Good operating surgeon will greatly increase practice. Excellent schools. Sport of all kinds, big game shooting, fishing, etc. Income tax 6d. in the £. Premium £2,000 to include drugs, surgery fittings and furniture.
- 24 LONDON NORTH—Old-established chiefly working-class PRACTICE. Receipts for last 12 months approximately £1,600 with panel of about 2,700. Suitable accommodation can be rented at £92 p.a.
- 25 EASTERN COUNTIES—COUNTRY PARTNERSHIP—ONE THIRD SHARE available in mixed-class Practice over £2,500 p.a., including panel of nearly 1,800. House contains 2 reception, 4 bedrooms large and attractive garden and good garage. Rent £55 p.a. Sport of all kinds. Premium 2 years purchase or near offer.
- 26 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to Vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 27 LONDON SOUTH EAST—Old-established PRACTICE producing about £1,830 p.a., including select panel of 500. Fees from 3/6. Suitable house available with 2 reception, 5 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 28 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1,100 p.a., including selected panel of about 350. Fees from 5/. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.
- 29 NORTH WALES—FAVOURITE SEASIDE RESORT—A ONE THIRD SHARE (with increase later) is offered after short preliminary assistantship in old-established better-class practice producing about £3,400 p.a. Panel of 1,100. Suitable flat available for incoming partner who should be experienced. Premium 2 years purchase.
- 30 LONDON NORTH WEST—PARTNERSHIP—A ONE THIRD SHARE is for disposal in steadily increasing middle-class practice producing last year £2,400. Small panel. Fees 7/6 to 2/1. Choice of houses. Premium £2,000.
- 31 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing over £940. Selected panel of 400 to 450 patients in good repair with ample accommodation. Freehold £2,000. Premium £1,450.
- 32 MIDLANDS PARTNERSHIP—ONE HALF SHARE. In mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1,367 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 2 years purchase.
- 33 LONDON—SOUTH EAST—Well established middle class increasing PRACTICE producing for last 12 months £1,270. Panel of 960. Fees 7/6 to 7/6. Scope for development as building is in progress. Good house in excellent condition, containing 2 reception consulting, 4 to 6 bedrooms, dressing room etc. Price £500. Premium £2,400.
- 34 MIDLANDS—PARTNERSHIP—A SHARE representing approximately £1,300 p.a., with increase later, is offered in exceptionally sound good mixed class practice averaging about £9,000 p.a. with substantial panel and very good appointments. Excellent scope for major surgery. Suitable house available. Premium 2 years purchase.
- 35 YORKSHIRE—GOOD TOWN WITHIN EASY REACH OF COAST—A ONE FOURTH SHARE, with increase later, is offered in very old-established middle-class practice producing for last 12 months nearly £4,000. Substantial panel. Fees from 3/6. Suitable house with 2 reception 4 bedrooms, etc. Garage. Stabling and garden. Electric light. Gas. Can be rented at £65 p.a. or freehold purchased. Premium 2 years purchase.
- 36 MIDLANDS—COUNTY TOWN PARTNERSHIP—A ONE-QUARTER SHARE (with increase later) is for disposal in mixed-class practice averaging over £2,500 p.a., including panel of 2,800. Fees from 3/6. Suitable house can be obtained. Preliminary assistantship if wished.

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NORTH WALES—Old-established middle-class PRACTICE in beautiful Seaside and Country district Average cash receipts £1 417 p.a. Panel 415 Well-built house in good position, 3 reception, 7 bedrooms, garage for 2 cars, and garden Good sport and educational facilities Premium—Practice—£2,100.—No 929

NEAR MANCHESTER—Sound middle and working-class PRACTICE Average cash receipts £2,692 p.a. Panel over 2,500 Scope. Detached corner house 2 reception 4 bedrooms, 3 professional rooms, garage and garden. Premium—1½ years purchase.—No 952

MANCHESTER—Well-established middle and better working-class PRACTICE Cash receipts last year £1 122. Panel 740 on, 5 bedrooms, billiard room, garage and best offer.—No 965

EAST YORKSHIRE—Old-established unopposed PRACTICE in nice country district Cash receipts approximately £1 040 p.a. Panel 700 Excellent detached house 3 reception 4 bedrooms 3 professional rooms (separate entrance), garage Three-quarter acre garden Rent £50 p.a. or would sell for £750 Premium—1½ years purchase or near offer for quick sale.—No 959

NORTH WALES—Very old-established mixed Panel and Private PRACTICE near sea and beautiful country in present hands 44 years. Cash receipts approximately £1,550 p.a. including £822 p.a. from Panel. Excellent house for sale or may be rented Premium—Practice best offer.—No 966

LANCS TOWN—PARTNERSHIP in Panel and Private Practice about 7 miles from Manchester Average cash receipts £4,325 p.a. Panel 3,610. Scope Detached house 2 reception, 5 bedrooms, garage and half acre garden Premium—2½ share (about £1 730 p.a.)—2 years purchase.—No 962

MANCHESTER—Old-established middle and better working-class PRACTICE in present hands 34 years. Average cash receipts £1 082 p.a. Panel 470 Scope for energetic man. Good house, 2 reception, 5 bedrooms, garage and good garden. Premium, best offer Vendor retiring.—No 875

CHESHIRE TOWN—Very old-established mixed-class PRACTICE. Cash receipts £1,500 p.a. Panel 1,700. Good house 3 reception, 4 bedrooms, and dressing room, 3 professional rooms, garage and garden. Premium—2 years purchase.—No 951

NEAR MANCHESTER—PARTNERSHIP in sound old-established Practice. Cash receipts last year £4 900 Panel 3,200 Excellent house 3 reception 5 bedrooms, garage and nice garden. To rent. Premium—2½ share—(approximately £1 940 p.a.)—years purchase.—No 944

NEAR LIVERPOOL—Well-established middle-class PRACTICE in pleasant district Ample scope as district developing. Cash receipts £800 p.a. Panel 650 Nice house, 4 reception, 4 bedrooms and garden Premium—1½ years purchase. Vendor retiring.—No 943

EASTERN COUNTY—Partnership in old-established Country PRACTICE with income of about £4,500 p.a. Panel 2,000. Excellent house, 3 reception, 5 bedrooms, garage and good garden Rent £60 p.a. Premium—half share.—£2,700.—No 931

MANCHESTER—Middle and better-class PRACTICE in present hands 40 years Cash receipts last year £2,151 Panel over 600 Good house, 3 reception, 6-7 bedrooms, garage and garden. Premium—Practice and house—£3 000 Long introduction if desired Vendor retiring.—No 832

NORTH WEST COAST—Old-established middle-class PRACTICE in Seaside and residential town. Cash receipts last year £1 100. Panel 350 Nice detached house, 2 reception, 5 bedrooms, garage and large garden For sale or may be rented. Premium—1½ years purchase.—No 961

LANCS TOWN—Old-established mixed-class PRACTICE, about 22 miles from Manchester Cash receipts last year £1 084 Panel 1 050 Scope Good house 2 reception, 5 bedrooms, 3 reception rooms (professional rooms) garage and garden. Premium—1½ years purchase.—No 951

WIRRAL COAST—PARTNERSHIP in old-established mixed-class Practice Cash receipts last year £2,830. Panel 2,815 Scope Excellent corner house 2 reception, 4 bedrooms, garage. Premium—½ share—2 years purchase.—No 946

DERBYSHIRE—PARTNERSHIP in old-established Country Practice near to large town. Cash receipts last year £3,238 Panel 1,800 Scope as district developing. Attractive house, specially built, 2 reception, 5 bedrooms, garage, and large garden. Electric light and main drainage. Rent £80 p.a. Premium—1/3 share—2 years purchase.—No 854

DERBYSHIRE—Old-established PRACTICE in pleasant district near large town, offering great scope for increase owing to building developments. Suitable for two men in partnership Cash receipts last year £3 000 Panel 3,359 Two good houses, with ample accommodation and modern conveniences, each with garage, garden and tennis court. Premium—2½ years purchase or near offer.—No 955

NEAR MANCHESTER—PARTNERSHIP in old-established middle and working-class Practice Cash receipts approximately £2,600 p.a. Panel 2,300 Good detached house, 2 reception, 5 bedrooms, garage and garden. Rent £80 p.a. Great scope Premium—4/9th share—(about £1 000 p.a.)—2 years purchase.—No 949

LANCS TOWN—Mixed panel and private PRACTICE, in present hands 30 years Cash receipts approximately £1,500 p.a. Panel 1,500 Great scope Good house 2 reception, 4 bedrooms, garage and small garden. Rent £50 p.a. Premium, best offer.—No 945

SHEFFIELD—Old-established mixed-class PRACTICE. Cash receipts last year £1 112. Detached house 2 reception, 3 bedrooms, small garden. Rent £52 p.a. Premium—1½ years purchase.—No 940

NORTH STAFFS—PARTNERSHIP in old-established mixed Panel and Private Practice Cash receipts last year £5,521 Panel 7,500 Incoming partner may choose own residence—Premium—2/9th share (about £1,200)—2 years purchase Further share later.—No 941

NEAR NOTTINGHAM—PARTNERSHIP in practically unopposed mixed class Practice Average cash receipts £3,500 p.a. Panel over 1 600 Appointments £120 p.a. Attractive house 2 reception, 5 bedrooms, garage and pleasant garden. Premium—1/3rd share—2 years purchase.—No 953

LANCS TOWN—Well-established Panel and Private PRACTICE. Earnings last year £2,254 Panel 1 750 Good house available Premium—1½ years purchase Partnership if desired.—No 920

DEATH VACANCY—STAFFS—Old-established mixed-class PRACTICE in pleasant country district offering great scope. Cash receipts over £400 p.a. Panel 300 Good house 2 reception, 5 bedrooms, garage and large garden Rent £80 p.a. Premium, best offer.—No 960

SHEFFIELD—LIFE INSURANCE, MEDICAL REFEREE connection, etc. Income £50 p.a. Suit doctor living in one of the suburbs, with or without a practice. Premium—£600.—No 963

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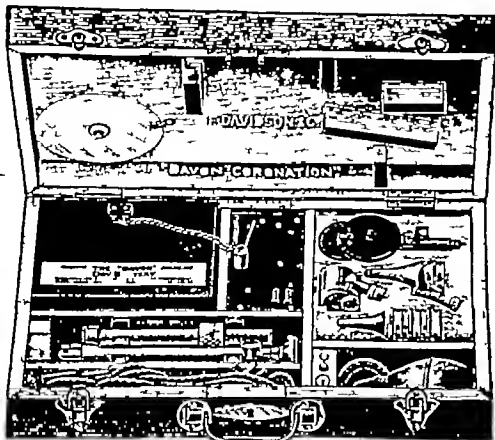
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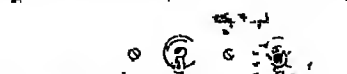
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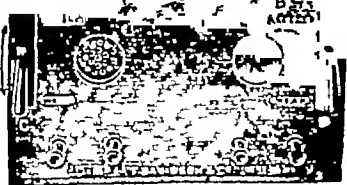
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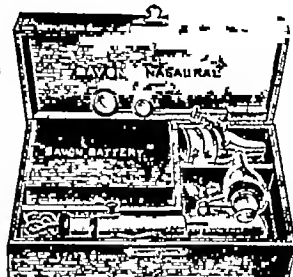
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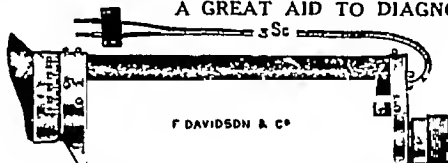
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BRITISH MEDICAL JOURNAL

JOURNAL OF THE



ASSOCIATION

SATURDAY MAY 22 1937

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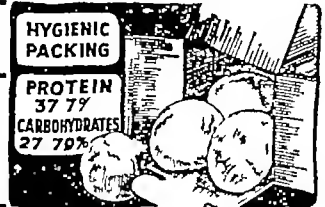


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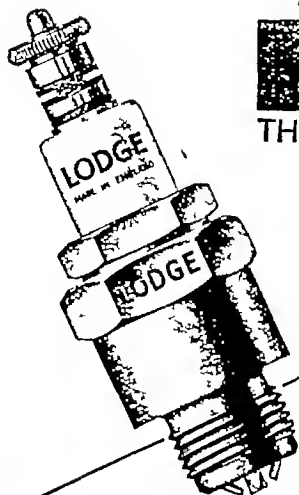
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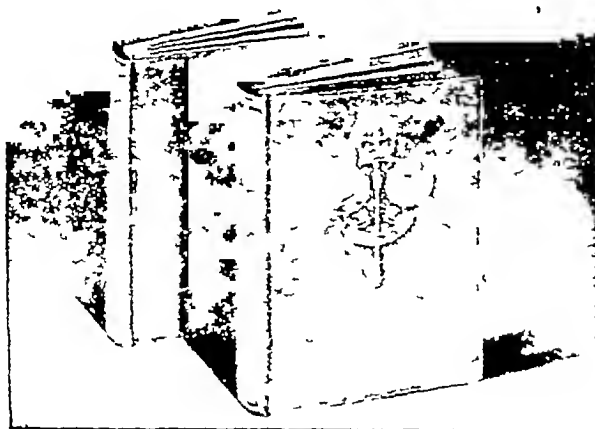
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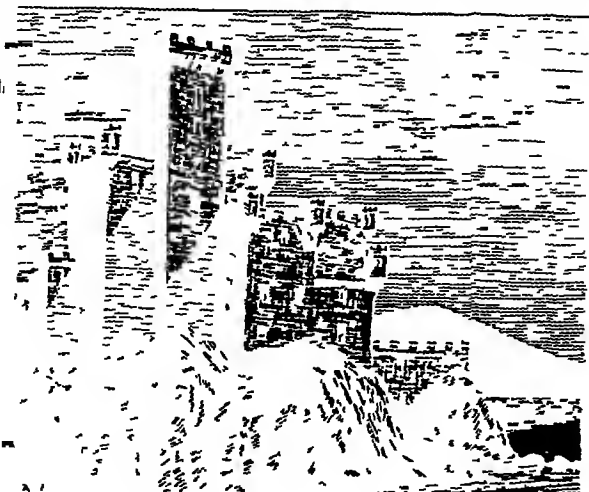
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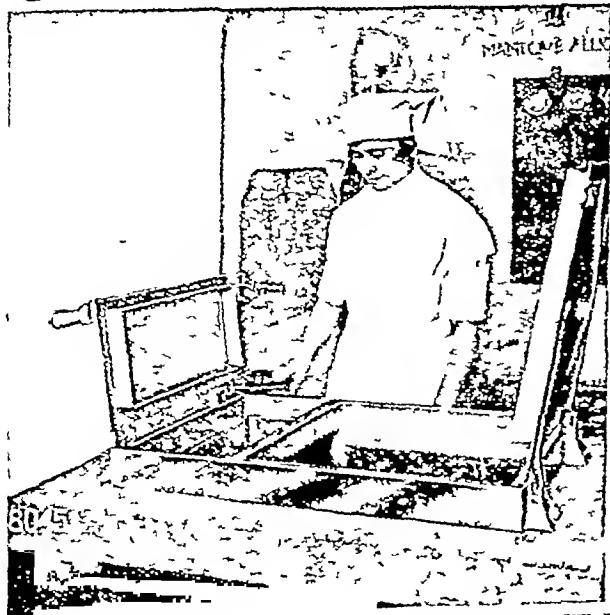


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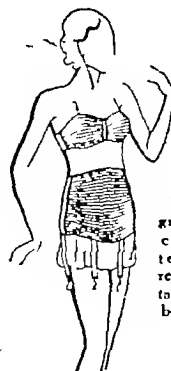
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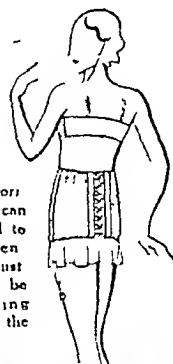
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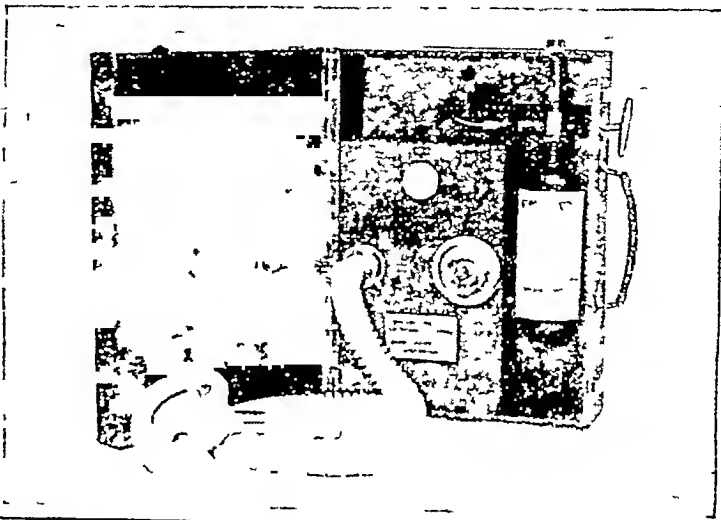
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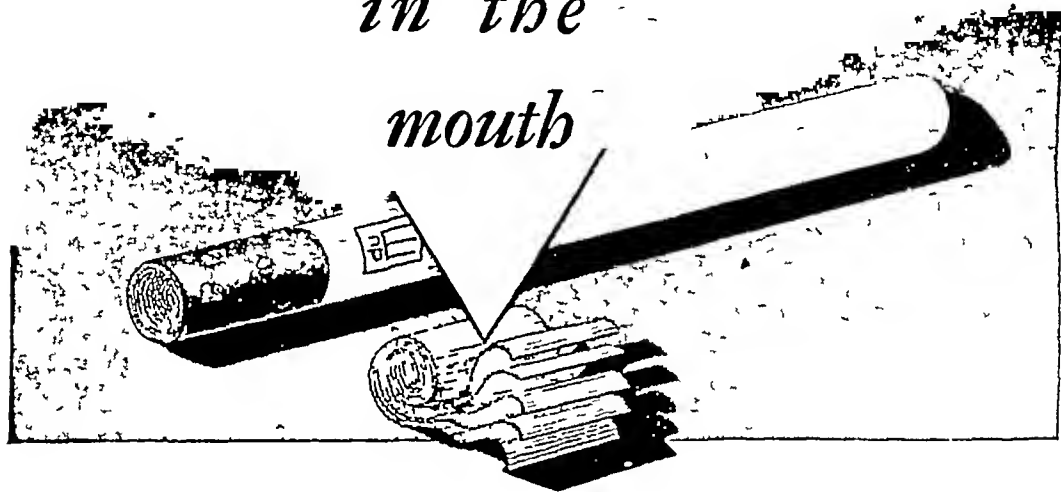
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George IV
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— and now —

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Founded in the year 1793, in the
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has a history of continuous Progress during eight reigns. Constantly under the personal supervision of members of the same family the SALTAIR SURGICAL SERVICE has worked in close co-operation with the medical profession. During nearly a century and a half of unceasing activity many revolutionary changes and improvements have been effected in the designs of the wide range of Surgical Appliances produced by SALTS, while the confidence of medical men has been treasured by the firm and still further encouraged by the unequivocal Guarantee which appears at the head of every announcement issued on behalf of this House—advertisements which have been strictly confined to the medical press.

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- "A" TABLETS in Diarrhoea, Flatulence and Colitis
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Afford the Simplest most Reliable and most efficient
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**GOUT, RHEUMATISM, ECZEMA, SCABIES
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In Boxes of 1-doz. and 1-doz. BATH CHARGES 2-doz. TOILET CHARGES and 1-doz. SOAP TABLETS

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A reliable preparation for the stimulation of the Endocrine Glands Corrects menstrual irregularities and relieves distress during the menopause Also extensively prescribed for rejuvenation and premature senility

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Because eczema generally brings pain and itching, any local dressing should attempt soothing as well as healing And this is the great virtue of Sphagnol-peat ointment—that from its first touch, it gives coolness and comfort to tender skin

Many doctors find Sphagnol so successful that they are prompted to write about it. Here is an extract from one of the letters we have received

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'Cristolax' presents pure medicinal paraffin of optimum viscosity in elegant combination with 'Wander' Dry Malt Extract. Being entirely free from any oily or disagreeable taste it is easy to administer and its use does not give rise to the unpleasant symptom of "leakage."

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Some of the more severe symptoms of menopausal disturbances may require intensive treatment with Oestroform parenterally administered.

Most cases, however, respond to treatment with Oestroform given orally. Treatment should begin with small doses (1,000 international units two or three times daily) followed by rapidly increasing doses up to 10,000 units two to

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Oral and vaginal therapy may be carried out simultaneously.

Literature on request

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NATURAL VICHY SALT for
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DYSPEPSIA

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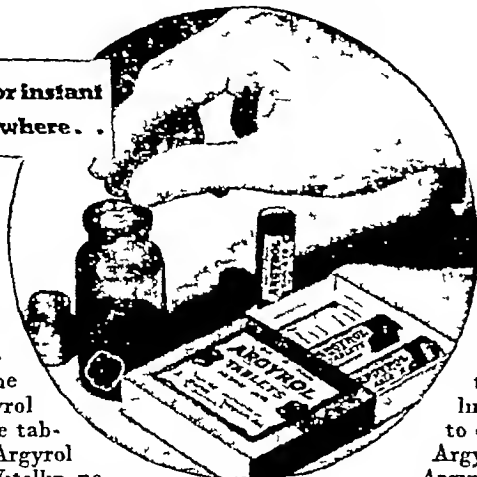
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' I have noted the remarkable tonic properties in most of the patients to whom I have prescribed Livogen. It increases vitality, overcomes lowered resistance and banishes the feeling of depression ' —M D

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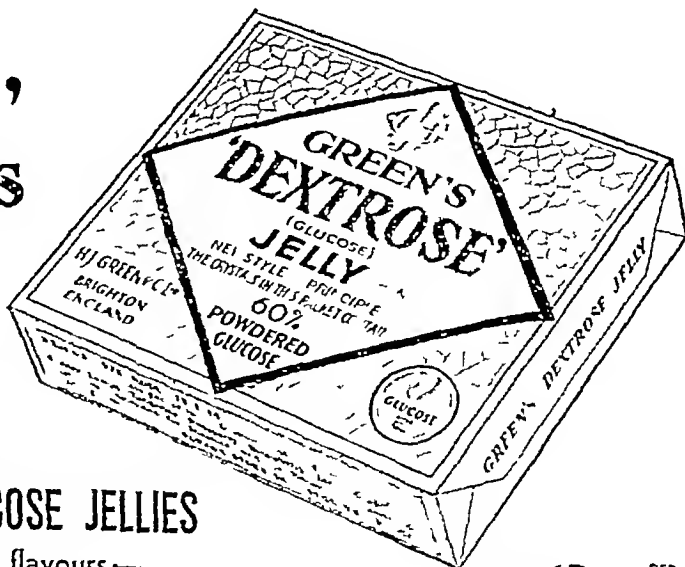
afford an ideal way of taking
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KAYLENE BRAND OF COLLOIDAL KAOLIN WITH HIGHLY VISCOUS LIQUID PARAFFIN

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Kaylene-ol is indicated in the treatment of Intestinal Toxaemia and Stasis, Chronic Colitis, dietary indiscretions and in all conditions due to toxic absorption from the bowel

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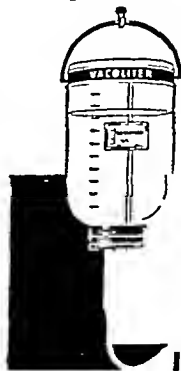
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ONE LITER (1000 C.C.) PACKED IN VACUUM



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SUGAR-FREE GINGER ALE
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Approved by the Institute of Hygiene and the Diabetic Association

These beverages have been analysed by the Institute of Hygiene and found "free from sugar and metallic contaminants" The analyses shown have been accepted by the Medical Advisory Council of The Diabetic Association and recommended for diabetic and obese subjects

ANALYSIS SHOWED THE FOLLOWING RESULTS

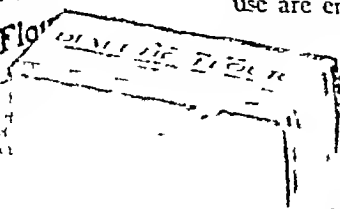
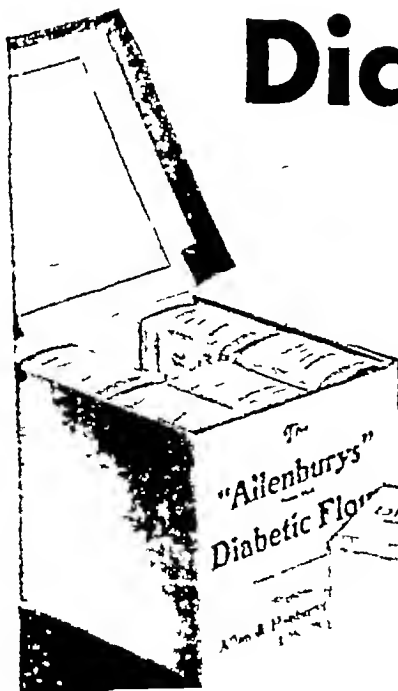
<i>Schweppes Sugar Free Dry Ginger Ale</i>	<i>Ordinary Dry Ginger Ale</i>	<i>Schweppes Sugar Free Tonic Water</i>	<i>Ordinary Tonic Water</i>	<i>Schweppes Sugar Free Sparkling Lime</i>	<i>Ordinary Sparkling Lime</i>
Carbohydrates absent	6.2%	Carbohydrates absent	9.1%	Carbohydrates absent	11.8%
Protein absent	absent	Protein absent	absent	Protein absent	absent
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"Allenburys" Diabetic Flour

A special preparation of caseins and lactalbumen to which leavening agents are added

It is a satisfactory and convenient product for the preparation of special foods, free from carbohydrates, and containing a minimum of fat, or definite proportions of these may be added as tolerance increases with the progress of the treatment. The "Allenburys Diabetic Flour" is convenient to use, and keeps well. From it may be prepared a variety of palatable and highly nutritious foods of special composition. Recipes and directions for use are enclosed with each packet.



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COLLOSOL BRAND PHOSPHO-MANDELATE

(for Urinary Sterilisation)

IN A NEW PACKING

This new and simple treatment for urinary infections, embracing cystitis and allied disorders, completely supersedes the difficult and nauseating ketogenic diet and consists in first rendering the urine acid by the administration of ammonium phosphate and then giving mandelic acid, the fluid intake of the patient being restricted to maintain as high a concentration of the acid in the urine as possible.

The cost of the 6 days treatment is 5/-

Suitable test papers with comparison tints of different pH levels are also supplied

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A purified fraction of
liver extract possessing
remarkable hæmopoietic properties

NEO-HEPATEX

(PARENTERAL)

For intramuscular or intravenous use

Neo-Hepatex (parenteral) is the result of an original process designed to conserve the maximum amount of the active hæmopoietic fraction of liver, and is prepared under the supervision of a staff of biologists with ten years' experience in research work on liver extracts

In addition, each batch is clinically tested in hospital. This ensures the high and consistent clinical activity which has made Neo-Hepatex an accepted standard in parenteral liver therapy the world over. A copy of the relative clinical test chart is enclosed in each box.

Neo-Hepatex may be administered in any dosage demanded by the condition of the patient, its clinical potency enabling the clinician to give a more than adequate dosage in small volume.

Neo-Hepatex is issued in Ampoules.

Boxes of 6 x 1 cc - 5/- 6 x 2 cc - 7/6 3 x 4 cc - 6/6

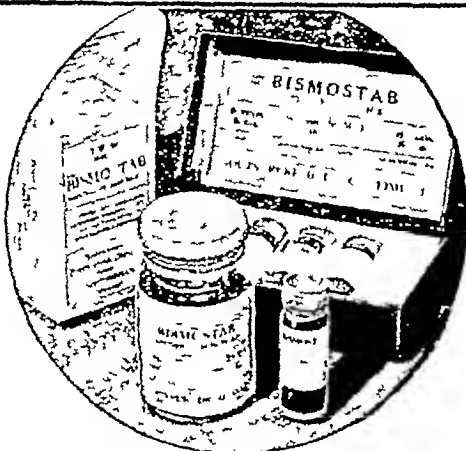
The high potency of Neo-Hepatex renders it most economical in cost.

Made in England at Evans Biological Institute by

Evans Sons Lescher & Webb Ltd.

Liverpool and London

Bismuth Preparations in the TREATMENT OF SYPHILIS



BISMOSTAB

TRADE MARK BRAND
Injection of Bismuth B P

A sterile 20% suspension of very finely divided bismuth metal in isotonic glucose solution. Bismostab is gradually and continuously absorbed over a long period.

5 c.c. and 10 c.c. rubber-capped vials
1 fl. oz. bottles

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Bismuth Oxychloride Suspension
in Isotonic Glucose

In Chlorostab, bismuth oxychloride is presented in a pure and suitably finely divided state ensuring uniform absorption at an optimum rate.

0.16 gm bismuth metal per c.c.—
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The therapeutic power of Quinostab is not exerted so rapidly as that of most bismuth preparations. Quinostab is particularly useful in the treatment of debilitated patients, in late and cardiovascular syphilis and in neurosyphilis.

3.5 c.c. and 175 c.c. ampoules
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Literature sent on request

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Telegrams Drug Nottingham

PERTUSSIS SOLUBLE ANTIGEN

for the
intra-nasal treatment of Pertussis

Specific Biologic treatment of certain types of infection, such as Whooping Cough, by means of local immunisation or desensitisation has been recently advanced

The antigens commonly applied are in solution form and these antigens have been prepared by the Mulford Biological Laboratories and are offered under the name PERTUSSIS SOLUBLE ANTIGEN. The product is a sterile solution of substances derived from recently isolated cultures of *Hemophilus Pertussis* and is administered by instilling a few drops into each nostril.

Clinical trials have given encouraging results and show that 88% of the cases treated early in the paroxysmal stage were benefited, and 40% of those treated late in the disease were relieved. Several positive contacts treated with Pertussis Soluble Antigen by intra-nasal application did not develop Whooping Cough. Pertussis Soluble Antigen is supplied in 5-cc vials with dropper.

Descriptive literature will be sent on request

SHARP & DOHME LTD.,
MULFORD BIOLOGICAL LABORATORIES,
76/78 City Road London, E C 1

Cystopurin

The ideal urinary antiseptic for oral administration!

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| <p>1 Produces no gastric irritation or toxic symptoms</p> <p>2 Is readily absorbed from the gut and excreted in the urine.</p> <p>3 Causes no renal irritation</p> <p>4 Renders the urine bactericidal in low concentrations</p> | <p>5 Acts from the renal pelvis downwards</p> <p>6 Is active in either acid or alkaline urine</p> <p>7 Perfectly safe for use in febrile conditions</p> <p>8 Acts on all causative organisms of urinary infections</p> |
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PROSTATITIS

From information received —

The Cystopurin—I had good results in one case. A man of about 64 with a small fibrous prostate suffering from frequency and retention. Three tablets daily cleared up his symptoms in six weeks except for a little nocturnal frequency but all pain straining and scalding had gone. He had been on various mixtures before for three months with no result."

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In a case of chronic prostatitis and cystitis in a man aged 64 Cystopurin greatly improved the condition of urine and frequency of micturition. Patient has had lately very good nights. Bacterial examination, no pus in urine.

I have pleasure in reporting to you on my experience of Cystopurin. I have in the past used it in intractable cases of cystitis or prostatitis and have had very good results.

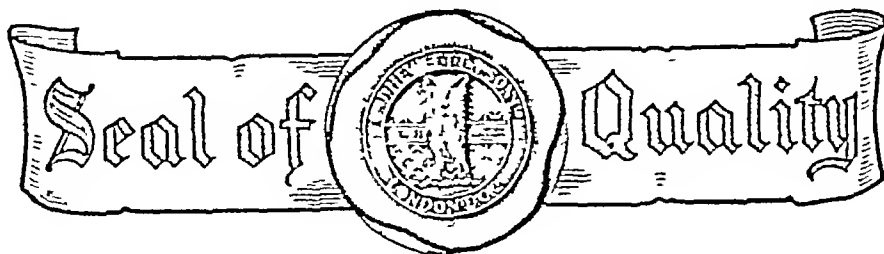
"Male aged 56. This man had delayed coming forward for treatment for about a month and was in a very serious condition. He had an acute urethritis with prostatitis and orchitis, the testicle being about the size of an orange. His temperature was 103.4° F. Pain was extreme and he was afraid to micturate. He was put on treatment at once but with very poor results. I administered Cystopurin tablets in the dose of two t.i.d. At the end of the third day an improvement was noticed the temperature having fallen to 100° F. The dose was then increased to three t.i.d. At the end of a fortnight the prostate was considerably reduced in size and much less tender and the testicle was nearly normal in size and painless. Progress was thereafter uninterrupted the first negative smear being returned much sooner than was anticipated. The dose of three tablets t.i.d. was reduced to one t.i.d. when the temperature became normal on the seventh day.

"I am sure that this man's illness would have been of much longer duration but for Cystopurin.

Supplied in bulk and in tubes of 20 tablets for dispensing purposes.

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Literature and samples free on application

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Under this easily remembered title we have introduced the new chemo therapeutic compound Para amino benzene sulphonamide which is indicated in puerperal sepsis erysipelas scarlet fever streptococcal inflammation of the throat and tonsils meningitis and streptococcal arthritis

Supplied in 7½ grain tablets the dose being 2 or 3 tablets daily after meals which may be reduced as the symptoms subside

SYRUP. AMMONII MANDELAT. (HEWLETT'S)

A new preparation of Ammonium Mandelate in the form of a pleasant orange flavoured syrup for the treatment of Urinary Infections The full dose of 3 grammes of Mandelic Acid is contained in 2 teaspoonfuls of the syrup and in normal cases no Ammonium Chloride or other additional drug is necessary

FORMALGAR

(Formerly known as Gargar Formalin Co)

A most economical efficient and pleasant gargle and mouth wash containing Formalin Glyc Acid Carbolic Tinct Pyrethri &c., suitably flavoured It is highly concentrated one fluid drachm being sufficient for an eight ounce bottle

Dr G. H. speaks very highly of Gargarisina Formalin Co used twice daily (Gargle—1 drachm to 5 oz. water) for throat irritation in professional singers

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A non-poisonous non-corrosive germicide with a fragrant pine odour having a Rideal Walker Carbolic Acid Co-efficient of 5

It is superior to Ioline Iysol &c. being non-staining and non-irritating and it forms a perfect emulsion with ordinary tap water in all proportions

In 1 pint bottles 2 gallon W. Qts. and 1 gallon tins

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It has been found most useful for Enlarged Glands Rheumatic and Gouty Affections Lumbago Sciatica Swollen and Stiff Joints Skin Diseases &c.

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Containing about 5% of Iodine in a stainless non-irritating form together with 5% Methyl Salicylate Useful in the treatment of Enlarged Joints Synovitis Rheumatoid Affections &c.

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A liquid preparation of the Hypnotic Barbitone or Diethyl Barbituric Acid has long been deemed as a useful means of procuring sleep When given in reasonable doses it is claimed that it does not produce any toxic symptoms whatever and in ordinary cases of insomnia one fluid drachm of Veronigen is quite a sufficient dose for an adult

Dose for Adults—One fluid drachm diluted about one hour before going to bed
For Children—1/2 to 1 drachm diluted —10 to 20 minutes diluted

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Telephone: FISHGATE 1172 & 1173

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in the operating theatre of a
London Hospital*

THE LESSON OF ANTISEPTICS

LISTER'S discovery that suppuration of wounds was caused by bacterial infection and could be prevented by the use of antiseptics opened the way to the marvels of modern surgery. To-day, it is taken for granted that every operation will be carried out without the introduction of micro-organisms into the blood.

Recognition of the importance of germ-free cleanliness however, is no longer confined to the operating theatre and surgery it receives ever-increasing attention from the lay public. Health standards to-day are higher than they have ever been as a result. Naturally elaborate precautions against infection are impracticable in everyday life, but fortunately adequate protection is provided by the liberal use of soap and water—provided that the soap is pure and has antiseptic qualities.

Wright's Coal Tar Soap has enjoyed the confidence of the medical profession for over 70 years. Leading bacteriologists advocate its use for everyday protection against infection and it has been found that more doctors use Wright's than any other brand of toilet soap. Wright's has substantial antiseptic and antipruritic qualities, and is the only soap to contain



'liquor carbonis detergens' (Wright's), the valuable skin therapeutic used and recommended by the foremost dermatologists. You can use and recommend Wright's Coal Tar Soap with every confidence.

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COAL TAR SOAP
The Safe Soap

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Intestinal Toxæmia with Hypertension Gastric Fermentation and Distension

"CHARKAOLIN" adsorbs toxins and gases in the stomach and intestines. An index of its adsorptive activity is its complete deodorisation of the intestinal contents.

"CHARKAOLIN" has given remarkable results in some cases of hypertension with intestinal auto-intoxication.

"CHARKAOLIN" is the original preparation of activated charcoal with "Osmo" Kaolin.

"CHARKAOLIN" GRANULES In bottles at 2/6

"CHARKAOLIN" TABLETS In bottles at 1/6 and 2/6

For sale in Great Britain and Northern Ireland.

Describe literature and clinical sample on request.



CHARKAOLIN

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In Gastro-Intestinal Disorders

In such conditions it is a primary consideration that the food should be light and unirritating. In gastric and duodenal ulceration and in the dyspepsias,

'ALLENBURYS' BEEF JUICE

may safely, and advantageously be given, where beef tea would often increase the pain and have a harmful effect. Because of its high protein and vitamin content, obtained by preparation at a low temperature and concentration in vacuum 'Allenburys' Beef Juice provides a valuable means of keeping up a patient's strength in persistent conditions and in such diseases as dyspepsia and cholera.

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ALLEN & HANBURY LTD.
LONDON, E.2



LACTIC ACID MILKS in INFANT FEEDING

Indications

Gastro-Intestinal disturbances. Whooping-cough Pneumonia. Measles. Diarrhoea. Marasmus Vomiting

Composition

	FULL CREAM		HALF CREAM		SEPARATED	
	Powder	Reconstituted Milk (1 In 8)	Powder	Reconstituted Milk (1 In 9)	Powder	Reconstituted Milk (1 In 10)
Moisture	% 2.4	% 87.8	% 2.4	% 89.2	% 3.1	% 90.4
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Protein	25.0	3.1	28.3	3.2	33.0	3.3
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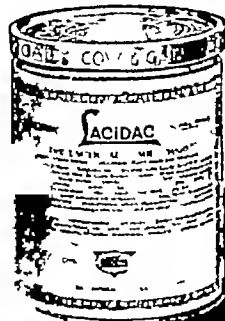
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to be successful in diagnosis and treatment. Taking a history of a patient seen for the first time is often a task requiring patience, tact, judgement, and sympathy. I believe that in our medical schools to-day more attention is being paid to instruction in the taking of histories, and I find that as a rule the practitioner nowadays keeps careful and documented notes of his patient's previous illnesses and records of any investigations which have been carried out. In my own work I prefer if possible to take out the history myself. By so doing it is possible to get in touch with the patient more intimately, to find out his own perspective of his symptoms, to assess his personality, and often to get in sight of a diagnosis, or at any rate to narrow down the list of possibilities and limit the necessary special investigations. It is often possible while doing so to form a perspective of the patient's complaints and then to elucidate obscurities by appropriate questions. The inquiries into occupation, diet, habits, home life, hobbies, and amusements are often revealing, and may afford suggestions in regard both to diagnosis and to treatment.

In any case of illness, even where the diagnosis appears obvious, examination should be as thorough and methodical as possible unless the condition of the patient is too bad to permit of this and the need for treatment is urgent and immediate. Personally I use a routine from which I rarely depart, embracing a brief review of all the systems, but devoting special attention to that chiefly involved. I am convinced that such a routine lessens the chances of making mistakes through missing some essential feature in the patient's condition, and is better than immediate concentration on establishing the apparently obvious diagnosis. It is like looking first at a specimen under the low power of the microscope to get a general impression and then using the high power to focus details and refinements.

Perspective in Diagnosis

The numerous aids to diagnosis which modern research has afforded us are so easily available in hospital and institutional work that there is a tendency to rely upon them to employ them as a routine and to use them as the first approach to diagnosis rather than after careful clinical observation. This in my opinion is a wrong perspective of their use. I yield to no one in my admiration for and appreciation of the valuable aid given in the study of disease by clinical laboratory methods, bacteriological investigation and biochemical tests. I employ them whenever possible in private practice, but I try to be selective, to use only the essential ones to supplement the full clinical investigation, not to supplant any part of it and not to precede it, in other words, to support and extend the clinical diagnosis, or to negative it and give fresh aids to the correct one. Let us not forget that even laboratory methods involve a human factor, depending as they do upon the interpretation of observed data, and that they are therefore not infallible.

In all difficult cases and in those with a prolonged course it is essential to keep an open mind and not try to fit in subsequent developments to the original diagnosis if they seem in the slightest degree to contradict it. It is wise from time to time to start again as it were and regard the problem as a fresh one looking at it from a different standpoint. I am reminded of the importance of the point of view in an illustration I read in the preface to a book I have not so far been able to trace. A church was situated half way up a hill. It looked very different when seen from above and from below but

it was the same church. Everything depends on the point of view. The problem in the patient is the same problem, but a different attitude in its approach may prove illuminating. I am always suspicious of a double or composite diagnosis in a difficult case. It is like a picture with two horizons, and is usually out of drawing.

I am very much impressed with the fact that physicians with great experience of post mortem work rarely make 'tall' diagnoses, but often make brilliant suggestions in difficult cases from their wide knowledge of the distribution of the effects of disease. I lament the tendency nowadays for aspirants to hospital posts to avoid the routine of the performance of post mortems as pathologists, which formerly was almost the routine preparation for the staff.

Perspective in Prognosis

Prognosis is admittedly one of the most difficult problems in the practice of medicine. It depends upon so many factors some of which are capable of expression statistically, while others are almost imponderable. In any given case its assessment depends upon an accurate estimation of the patient, together with the extent, nature, and character of his malady, but even then the individual experience of the practitioner is apt to influence his opinion more than a statistical statement as to the average.

Of one thing I am convinced, and that is of the wisdom of being hopeful even if the outlook is grave, and if possible infusing that hopefulness into the patient and those around him, whether relatives or nurses. In this connexion I may quote Dr G. F. Still, to whose address on 'Perspective in Medicine' I am much indebted. He says, 'Certainly we have no right to close the door of hope so long as there is the smallest possibility of recovery, and adds, "That great clinician, Sir James Goodhart, when he was close on 70 years old said to me apropos of diagnosis, 'The older I grow the more hopeful I grow, and certainly this has been my experience'.

A special case often hard to deal with is the problem of what to tell to a patient with an obviously lethal disease, notably malignant disease of some vital area, such as the bronchi or mediastinum, recognized at a time when any opportunity of eradication or even of lengthy arrest is improbable. I have been much impressed with the fact that in such cases when I have been dreading the direct question from the patient as to the nature of the disease and the outlook, how rarely it is asked. I have felt that the patient suspects but does not want to know. Believing this to be true, I have not often told a patient my suspicions unless I have been deliberately asked by man to man my definite opinion, or unless I know that grave matters are at stake. I repeat that I think this problem one of the most difficult we have to face, with the knowledge that with the best intentions we may make the wrong decision. We must all have seen cases where the announcement that the condition was almost certainly lethal has embittered the last days of a patient's life and accelerated the end. On the other hand I can recall one case where I was forced by the patient's wife to tell him that in my opinion he could not recover. I have never disliked a woman more than I did that one but I was obliged to do as she demanded. I have never admired a man more, he said, 'You mean Doctor, that in the words of a South American proverb I have to pack my biscuits for the journey.' On my answer in the affirmative he sent for his lawyer and his priest arranged his

in great favour, either with the public or the lay press. Religion, medicine and politics appear to be three matters in regard to which nearly everyone seems to feel competent to criticize and to offer suggestions to the experts. The lawyer, accountant, chemist, and engineer, come in for much less comment in regard to their professions, and their opinions are generally accepted. Their only critics are as a rule other members of their own professions. The lay press no doubt contributes largely to this public attitude to our profession. While we must admit with gratitude that the Press is ever ready to help forward any appeal for assistance in regard to the work of our hospitals and other agencies for the aid of the sick, suffering, and needy, it too often seizes on the sensational in medicine and champions the heterodox or the unproven. The fact that the legitimate practitioner of medicine does not advertise no doubt contributes to this attitude of both public and Press. The doctor is a public servant and his actions are often of public interest. His refusal to avail himself of the aid of the Press is misunderstood. It is not to withhold anything helpful but to prevent the exploitation of the public.

The medical press of this country is in my opinion wholly admirable. It is conducted entirely in the public interest and edited with tact and restraint. The best proof of this is the respect in which it is held by the profession and the rarity of any sensational extracts from it in the public press. There is so much that is dramatic and even romantic in medicine and medical research that it is to be regretted that the lay press neglects these aspects for the sensational and the bizarre.

Poise

Poise is a word with many derived meanings. In its original scientific application it is concerned with weight and balance. It has a pleasing sound, as have most words with a pleasant meaning. There is something about its lingering cadence which suggests balance and hovering. Shelley used it in this sense in the line *On poised wings held mute and moveless*. In definition the learned Dr. Johnson again comes to my aid. He defines 'poise' as a regulating power, and then quotes Dryden: 'Men of an unbounded imagination often want the poise of judgement.' I want to stress the idea that poise means more than perspective; it is an artistic balance—a power and judgement with grace and dignity. It must be carefully distinguished from pose. Pose is an attitude, a self-conscious and concerted over-expression of self. It is rather interesting to note that the difference is only an 'i', but it is a capital 'I'. The poseur is an egotist—the man with true poise is usually a philosopher and often an altruist. I often think that some of the general practitioners of my acquaintance have the truest poise in their relations to their patients. I so well remember one distinguished lady who said of her trusted medical adviser: 'He is not our doctor only, he is our very dear friend', and so indeed he was for his advice was sought and followed not only on medical matters but on many of the ordinary affairs of life. Poise in professional conduct is inculcated in the highest degree in the Hippocratic oath, which is often quoted but seldom read.

While we often get gratitude from our patients it must be confessed it often happens that those for whom we do most are those who are least grateful and who sometimes even try to evade their liabilities. I am always suspicious when I hear 'No expense is to be spared, Doctor.' I am reminded of a series of seventeenth-century engravings where the doctor is first represented

as almost divine, then degraded to the rank of angel, then shown as mere man, and is finally represented as satanic when his account is presented.

The same idea occurs in the well known quatrain

God and the doctor we alike adore
But only when in danger not before
The danger o'er both are alike required
God is forgotten and the doctor slighted

How many of us must have wished that we need only see and treat the patients whom we like and who give us their confidence. I have, however, learned one important lesson in poise—that often the patient who is gauche, taciturn, difficult or even rude is self-conscious and shy, and that the attitude is often almost a subconscious protective reaction on his part. If we can get through this shell and probe the real person we can often help him greatly, but it sometimes needs great patience.

The happiest relation between doctor and patient is one of mutual esteem and confidence. The patient who goes behind his doctor's back to get what he calls an unbiased opinion seldom gets the best. On the other hand the doctor who opposes a patient's request for consultation where there is a desire on the part of the patient or his friends for confirmation of an opinion or for help in treatment is lacking in poise, and is often not acting in his own or his patient's best interests. There are, however, some patients who collect doctors' opinions rather than take advice. Such are difficult to help, and they usually drift into the hands of the unorthodox, or crowd the waiting rooms and clinics of foreign specialists whose reputations are not always greatest in their own country. This is not to belittle the value of international consultations. Our work is so responsible and our problems are often so complex that most of us welcome aid from those with greater experience, no matter whence they come. The aim of every true doctor is to help his patient. He can best do so if he knows that his patient trusts him. Money cannot always buy the best. I often think of Kipling's *Last Rhyme of True Thomas*:

And some they give me the good red gold,
And some they give me the white money
And some they give me a clout o' meal
For they be people of low degree

And the song I sing for the counted gold
The same I sing for the white money
But best I sing for the clout o' meal
That simple people given me

My own criterion has been never to recommend or allow anything that I would not permit to one near or dear to me. La Rochefoucauld, probably the greatest writer of crisp epigrams of all time, said: 'It is more necessary to study men than books.' That is most true in our profession, and we must bear in mind that it is a sick, maimed, suffering or sorry fellow-creature that we have to deal with. Oliver St. John Gogarty writes, 'Humanity is all that matters to human beings.' In these days when Robert Burns's wonderful lines 'Man's inhumanity to man' makes countless thousands mourn, seem more than ever true. Let us remember that our profession and we as members of it can and should set an example of true humanity in a world at present almost attuned, or at any rate inured, to cruelty, misery, and suffering. An Edinburgh surgeon, John Chiene, said to his students: 'I always feel when I hurt a patient I have done wrong.' The true perspective in medicine and the true poise in practice are summed up in the golden rule: Do unto others as you would they should do unto you.

ENURESIS IN CHILDREN

A REPORT OF 70 CASES

BY

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This report presents a series of seventy cases of enuresis in children treated for the most part by securing the patient's interest in his own complaint. The cases have been collected during the last seven years from various sources—namely from the children's department of Guy's Hospital during a short period as assistant school medical officer from private practice and from other hospital outpatient departments. The enuresis had in each instance been present since birth, but cases of enuresis in mentally deficient children have not been included.

Object and Technique of Treatment

The procedure was as follows. After taking a detailed history of the number of times involuntary micturition occurred, whether by day and night or by night only of the size of the family and of the presence of enuresis in other members etc. a physical examination was made to exclude organic disease. In the absence of this the child was presented with a small calendar to be kept by the bedside on which the date of each dry night was to be recorded by the patient himself. A small reward was occasionally offered for success in the earlier cases but was not continued as it was found that praise and encouragement were sufficient. In the case of young children unable to read figures the co-operation of the parent was essential. Beyond spending the necessary time to interest the child in these measures and seeing the patient at regular intervals afterwards no treatment was used and no medicines were prescribed.

This very elementary procedure is often all that is required, in the absence of organic disease to put an end to an apparently intractable habit—and frequently a child who has never since birth slept through the night without involuntarily voiding urine can be completely cured in a short while by these means. The treatment is best carried out at a clinic where all cases can attend at the same time and where the atmosphere of competition and enthusiasm that prevails in the waiting room is an adjuvant to success. If, on the other hand organic disease was found and considered to be a predisposing factor appropriate measures were adopted first and the above procedure instituted later when necessary.

Case Reports

The first case is elected because it is typical.

CASE I

David B. aged 7. The youngest of four with no history of enuresis in other members of the family. The parents are of respectable artisan class. He suffered from nocturnal enuresis since birth, with only occasional dry nights. No enuresis during the day. With calendar first week three dry nights second week five dry nights next two weeks ten dry nights cure in four months. Remains cured five years later except for a short period during an attack of measles.

The second is an instance of a successful result in a severe case.

CASE II

Daisy L. aged 9. The elder of a family of two parents of labouring class. Father often out of work but children comparatively well kept. No family history of enuresis. Patient suffered from nocturnal and diurnal enuresis from birth. Had

frequently been scolded without effect—and was unwilling to talk about her habit. Interest easily aroused. Two calendars given one for day and one for night. The mother who co-operated well undertook to see that the child passed urine voluntarily every two hours during the day and night for two weeks. During the first week five dry nights and days during the second five and during the third four. During the next fortnight often went the whole night without having to be disturbed. Cure effected after three months. She has no enuresis now six years later.

The third case was that of a girl of 15 with whom it was not anticipated that the simple method would succeed.

CASE III

Florence T. aged 15. The eldest of three parents comparatively well-to-do. The mother had suffered from nocturnal and diurnal enuresis as a child. The patient had had nocturnal enuresis every night since birth and had many times been under treatment. At the end of a fortnight there was a total of five dry nights—a thing which had never been known in the girl's life before. Cure was effected in five and a half months and has remained permanent for a year.

The following case demonstrates the benefit of clinic treatment.

CASE IV

Kathleen F. aged 9. The second of four children of professional class parents. No family history of enuresis. Enuresis two or three times during the night and occasionally during the day since birth. The child was seen in private practice and no improvement was made by the end of a month. The mother was not co-operating and was indignant that the child was having no medicine. Consultations continued at a clinic where other children were being treated in the same manner. Cure was effected in three months and has remained permanent for three years.

Analysis of 70 Cases

The series consists of thirty-one boys and thirty-nine girls ranging in age from 4 to 10 years with one of 15 years. The age incidence rises gradually from 4 reaches a peak at 8 (twenty-two cases) and then falls off. In forty-three of the cases (61 per cent) there was nocturnal enuresis only whilst the remaining twenty-seven (39 per cent) complained of both nocturnal and diurnal enuresis.

Family Records.—In only five of the cases (7 per cent) was there a history of enuresis in one or other of the parents while ten of the children (14 per cent) had a brother or sister who suffered or had suffered from the complaint. Fifty-one or almost three quarters of the children came from a family of three or more, ten came from families of two and nine were only children. The ratio of hospital-class patients to private patients in the series was 23 to 1.

Associated Conditions.—Preliminary physical examination brought to light the following conditions: thread worms in twenty-five (35 per cent), enlarged tonsils and adenoids in fifteen (21 per cent), undescended testicle in two (2.8 per cent), malnutrition in four (5.7 per cent), pituitary in one (1.4 per cent).

With regard to the tonsils and adenoids group it should be noted that in only three of the cases was enlargement so gross that they were referred for operation first. The remainder were treated beforehand and only a few of these underwent tonsillectomy at a later date partly because of refusal and partly because the surgeon considered it unnecessary. In two of the cases the enuresis cleared up in hospital following the tonsillectomy without further treatment.

Some attempt was made from the parent's account and from observation to classify the children into three temperamental groups—namely, nervous or excitable,

normal and phlegmatic. It must be admitted, however, that the majority (70 per cent) appeared to fall into the normal group—the nervous and phlegmatic totalling 15 per cent. each—and no great reliance is placed on these figures.

Results of Treatment—Since it is difficult to ascertain at what stage cure may be assumed to be permanent, care has been taken to keep in touch with the majority of cases. For those not heard of for some time a follow up has been undertaken as thoroughly as possible. Out of the whole group forty-two (60 per cent) are known to have maintained their cure for periods ranging from eighteen months to six years, an additional seven (10 per cent) are considered cured, but so far have only maintained their improvement for a few months, seven (10 per cent) are not traced, and fourteen (20 per cent) are failures. There are no improved cases. Either a child can be encouraged to stop his enuresis or he cannot, and the fact that he wets his bed only four nights out of seven instead of every night does not mean that he is very much better off, and the method must be regarded as having failed. In the accompanying table the results are tabulated.

Although two of the failures were in those with low intelligence quotients no attempt was made in the group as a whole to correlate enuresis with intelligence. Addis (1936), however, has brought forward evidence to show that bladder control is not necessarily deficient when intelligence is low, and that enuretics have a smaller percentage of low intelligence quotients than non-enuretics. Addis also disagrees with Batty (1933), who considers faulty training, overcrowding, bad home conditions, and dirt to be among the chief factors in the production of enuresis. On this point it is not possible to arrive at any conclusion from the present series, as no systematic inspection of homes was undertaken. It is interesting to note however, that a greater proportion of private patients were cured than hospital patients (76 per cent as against 54 per cent) and that there was a greater proportion of failures in the hospital class than in the private class (25 per cent against 10 per cent).

Enuresis has also been described as a pure conduct disorder (Hamill, 1929), but there were at least three cases in the present series which cleared up following treatment of definite associated defects alone, though how far the results were due to suggestion it is difficult to say.

70 Cases	Cured 42				Cured but only maintained a few months as yet 7				Not traced 7				Failed 14			
	Hospital Class 26		Private Patients 16		Hospital Class 6		Private Patients 1		Hospital Class 5		Private Patients 2		Hospital Class 12		Private Patients 2	
	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal	Noc turnal	Noc turnal and Diurnal
No of cases	17	9	12	4	6	0	1	0	2	3	0	2	5	7	0	2
Average duration of treatment	2½ months	4 months	3 months	4½ months	2½ months	—	3 months	—	—	—	—	—	—	—	—	—
Threadworms found	7	3	5	3	—	—	1	—	—	—	—	1	1	2	—	2
Tonsils and adenoids enlarged	2	—	1	—	2	—	1	—	2	1	—	1	1	2	—	1
Undescended testicle	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—
Petit mal and malnutrition	1	—	—	—	—	—	—	—	2	1	—	—	—	1 petit mal	—	—

With regard to the fourteen failures, two of them were in backward children having an intelligence quotient of less than 90 (Binet and Simon, Herring revision), two patients did not return after the first consultation, and in two of the cases the parents failed to co-operate. One suffered from *petit mal* and did not improve with this method until luminal was added. He then remained dry except when he was having frequent attacks of minor epilepsy. A further two cases, heavily infected with threadworms, cleared up when these were successfully treated, and one commenced to improve under this regime only when large tonsils and adenoids had been removed. The remainder four in number, were completely unaltered.

Discussion

With regard to the aetiology of enuresis many hypotheses have been put forward including heredity, nervousness, peripheral irritation as from threadworms, associated abnormalities such as enlarged tonsils and adenoids, epilepsy etc. In this series none of these defects seemed to be entirely responsible in that many of the cases cleared up before attention was paid to them. In a few of them however they did appear to be a factor of importance.

Again, psycho-analytic studies of enuresis have revealed a connexion between it and the emotional life of the patient, in that it is the expression of unconscious erotic fantasies, or fantasies of persecution, love, and hate, though whether this view is generally accepted among psychologists I do not know.

With regard to the different treatments advocated for enuresis they are too numerous to summarize here. They include belladonna, atropine, ephedrine, pituitrin, camphor, re-education, and suggestion by means of injection of inert substances. Goldman and Malavazos (1936) have utilized hormone therapy. Stocks (1936) reports a series of twenty-eight cases in which thirteen were cured and others improved by calcium. But any idea that a specific drug effect may lead to cessation must be considerably modified by the work of Friedell (1927) who cured 87 per cent of functional enuretics by subcutaneous injections of sterile water, and by Usher (1931), who has used similar treatment successfully.

Whatever may be the psychological significance of enuresis, therefore, and however important the coexistent physical defects in initiating or maintaining it, it seems reasonable to regard the failure to outgrow the habit at the normal age as a neural motor reaction in response

to many different environmental situations and bodily states whether emotional, physical or a mixture of the two, and to assume that in no two cases is it due to an identical combination of factors. At all events it is quite possible to persuade most of the children to change the habit by simple encouragement or by other suggestive means, nor is the task very laborious.

Summary

1 A series of seventy cases of enuresis in mentally normal children is described with the procedure by which they were treated.

2 The results of treatment are analysed and show at least 60 per cent of cures maintained over a length of time by the one method and additional cures by other methods to suit the individual case.

3 Theories of aetiology and different methods of treatment are briefly discussed.

4 Most of the cases may be cured by simple procedures based on encouragement or suggestion.

My thanks are due to Dr H C Cameron in charge of the children's department, Guy's Hospital, and to Dr J L Roberts, school medical officer for the City of Portsmouth, for permission to include in this series cases collected from their departments.

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ACUTE LYMPHOCYTIC MENINGITIS

BY

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Acute lymphocytic meningitis is a specific disease which has been systematically described only in recent years. It is characterized by symptoms of meningitis often preceded by upper respiratory tract infection, certain distinctive findings in the cerebro spinal fluid, and a benign course usually ending in complete recovery.

The modern study of the aetiology of the disease began when Armstrong and Lillie (1934) during the St Louis epidemic of encephalitis in 1933 isolated from a fatal case in a negress a virus which was pathogenic for monkeys and mice. They found that this virus differed in many respects from the virus of encephalitis on which they were working at the time. Later Armstrong and Dickens (1935) showed this virus to be identical with one recovered from a series of cases of acute lymphocytic meningitis. Bengtson and Wooley (1936) reported successful cultivation of the virus on the chorio allantoic membrane and brain of the developing chick. They make the interesting observation that inoculated chicks hatched out were definitely subnormal in many features. Findlay, Alcock, and Stern (1936) isolated a virus from a mouse which had developed symptoms of nervous disease. This virus they showed to be identical with Armstrong's virus, and they further established the identity of the American lymphocytic meningitis with the European type. They were able to demonstrate the presence of antibodies in the blood of a Dublin patient previously reported by Collis (1936), and they give a full account of their studies on two cases in England which they investigated themselves.

They also found antibodies in the blood of a certain proportion of wild mice which suggests that these rodents may form the natural reservoir of the infection. The present position then is that lymphocytic meningitis is known to be widely distributed in Europe and North America. Recently Allen and Spence (1935) have reported six cases from New Zealand. I cannot find any record of cases reported from the Tropics but I propose to describe later on a series of patients who showed all the symptoms of lymphocytic meningitis. This makes it probable that the distribution of the disease is universal.

Pathology

Armstrong and Lillie found that intracerebral inoculation of the virus was usually fatal for mice. The mice die in convulsions after six to eight days. In monkeys the condition is characterized by drowsiness and apathy and recovery is the rule. Findlay, Alcock, and Stern found an intense basal meningitis in their experimental animals. The infiltration extended on to the posterior surface of the upper part of the cord. There was extensive round-celled infiltration in the lining membrane of the whole ventricular system. Armstrong and Lillie found oedema and infiltration of the choroid plexus in two thirds of their specimens. The name chorio-meningitis which is often used to describe the disease, is based on this finding. The lesions are confined for the most part to the meninges and choroid plexus and there is very little perivascular infiltration in the brain tissue.

Symptoms

The clinical symptoms of the disease are hardly sufficient to distinguish it from other forms of meningitis and meninges. It begins often as a cold, sometimes with coryza. Even in the early stages there may be generalized aching. Headache can be intense. One of our cases had a peculiar combination of drowsiness and insomnia. The temperature is raised usually running between 100 and 103 F. Kernig's sign is present in practically all cases.

Armstrong and Dickens say there is usually no paralysis and no definite neurological signs. Allen and Spence however found an occasional extensor plantar reflex in their cases. In one of our cases there were extensor plantar reflexes, weakness of the legs, and retention of urine. Findlay, Alcock, and Stern record paraplegia, praesthesia and cranial nerve palsy in their cases both of which had retention of urine. The cerebro spinal fluid shows characteristic changes. The cells are increased and findings of 50 to 2 000 per cmm are recorded (Armstrong and Dickens). Lymphocytes may constitute up to 100 per cent of the cells and are rarely below 90 per cent. Sugar, chlorides, and urea are normal. No bacteria are found.

Diagnosis

In the Tropics there are special difficulties about the diagnosis of such cases. Apart from diseases like dengue, influenza, and spirochaetosis, ieterohaemorrhagica, which may simulate the condition clinically, there are three comparatively common diseases which give similar cerebro-spinal fluid findings. I refer to tuberculous meningitis, syphilitic meningitis and lead encephalopathy. The important though not the only factors in excluding tubercle are the absence of bacilli, the normal chloride content of the fluid, and the benign outcome of the disease. In the case of syphilis we sometimes have to rely on the Wassermann or other serological reaction. How far these tests are reliable in an individual case it is often

difficult to say. One would expect, however, that the Wassermann or Kahn test would be positive in the spinal fluid in 100 per cent of cases of syphilitic meningitis. Even so one reads of fairly well-authenticated cases of recovery in tuberculous meningitis on the one hand and undoubted cases with normal chlorides and absence of tubercle bacilli on the other hand. In syphilis there can be a 'clinical silence', as Craps (1936) puts it, during bismuth treatment. It is a legitimate speculation that meningitis could occur before the Wassermann reaction became positive again.

Lead encephalopathy can give a picture not unlike that described for acute lymphocytic meningitis, and the cerebrospinal fluid findings are similar, except that the cells are rarely increased to the same extent. In children lead line and paralysis are not to be expected and gross anaemia is rare. Encephalopathy in children and adults due to the use of toilet and face powders containing lead is common, especially among Chinese in the Far East.

Keeping the above considerations in mind, I think it is still possible to report with confidence the occurrence of two cases of lymphocytic meningitis in Malaya. Both were treated in the wards of the General Hospital, Singapore.

Case I

A male European, aged 23, admitted on January 11, 1937, was discharged on January 26. His illness began eleven days before admission with fever, cough and generalized aching. He recovered sufficiently to get up from his bed on the fifth day. On the seventh day the fever returned. He now complained of headache, weakness of the legs and subjective disturbances of sensation—pins and needles. He was put to bed and had to be catheterized on the tenth day. On this day he was said to have coughed up some blood or sputum streaked with blood. On admission to hospital (eleventh day) he looked ill. Prominent symptoms were headache and photophobia and drowsiness with insomnia. The bladder was distended and he was unable to pass urine. Kernig's sign and head retraction were present. Knee jerks were exaggerated, and there was bilateral ankle clonus. The right plantar reflex was extensor, the left normal. Abdominal reflexes were absent. There was no ocular paralysis and the fundi were normal. The lower limbs were weak but there was no gross paralysis and no objective sensory loss. No signs of disease were observed in the chest. Routine examination of blood (for malaria) and stools (for ova), and repeated examination of the sputum (for acid fast bacilli) revealed no abnormality.

Lumbar puncture on January 12 revealed a clear fluid under increased pressure. The count gave 110 cells per cmm, globulin was present. The total protein amounted to 120 mg. and the chlorides to 710 mg. per ccm. Sugar was found. A differential count showed that 85 per cent of the cells were lymphocytes. There were no organisms in stained or unstained smears. The Wassermann and Kahn tests were negative. The lumbar puncture relieved the headache. On the fifth day after admission the patient was able to pass urine and on the sixth day his reflexes were all normal. His temperature which was 101° F on admission fell by lysis to normal on the fifth day and remained so. On January 21 he developed a small swelling at the angle of the mouth. A boil formed which discharged itself on the inner surface of the lower lip after two days. Otherwise his convalescence was rapid and without event.

Case II

A male European, aged 26, admitted on January 28, 1937, was discharged on February 16. On January 27 in the afternoon he suddenly developed severe headache with a temperature of 102° F. His bowels were opened twice that afternoon. The next day he had diarrhoea—six motions. The headache and fever persisted and he was admitted to hospital in the evening. On admission his temperature was 102.6° F and the pulse 100.

He looked ill and was restless. He had nausea and retching and complained of severe headache. The tongue was moist and coated, the fauces were injected. No signs of note in the chest or abdomen. Routine examination and inspection revealed no abnormalities in stool, urine or blood smears. His fever remained at 102° F for two days, after which he ran an irregular temperature varying between 99° and 101° F for the next five days. White blood counts on January 30 and February 1 showed 9,500 and 9,100 cells with 79 per cent and 86 per cent of polymorphs respectively. Stool culture was negative for dysentery and enteric groups as was the blood culture for the enteric group. The Widal reaction was twice negative for *O* agglutinins in enteric *abortus* and *proteus* (X19 and Xk) groups. H agglutinins for enteric were present, but were without significance owing to previous T A B inoculation. On January 30 he complained of severe abdominal pain. There was some general tenderness but no rigidity. The pain continued for the next three days, during

Cerebro-spinal Fluid Findings in Case II

Date	3/2/37	5/2/37	10/2/37
Cells per c.mm	268	116	68
Lymphocytes	93.5%	100%	100%
Polymorphs	6.5%	nil	nil
Total protein	100 mg. °	90 mg. °	80 mg. °
Globulin	Present	Present	Present
Chlorides	703 mg. %	733 mg. %	—

which time his symptoms became aggravated. His restlessness increased and there was that marked alteration in behaviour which is often associated with tuberculous meningitis. Further examination on February 3 revealed head retraction, a positive Kernig's sign on both sides, flexor plantar reflexes sluggish, knee jerks and brisk abdominal reflexes. Lumbar puncture on this date gave a slightly opalescent fluid under increased pressure. There were 268 cells per cmm, of which 93.5 per cent were lymphocytes and 6.5 per cent polymorphs. The sugar content was normal and the protein 100 mg. and chlorides 703 mg. per 100 ccm. Wassermann and Kahn reactions of the fluid were negative. Gram and Ziehl-Neelsen stained smears showed no organisms.

Headache was relieved by lumbar puncture and improvement set in rapidly. Further lumbar punctures were performed on February 5 and 10, the results of which are set out below. On the 9th all his symptoms had disappeared and he was allowed up. His convalescence was rapid and uneventful.

Comment

Birch (1936) who has recently described some cases, gives a good account of the differential diagnosis in temperate climates. In view of what has already been written in regard to diagnosis in the Tropics, elaborate comment on the above cases is unnecessary. In future it is hoped to arrange for biological tests. It should then be possible to decide whether the lymphocytic meningitis which occurs here is identical with that in Europe and in North America.

The fact that in both instances quoted above the patients happened to be Europeans might give a wrong impression of the racial incidence of the disease. Actually they are representative of half a dozen similar cases—Asiatic and European—seen by me in the past two years. My notes in regard to the other cases are not complete and do not justify publication at this stage. I believe the incidence of the disease in Malaya is about the same as it is in Europe and that it affects all races in the Peninsula.

Summary

Two cases of lymphocytic meningitis in Malaya are described. The symptoms were comparatively severe, but

recovery was complete in both cases. Clinically the disease was identical with the acute lymphocytic meningitis of Wallgren.

My thanks are due to Dr Benjamin Chew for the routine investigations and for the blood counts. I am indebted to the Government pathologist, Singapore, and his staff for the Wassermann and Widal tests, and to the Director of Medical Services, Straits Settlements, for permission to publish this article.

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BILATERAL TUBAL PREGNANCY

REPORT OF A CASE

by

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Multiple extra uterine pregnancy is a sufficiently unusual condition to merit a report of any case that may be encountered. Such cases may be grouped under the following three headings:

- 1 Intra uterine pregnancy combined with extra uterine gestation
- 2 Multiple pregnancy in a single Fallopian tube
- 3 Coincident pregnancy in each tube

This last group may be subdivided into two groups, (a) successive or repeated gestation as seen in the case of Ferguson (1899), (b) simultaneous binovular gestation as seen in the cases reported by Launay and Seguinot (1911) and Lockyer (1917). The second subdivision of the last group is undoubtedly the rarest form of multiple extra-uterine pregnancy, and it is often extremely difficult to prove that a given case falls into this category.

Case History

The present case is that of a woman aged 28, married nine years, who was admitted to hospital on February 14, 1937. The following are the particulars:

Menstrual History.—Menstruation started when the patient was 15 years old, regular twenty-eight-day interval lasting three to six days, no vaginal discharge. The last menstrual period occurred on December 24, 1936; there had been no loss per vaginam since then.

Previous History.—There had been one normal confinement eight years ago and one miscarriage at six weeks four years later. Three years ago the patient had pains in the lower abdomen with vomiting and constipation. Two months later she had a similar attack, and six months ago another attack in which the pains were less severe but lasted longer.

Present Illness.—At 6 p.m. on February 13, 1937, the patient suddenly felt faint and had slight pain in the lower abdomen shooting upwards. This pain became worse and caused the patient to vomit. She fainted and does not remember the events very clearly. The vomitus was brownish in colour. During the night the pains came on again, starting in the pelvis and shooting up into the abdomen. They were colicky in nature. She felt she was choking and vomited constantly, and on attempting to pass urine she fainted. On the morning of February 14 the pains were still present, and she also

complained of pain in the right shoulder. She was admitted to hospital on February 14 at 2 p.m. On examination the patient appeared shocked and the skin was cold. She was very pale and the tongue brown and dry. Temperature 97.2° F, respirations 22, pulse 120 thin and running. Heart and chest were clear. The abdomen moved evenly on respiration and was not distended; there was no rigidity but marked voluntary guarding. Very tender in right iliac fossa.

On vaginal examination a soft boggy mass was found in the pouch of Douglas and an ill defined soft swelling in the left fornix. The uterus was very tender and voluntary guarding made adequate examination of the right fornix very difficult.

A diagnosis of ruptured tubal gestation was made.

Operation

Under general anaesthesia the abdomen was incised by a mid line infra umbilical incision and free blood escaped on opening the peritoneum. On exploring the pelvis a mass was found on the left side formed by the left tube surrounded by omentum. Through a gap about one centimetre long on its anterior aspect chorionic tissue and old blood clot were seen protruding. Clamps were placed on the uterine end of the tube, the mesosalpinx and the proximal end of the omentum and the tube and adjacent omentum removed. Clots were removed from the pouch of Douglas and haemostasis secured. Then fresh blood was seen to be escaping from the fimbrial end of the right tube in which there was now observed to be a swelling the size of a hazel nut impinging on to the uterus. The right tube was removed. Some difficulty was experienced in checking the bleeding from the uterine cornu. The right ovary was the seat of a corpus luteum of pregnancy but no similar change was seen in the left ovary. Clots were taken from the peritoneal cavity and the abdomen closed. The patient was given a continuous intravenous saline transfusion for three hours and then continuous rectal saline for forty-eight hours. Apart from some difficulty in getting the bowels to act the patient made an uninterrupted recovery and left hospital in three weeks.

Macroscopically both tubes were found to be thin and tortuous. In the left tube on the anterior aspect about three centimetres from the uterus there was a rent one centimetre long through which chorionic villi and old blood clot protruded. The omentum had wrapped itself round the rent but the adhesions were plastic and therefore of quite recent origin. The foetus unfortunately was not found. The attachment of the omentum to the site of rupture recalls the findings of Paul Bloch in the case reported by him (1931) though in his case the attachment was of longer duration. He too found no trace of either foetus. The right tube was unruptured; there was a swelling the size of a hazel nut at the site of foetal implantation. Haemorrhage had occurred around this area and in the lumen of the tube the amniotic sac was ruptured but no sign of a foetus was discovered.

Unfortunately the specimens were thrown away before a microscopical examination was made. Microscopical study was therefore impossible but the macroscopic examination definitely revealed two areas of foetal implantation separated from each other by the fundus of the uterus. On the left side there was definite rupture and on the right evidence of tubal abortion. The foetus was not recovered on either side. There was only one corpus luteum of pregnancy but according to Lockyer (1917) this is the usual finding though in the case reported by Schoekaert (1928) there were two, one in each ovary. Apart from this Schoekaert's macroscopic findings closely resemble those seen here. That this case is not one of hematosalpinx on one side and tubal pregnancy on the other is proved by the presence of chorionic tissue on both sides and absence of distension of the tube in its whole length as was found in Dorn's case (1891).

The attempt to correlate the operative findings with the history is interesting. The first onset of pain was slight but rapidly became worse and was apparently extremely severe. It was accompanied by internal haemorrhage and shock as the patient fainted and was only semi-conscious for several hours. This apparently was caused by the rupture of the

left tube. The patient's condition then improved, but during the night she was seized with colicky pains, evidently the attempt at abortion of the part of the right tube. In both cases she referred the pain to the centre of the lower abdomen. The physical findings were not helpful in aiding the diagnosis of bilateral tubal pregnancy, but in the light of subsequent findings the extreme tenderness on the right side in conjunction with the tumour on the left should have suggested the possibility.

The question of the relative ages of the pregnancies in this case it is impossible to decide. The periods had been regular till six weeks before the onset of the illness, and it is therefore reasonable to assume that both pregnancies were of equal development. Neither foetus was recovered, so help from that source is lacking. Finally, there was only one corpus luteum of pregnancy. It is probable that this was a case of simultaneous bilateral tubal gestation, but further than this it is impossible to go. The aetiology of tubal pregnancy is still *sub judice*. That inflammatory changes are frequent precursors of tubal pregnancy is however, extremely probable, and in this case the history of three previous attacks of lower abdominal pain is very suggestive of salpingitis being at least a predisposing factor.

Finally, with regard to treatment opinions vary. Lockyer (1917) considers that the possession of a normally menstruating uterus is of great importance to the mental outlook of the patient. Launay and Seguinot (1911) consider that in such cases it is often impossible to tell ovary from tube, that both are grossly disorganized and both may need to be removed. They argue then, that the uterus is superfluous when both tubes and ovaries are removed, and a subtotal hysterectomy permits of better toilette of the pelvic cavity and reperitonization of the raw areas. Beckwith Whitehouse (1935) advocates conservation of the ovaries when possible and also of the uterus, unless special circumstances call for its removal. Undoubtedly if the condition is diagnosed before rupture double salpingectomy is sufficient. After rupture, when the patient is suffering from shock and haemorrhage the minimum of surgical intervention necessary to relieve the condition seems indicated, and therefore the author is in favour of double salpingectomy, conserving the ovaries, or at least a portion of the ovaries, whenever possible.

I am indebted to Dr Fitzgerald for permission to operate and report on this case.

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A special commission for scientists and doctors and others interested in the relation of science and medicine to peace meeting simultaneously with other commissions on Saturday May 29 will be a feature of this year's National Peace Congress to be held at Friends House Euston Road London from May 28 to 31. The chairman of the commission is Professor S. Chapman, F.R.S. of the Imperial College of Science, and the introductory speech will be made by Professor P. M. S. Blackett, F.R.S. The commission will discuss the development of the contribution of the scientific and medical world to the promotion of international peace. All interested organizations national and local, are entitled to appoint delegates to the congress or to the science commission. Individuals can also attend as visitors. Copies of the programme and full particulars are available from the National Peace Council 39 Victoria Street S.W.1

INTRA-EPIDERMIC VACCINATION

BY

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The vaccination of a large number of individuals speedily and efficiently is a problem which often confronts the medical officers of port health authorities. For instance, in the event of a case of small-pox occurring in a large passenger liner the number of contacts to be vaccinated may amount to several hundreds, the quantity of lymph at one's disposal may be limited, and it is imperative that the method adopted should be simple, speedy, efficient, economical, and, above all, leave as few ill effects as possible.

Intra-epidermic vaccination, which has been in practice for ten or more years in Canada and the United States and has also been used exclusively by the medical officers of the Liverpool Port Health Authority for the past three years, satisfies all these requirements, and experience has shown it to have many advantages over the scarification method.

It is *simple and speedy* in that it is merely one intra-epidermic puncture not more than a sixteenth of an inch, and in addition is entirely painless.

It is *efficient* since when the lymph is good and the technique correct a specific reaction never fails to appear.

It is *economical*. The avoidance of wastage of lymph is sometimes of paramount importance when the amount is limited. By the intra-epidermic method an efficient vaccination is obtained with a minute drop of lymph so that a tube indicated for one vaccination is sufficient to vaccinate twelve people or even more. As no dressing is required on the arm at the time of vaccination a great saving in gauze or lint, and bandages or strapping is effected. Dressing is only necessary if and when the pustule appears.

Technique

The usual means by which lymph is transferred from the tube to the arm have never been satisfactory, rubber bulbs for fixing on to the end of the lymph tube after the ends have been broken off do not entirely meet the case, as the bulb is too small to give that delicacy of touch which is necessary for the expression of successive and discrete minute quantities of lymph from the tube, while the unhygienic practice of blowing the lymph out of its tube cannot be too strongly deprecated, and may possibly be the cause of secondary infection.

In the transference of minute drops of lymph from the tube to the arm the following procedure has been found to be eminently satisfactory: the only apparatus required is a soft rubber teat as used in a baby's feeding bottle. At least a dozen persons may be vaccinated with one ordinary small tube of lymph and this number can be increased with practice. The glass tube sealed at both ends and containing the lymph, is pushed through the small hole of the teat until about an inch of it is visible (Fig. 1 A). This end (Fig. 1 A) is broken off, and the glass tube drawn back again until about an inch is still left within the teat (Fig. 2). The free end of the lymph tube is then broken off and by means of gentle pressure with the thumb over the open end of the teat successive and discrete minute quantities of lymph can be expressed (Fig. 3). Whereas by the old methods one tube of lymph was used to vaccinate one or perhaps two persons it will be found that by the method just described one small

tube of lymph will be sufficient to vaccinate a dozen or more persons. Particular care must be taken to maintain a steady pressure of the thumb when expelling the lymph from the tube. Any relaxation will cause the lymph to be drawn back into the test and subsequently lost.

If a large number are to be vaccinated at one time it is an advantage to have two medical officers working together and also a nurse or attendant for the purpose of cleaning the arms with spirit. When the arms have been prepared one medical officer goes down the line,

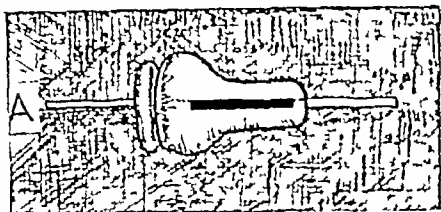


FIG 1

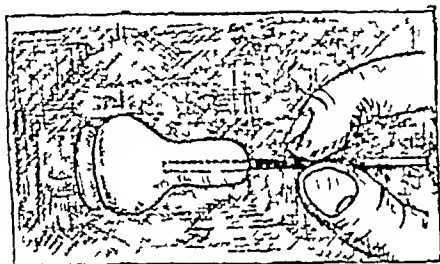


FIG 2



FIG 3

putting the smallest possible amount of lymph on each arm followed by the second medical officer who does the actual vaccinating. In this manner mass vaccination can be carried out speedily and efficiently. The technique is exactly similar to a Schick or a Dick test: a straight solid, sterile needle is held almost parallel with the skin and the point is inserted gently through the drops of lymph under and along the epithelial layer for about a sixteenth of an inch, and immediately withdrawn, by this means a minute quantity of lymph is carried into the layers of the skin on the point of the needle and although so small in amount is sufficient to produce a perfect vaccination, always provided that the individual is not immune. In this way blood is never drawn. It is not necessary to attempt to rub the superfluous lymph into the needle track, and no dressing is required on the arm. The vaccination is inspected after twenty-four hours, and daily afterwards if the exact nature of the reaction is to be recorded. In no case where the technique is correct and the lymph efficient is there failure to react

in one or other of the following forms—namely (a) immune reaction, (b) vaccinoid, (c) successful vaccination.

(a) *Immune Reaction*—If the subject be immune owing either to a previous vaccination or to a previous attack of small pox a faint red spot with slight swelling and some itching will appear over the site of puncture in about twenty-four hours. The reaction reaches its maximum in about forty-eight hours and usually disappears in about four days.

(b) *Vaccinoid*—This is a modified vaccination and appears on either the third or the fourth day in the form of a vesicle or small pustule about a quarter of an inch in diameter. Constitutional reaction is slight and generally unnoticed.

(c) *Successful Vaccination*—No local reaction appears before the fourth day and very occasionally may be delayed until the sixth day. The local and constitutional symptoms correspond with those of an uncontaminated successful vaccination by the scarification method. The absence of any reaction within six days is due either to poor lymph or to faulty technique and in such cases revaccination should be carried out preferably with different lymph and repeated until a reaction is seen.

Advantages of the Method

From observations carried out over a period of two years on vaccinations performed by this method a number of interesting facts have been elicited.

1 It is extremely rare to get severe local or constitutional disturbances. Two ship's companies each consisting of several hundred men were vaccinated one by the intra-epidemic method and the other by the scarification method. The lymph was of the same origin and the surgeons were experienced vaccinators. In the ship's company vaccinated by the former method there were no "bad arms" and none of the crew was off duty, whereas in the latter there were no fewer than 5 per cent who suffered from severe local and general reactions and were off duty for varying periods of from two to five weeks.

2 No dressings are necessary at the time of vaccination.

3 There is a great saving in the amount of lymph used which is an important factor when a large number of vaccinations are performed at one time.

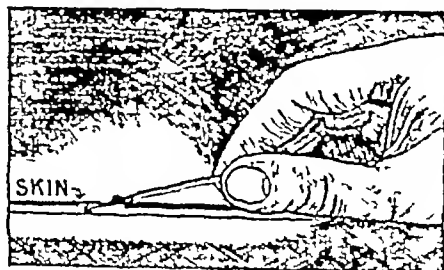


FIG 4

4 There is no necessity to rub in the lymph after the needle has been withdrawn (Fig 4 shows diagrammatically how the operation should be carried out).

5 Many hundreds of intra-epidemic vaccinations have been performed in the Port of Liverpool, and so far there is no history of any case of post-vaccinal encephalitis.

6 There is no trauma arising from the needle puncture and the immune reaction when present is perfectly definite.

This reaction also occurs when the scarification method is used, but is obscured by the trauma

In conclusion there is a tendency on the part of an operator carrying out this method for the first time to think that the small quantity of lymph carried into the layers of the skin on the point of the needle will be inadequate to result in an efficient vaccination, but practical experience will dispel this idea

I am indebted to Dr T Gwynne Maitland medical superintendent of Messrs Cunard White Star Limited for the records of a large number of vaccinations carried out intra-epidermally and to Dr F C Logan medical superintendent of the County Mental Hospital Gloucester for suggesting the method of transferring the lymph from the tube to the arm.

A NOCIFENSOR LESION OF THE HAND

A SYNDROME FOLLOWING TRAUMA AND ASSOCIATED WITH ADDUCTION OF THE SHOULDER

BY

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During the past two years we have been greatly interested in five patients with peculiar circulatory and sensory disorders of the hand following injury to the upper extremity but not due primarily to injury of the hand itself. Most of us are familiar with cases in which after a direct blow to the carpus with or without fracture a profound circulatory stagnation occurs in the hand with an extreme form of osteoporosis in its skeleton. The present cases are different, however, for as I shall show, the cause of the circulatory disturbance in them is to be found in the shoulder region. I have thought it worth while drawing attention to these cases because a knowledge of the possibilities may enable one to be on guard to prevent them and because I believe an appropriate demonstration is provided of a type of disorder recently described by Sir Thomas Lewis as of the nocifensor system

Symptoms and Signs

All five patients were women between the ages of 40 and 50 who had suffered some trauma to the upper limb between two and four weeks prior to the onset of symptoms in the hand. The original trauma varied—there were two cases of Colles's fracture one of fractured olecranon one of fractured clavicle, and one of traumatic arthritis of the shoulder joint. In four out of five cases the right upper limb had been injured. In every case the arm had been immobilized by the side since the injury. The symptoms complained of were pain in the region of the shoulder-joint, severe constant burning pain in the hand and fingers with increasing stiffness and extreme sensitiveness both to touch and to changes of temperature. The signs were practically constant in each case. There was marked limitation of movement of the shoulder with generalized tenderness around the joint. The patients with a traumatic arthritis of the shoulder-joint and with a fractured clavicle were the only two giving a history of injury in that region.

The skin of the hand and fingers was smooth and shiny. The colour varied from red when warm to blue when cold. There was hyperalgesia to pinprick and hyperaesthesia to light touch over the affected area more marked as one would expect, on the flexor aspect. The

interphalangeal joints were stiff and painful. In the older cases trophic changes were commencing in the nails and the fingers. In short, the general picture was similar to that of causalgia. Further clinical examination revealed several features of interest. In two of the patients the pupil on the same side was larger suggesting some degree of cervical sympathetic irritation. This was supported by the finding of a blood pressure raised by ten millimetres of mercury in the affected arm in three patients, one of whom had an enlarged pupil. Radiograph examination was made of the cervical spine, shoulder, and hand in each patient. One had evidence of the common mild cervical arthritis. No cervical ribs and no bony changes in the shoulder were demonstrated. In two patients there was definite osteoporosis of the bones of the hand. This is a common finding in any hyperaemic condition of long standing.

Outstanding Features

In these five cases there are three outstanding features. First they represent only a fraction of the injuries of the upper limb treated in a similar manner, secondly, they showed evidence of sympathetic stimulation at a high level and, lastly there were peripheral circulatory disturbances of a constant type resulting from injury at various levels. It remains to demonstrate an organic lesion capable of producing these features each of which will be discussed in turn.

There can be no doubt that immobilization of the upper limb and shoulder girdle must tend, especially in middle aged women, to produce not only some drop of the shoulder girdle in relation to the bony thorax, but also some distraction of the humerus from the scapula at a lax joint which is dependent more than any other upon muscle tone. This second factor might well be the cause of the constant periarticular adhesions of the shoulder joint. This downward drag must tend to put the lowest trunk of the brachial plexus on the stretch as it runs over the first rib.

Telford and Stopford, following the work of Todd, have shown by histological studies that the sympathetic connexions of the lowest trunk of the brachial plexus are generally found scattered within the trunk. They drew attention, however to the fact that in a certain number of cases these sympathetic fibres may lie close to the periphery and even form a distinct separate bundle in the inferior part of the trunk that is nearest to the first rib. In such a position the sympathetic fibres are more exposed to the risk of irritation or drag across the rib, and give rise to vascular symptoms. We have considered that such sympathetic irritation with resultant arteriolar spasm, would account for the rise of blood pressure on the affected side in our cases and that drag upon the inferior cervical ganglion or its branches would result in similar irritation and be responsible for the slightly dilated pupil.

In searching for the cause of the peripheral circulatory changes we are upon even less certain ground. For many years the posterior nerve roots were thought to contain fibres concerned only with sensation. Then it was found that if posterior nerve roots or sensory cutaneous nerves were cut and their peripheral ends stimulated flushing of the skin was produced. Sir Thomas Lewis showed that these antidromic impulses in the sensory nerves produced in the skin a substance like histamine which dilated the cutaneous vessels a response favourable to trauma and inflammation. He has recently shown that these impulses are not antidromic but are carried by hitherto unknown efferent fibres travelling to the periphery in the sensory nerves. Stimulation of these fibres produces throughout

the area of the cutaneous nerve in which they run not only a flush but indirectly also hyperalgesia. He is inclined to attribute the pain to the liberation in the skin of a substance which in turn directly stimulates the known pain nerve endings. To this efferent system, which is essentially protective, he has applied the term "nocifensor." He considers that the clinical picture known as causalgia results from stimulation of nocifensor fibres by an irritative lesion of a nerve.

We have already some evidence of sympathetic irritation near the lowest trunk of the brachial plexus. Coincident stimulation of nocifensor fibres in this trunk would account for the vascular changes and hyperalgesia in the hand, the part of the limb which is supplied very largely from this trunk.

Treatment

The treatment has aimed at the elimination of this source of irritation. In each patient the shoulder joint was manipulated under anaesthesia in two or three stages to stretch periarticular adhesions. After each manipulation in abduction splint was used, accompanied by treatment with radiant heat massage and exercises to the shoulder and hand. In every case the colour changes and hyperalgesia in the hand improved rapidly. The raised blood pressure and dilated pupil became equal within a fortnight. The pain and stiffness in the shoulder resolved next, but the complete return of movements in the fingers has been tardy.

The relative infrequency of these cases would not appear to justify the universal use of abduction splints in arm injuries, but the study of such cases indicates the need for special watchfulness in middle-aged women with injuries to any part of the upper extremity, the early mobilization of their shoulder-joints so as to prevent adhesions and brachial plexus drag. Should such lesions develop the treatment by manipulations, abduction and physical therapy offers a good chance of cure but demands considerable patience on both sides.

I am indebted to Mr. Norman Capener for permission to report these cases and for his interest and help in preparing this report.

The fourteenth issue of the *Proceedings of the University of Otago Medical School* is dedicated to Sir Lindo Ferguson. This tribute marks Sir Lindo's retirement from the post of Dean of the Medical School which he has held since 1914. He was the first trained ophthalmic surgeon to settle in New Zealand, whither he emigrated in 1883 for reasons of health. During his tenure of the office of dean two important measures were carried through largely by his efforts: the extension of the medical curriculum from five to six years and the transfer of the departments of anatomy and physiology from the main University to fresh buildings adjoining the new Medical School. Besides tributes to Sir Lindo Ferguson the issue contains among other interesting articles papers on hydatid disease and gonorrhoea, the two principal causes of medical research in New Zealand. In view of the mortality from hydatid disease in that country estimated at roughly 15 per cent, septicaemia is regarded as the commonest cause of death. The hydatid has recently been introduced by the Australian College of Tropical Medicine and analysis of this condition in the hospital of 1936 is case record already published. With regard to gonorrhoea, the results of a series of 1000 examinations of men in certain parts of New Zealand and in the Islands of Samoa give a picture of the prevalence of gonorrhoea in the predominant

Clinical Memoranda

A Case of Bronchostaxis

In view of the recent article in the *British Medical Journal* (January 16, p. 109) on bronchoscopic findings in some cases of haemoptysis, the following case is of interest, as it emphasizes the position of bronchoscopy in unexplained haemoptysis.

CASE REPORT

A man aged 48 years was admitted to St. Nicholas Hospital complaining of having coughed up about a cupful of light red frothy blood. The patient, on direct questioning, stated that he had lost some weight during the past eight months and had had a slight cough for six months. He had also had a fair amount of worry during this time. There were occasional vague pains in the chest and some shortness of breath on exertion but no other symptoms. There was no family history of any chest trouble.

On examination the patient was seen to be a healthy looking man with a somewhat anxious expression. The mucous membranes were of good colour. His dental condition was good, and there was no bleeding from the gums; the throat was healthy. No cardiac enlargement was detected by clinical examination or by x-rays. The heart sounds were natural and there were no added sounds. The vessels appeared to be healthy. The blood pressure was 130/80. With regard to the respiratory system the chest was found to be symmetrical, both infrascapular regions were a little flat but the tone of the pectoral muscles was good. The right upper zone appeared to move a trifle less than the left. The percussion note appeared normal. On auscultation the breath sounds were slightly weaker over the right upper zone. They were vesicular and there were no added sounds. The trachea was in the mid line. There was no clubbing of the fingers. No abnormality was detected in the digestive and the central nervous systems.

The patient continued to cough up bright red frothy blood for three days after admission. There was no pyrexia. On investigation the sputum was repeatedly found negative for tubercle bacilli and the Wassermann and Kahn reactions also were negative. Radiographs showed that the heart was not enlarged. Those taken of the lungs revealed a condition of the left apex which the radiologist described as an old healed lesion. There was no evidence of neoplasm. Lipiodol examination showed no evidence of bronchiectasis.

The haemoptysis did not recur, but it was felt that in view of the possibility of a small bronchial neoplasm and the above negative findings a bronchoscopy was indicated. The patient was anxious to know his position and gladly accepted the advice. He was accordingly transferred to St. Giles Hospital for bronchoscopy by Mr. Cawthorne (ear, nose and throat consultant surgeon to the London County Council) to whom I am indebted for the following report:

"*Right side*—A reddish patch of mucosa about the size of a sixpenny piece in the main bronchial wall just distal to the opening of the upper lobe bronchus. This bled on touching. The middle and lower bronchi were normal. *Left side*—Normal. *Summary*—A bleeding patch on the right bronchus rather similar to the condition of the nasal mucosa in epistaxis."

CONCLUSION

A case of bronchostaxis is described, and the value of bronchoscopy is emphasized as a means of establishing the diagnosis in cases of haemoptysis and also in this case of relieving the anxiety of the patient.

I am indebted to Dr. P. Hamill, consulting physician to the London County Council Medical Services, for his advice; to Dr. J. de C. consulting radiologist to the London County Council for the radiological findings; and also to Sir Frederick Menzies, Medical Officer of Health, London County Council, for permission to publish.

JOHN C. ROBERTS, M.B., B.S.

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Recurrent Perforation of a Gastric Ulcer

The following case is sufficiently rare to warrant recording. It does not tend to bear out the contention of W J Mayo, Clairmont, and other surgeons, who drew attention to the fact that complete perforation by the cautery, through the centre of the crater of an ulcer, had been made an essential in technique because of a clinical finding that spontaneous and complete perforation of a gastric ulcer is quite likely to be followed by the cure of the ulcer and of the patient, providing the resulting scar does not encroach on the pylorus.

CASE REPORT

An unmarried man of 24 had been a ship's cook for about a year. His meals were always irregular. For two months before admission to hospital he had suffered from "wind and had a bad taste in the mouth." In September 1933 at the age of 21 he had had two or three glasses of beer, and was sitting down when an acute attack of abdominal pain bowled him right over and he vomited. Classical physical signs of perforation were present.

At the first operation a small perforated gastric ulcer, low down on the lesser curve, was found and over sewn. As there was little exudate the abdomen was not drained and recovery was uneventful.

He remained well after operation and received advice as regards diet and the taking of a bismuth powder. He was told that he should return for further investigation. He gave up his work as ship's cook and became a stevedore, his meals being then a little less irregular. Ten days before admission for the second operation he began to suffer from a dull aching pain in the epigastrium. This lasted up to four hours and was unrelated to the taking of food. In April 1935 at the age of 23 he was walking along the road one and a half hours after tea when he was seized with an attack of acute abdominal pain, as in 1933 which doubled him up. The physical signs were like those accompanying the first perforation.

At the second operation a perforated ulcer was found in the same situation as on the previous occasion. It was embedded, and the abdomen was drained. Recovery was uneventful.

He had no symptoms subsequently until a fortnight before the third admission, when gnawing pains in the epigastrium began to trouble him. They would last most of the day and were unrelated to meals. In January 1937, at the age of 25 while walking he was again seized with acute pain in the abdomen similar to that in the previous attacks. The characteristic physical signs were again present.

At the third operation a small lesser curve perforation was found once more covered by adhesions which sealed it off from the general peritoneal cavity. The perforation was embedded and the abdomen closed without drainage there being very little exudate. He is progressing very favourably.

The patient is healthy looking and well developed. He had always enjoyed good health other than just before each operation. He has been adhering to a prescribed diet as much as possible, and has taken bismuth powder regularly. He is of moderate habits. The family history was irrelevant.

This case presents the following points of interest: (1) the age of the patient, (2) three recurrent perforations, (3) each perforation appeared to be in the same situation, (4) the comparative absence of symptoms.

I am indebted to Mr Russell Howard M.S. F.R.C.S., for allowing me to publish this case.

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Reviews

DISEASES OF THE GALL-BLADDER AND BILE DUCTS

La Vésicule Biliaire et ses Voies d'Excrétion By M. Chiray and I. Pavel. Second edition (Pp. 860. 203 figures. 120 fr.) Paris: Masson et Cie. 1936.

This work by Professor M. Chiray of Paris and Dr I. Pavel of Bucarest, with an account by Dr A. Lomon of the radiology of the extrahepatic biliary tract which occupies more than a hundred pages, including thirteen pages of references must be the most exhaustive volume yet published on the subject. In 1927 the authors brought out a monograph on the gall bladder, reviewed in these columns (1928, 1, 265), and now it has been expanded by the inclusion of the extrahepatic bile ducts and numerous additions throughout, the number of pages and illustrations being increased by a fourth and the price raised, but still comparatively cheap. The authors have segregated the biliary tract from the liver. In the first of the five parts the anatomy and physiology are, as before, summarized so as to bear on the clinical manifestations of disease. Thus the vexed question of the amount of power of contraction possessed by the thin walled gall bladder is discussed in some detail, and experimental and clinical observations made by the authors and others, are brought forward to support the conclusion that the main function of the gall bladder is to serve as a reservoir with the power of active contraction. Later in the section on biliary colic the pain is ascribed to contraction of the gall-bladder, which depends on a sensitive state of the neuro-vegetative nervous system. The functional interrelations of the gall bladder and Oddi's sphincter at the lower end of the common bile duct are said to have been elucidated in 1893 by Doyon in a scientific thesis at Lyons before the well known work of Meltzer and Vincent Lyon. The authors attach great importance to the non-surgical drainage of the biliary tract in disease as practised by Vincent Lyon of Philadelphia.

In this valuable source of reference due attention is drawn to the work done by English speaking writers in North America and this country. The bibliographies are most complete, and the illustrations good.

A SANITARY CLASSIC

Reid's Practical Sanitation. Revised and rewritten by John J. Buchan M.D. D.P.H. Twenty third edition (Pp. 332. 84 figures. 3 plates. 7s. 6d. net.) London: C. Griffin and Co. 1937.

Dr George Reid's handbook for sanitary inspectors, which now reaches its twenty third edition may justly be accounted a classic in the subject with which it deals. For forty four years it has worthily held the field of practical sanitation, adjusting itself in successive issues to the altering circumstances of the time. In view of the lamented death of its original author, and of the rapid progress and extensive new legislation of recent years the occasion has been deemed fitting for a complete recast of the book the charge being entrusted to the competent hands of Dr J. J. Buchan.

The new edition adequately covers the principal divisions of environmental sanitation—namely water supply, ventilation, drainage, house construction, disinfection and food control. The useful digest of sanitary law takes

in the recent Housing Act of 1936, the Public Health Act of 1936, and important statutes of earlier date relating to food and other matters. Among articles of practical interest are those on the taking of water samples, surveys of household drainage and the protection of woodwork in houses. Special attention has been properly directed to the disposal of refuse by controlled tipping, which at present enjoys a wide vogue. Full instructions are given for the management of tips in such a manner as to avoid offence. Bug destruction, another problem of the day, is suitably presented. What is said on milk and milk production, including cowsheds, the dairy milk grades, safe milk, and pasteurization, is admirably expressed in little space—a merit which is equally evident in the ensuing article on meat.

Dr Buchan writes out of wide experience and with a vigorous pen. His book is cordially recommended to all interested in sanitation.

TECHNIQUE OF IONIZATION

The Practice of Ionization. By J Newton Dyson M.R.C.S. L.R.C.P. (Pp. 178. 9 figures. 6s. net.) London: H. Kimpton, 1936.

Until he is actually qualified and in practice a medical student may not realize how small a part of what he has studied has to do with the practical management and treatment of patients. On a given disease his mind may be stored with information about aetiology, pathology, and morbid anatomy, but in practice he may find that all this seems to be of no avail if he has no constructive answer to the patient's primary question, 'But what can you do for me?' For this reason Dr J Newton Dyson's small book will come as a boon to those whose training has given them no knowledge of the value of some of the simpler methods of electrical treatment, since it provides practical information that will enable the physician to carry-out useful treatments with relatively simple equipment in a variety of conditions.

Dr Dyson's descriptions of technique are clear and uncomplicated, so much so that in some cases—for example, in the particularly interesting chapter on special organs—they may make the reader underestimate the amount of experience and skill needed for special treatments. In nearly all the treatments described the author attributes the beneficial results to the effect of the constant current itself because of its ability to "galvanize" into activity tissues which seem to hang fire in the process of healing and, in more localized applications, to its sclerolytic action on abnormal tissue. He uses the term ionization in its literal sense, implying the movement of ions in the tissues and not the introduction of chemical ions from without. In support of the view that chemical ions cannot be introduced through the skin by the constant current, the author quotes Murray Levick's experiment in which a leg about to be amputated was ionized with sodium salicylate immediately before amputation, and immediately after amputation careful analysis revealed no trace of the sodium salicylate. It may be argued that a leg about to be amputated is not in its normal state and is not a good subject for ionization. Against the author's view can be quoted the well known experiment in which rabbits are killed rapidly when connected in a constant current circuit if potassium cyanide or strychnine ions are applied under the appropriate electrode. It has recently been observed in the treatment of climacteric arthritis that when histamine is applied under a pad on the knee the patient's face and neck become flushed after the current has been running for some time.

Although in most treatments Dr Dyson relies on the constant current alone for the purpose in view, he uses a solution of zinc for its sterilizing effect in the treatment of ulcers, sinuses, and suppurative conditions of the nose and middle ear. In these cases the zinc ions do not penetrate into the tissues, but unite with the albumin, forming a superficial layer of zinc albuminate. This occurs only when the zinc ions are liberated by the current, and not when zinc is merely applied as a solution.

Perhaps the chapters on special treatments will prove of the greatest interest to those whose training has been lacking in experience of the value of physical methods of treatment. In some cases the author's enthusiasm allows him to make statements that savour a little of popular medicine—for instance, in connexion with Graves's disease, where he speaks of 'strengthening the nerves which were suffering from the absorption of excessive thyroid secretion'. In those cases of deafness which were greatly improved by ionization the inclusion of more detailed case notes would have been of advantage.

Treatment by ionization has often been in disrepute owing to unsubstantiated claims by its advocates and in writing of its effects it is therefore advisable to be over-cautious rather than sanguine. It is perhaps unwise of the author to cite the use of ionization in rodent ulcer and in lupus; any treatment which delays the application of the Finsen-Lomholt lamp combined with general carbon arc irradiation, in a case of lupus, is not wise.

THE AIM AND SPIRIT OF SCIENCE

What Science Stands For. By Sir John Boyd Orr F.R.S. Professor A. V. Hill F.R.S. Professor J. C. Philip F.R.S. Sir A. Daniel Hall K.C.B. F.R.S. and Professor Lancelot Hogben F.R.S. (Pp. 132. 5s. net.) London: G. Allen and Unwin, 1937.

In this small book are reprinted a number of papers read last year at the Blackpool meeting of the British Association, with a broadcast by Professor A. V. Hill on 'The Humanity of Science'. Taking the definition of humanity as 'the quality or condition of being human' Professor Hill asserts that the scientist at work is a human being like the rest of us, citing Sir Joseph Barcroft as an ideal example. But with reference to the acquired meaning of humanity, connoting kindness or benevolence, there is a natural tendency to regard the creative agent of poison gas and bombing aeroplanes as inhuman. Professor Hill, however, logically points out that science can scarcely be blamed for the misuse which non-scientific people make of certain scientific discoveries. Of those ultimately responsible for such misuse whether dictators, Prime Ministers or even Members of Parliament, only an insignificant minority have any acquaintance with science. Professor Hill gives a striking instance of the humanity of the scientific world. At an International Congress of Physiology at Edinburgh shortly after the war an attempt was made from abroad to exclude the Germans. Thereupon the British physiologists refused to attend unless the Germans were invited. The Germans came, and friendly scientific relations were restored. Professor Hill concludes with the words 'May not the example of science, with its spirit of friendly co-operation, lead gradually to a more reasonable view of international relationships, and so make its greatest contribution of all to human welfare?'

Sir John Boyd Orr, in a paper on 'Nutritional Science and State Planning' envisages as a dietetic goal the production of a higher standard of health than the mere absence of obvious disease. "For public health purposes

the standard which should be adopted is a state of physical well-being which cannot be improved by any change in the diet. Anything below that level should be regarded as malnutrition. Meanwhile the consumption of protective foods is hopelessly inadequate among the poorer classes, indeed, in nearly half the population the diet is below standard. Nor is the present supply of fruit, vegetables, and animal products in this country sufficient to provide for the proper dietetic demands. Increased production and lower retail prices are required. The land, the money, and the knowledge are available. The necessary financial aid provided by the State would secure as dividends improved national health, agricultural prosperity, and a stimulus to trade. A national food policy on these lines would constitute the greatest social reform of our age."

Professor J. C. Philip deals with 'The Chemist in the Service of the Community'. Apart from the important role of chemistry in fundamental research, the application of this branch of science to industrial problems confers many benefits on the public. The purification of a water supply, the isolation of a vitamin, the production of petrol from coal, of creaseless cotton fabric or non-inflammable film, are striking examples of applied chemistry. The remainder of the book is devoted to papers on 'Cultural and Social Values of Science' by Sir Richard Gregory, Editor of *Nature* on 'Knowledge and Power' by Sir Daniel Hall, and on 'Naturalistic Studies in the Education of the Citizen' by Professor Lancelot Hogben.

STATISTICAL METHODS

Statistical Methods in Biology, Medicine and Psychology By C. B. Davenport and Merle P. Ekas. Fourth edition (Pp. 216. 13s. 6d. net.) New York: John Wiley and Sons. London: Chapman and Hall, 1936.

To the middle aged or slightly elderly statistician the new edition of Davenport's—now Davenport and Ekas's—*Statistical Methods* recalls and invites comparison with the past. The first edition appeared in 1899, before the word biometry had come into general use, but when Karl Pearson and W. F. R. Weldon had already some enthusiastic helpers in their attempt to persuade biologists to count and measure. The second edition, published in 1904, was virtually a working handbook of methods devised by Francis Galton, Karl Pearson, W. F. R. Weldon, and their associates, and the full title, *Statistical Methods with Special Reference to Biological Variation* accurately described its scope—namely, that of a practical handbook of methods for the biological laboratory or museum worker.

The present, fourth, edition is entitled *Statistical Methods in Biology, Medicine and Psychology*. The general plan is, indeed, the same as that of thirty-two years ago. The volume is not a critical textbook, but a series of brief descriptions—illustrated by worked examples—of statistical methods in general use, followed by a collection of tables needed in computation. In number of pages this edition does not much exceed that of 1904, but the contents are widely different. The literature of the subject is now so large that the list of references is shorter than that of 1904, because an exhaustive bibliography could not have been printed. A handbook of biometric methods can no longer be simply a summary of Karl Pearson's papers: some methods he approved are obsolete, others he did not favour have been found valuable. But it is a significant fact that of the items in the select bibliography more than a quarter are works of Pearson or his pupils. One might almost use Macaulay's hyperbole

'Turn where we may, the trophies of that mighty intellect are full in view. We are judging Manlius in sight of the Capitol.'

To the earlier generation "Davenport" was a most valuable book, it could be put in one's pocket, and, as the tables included a table of logarithms, one could make shift to do statistical work with its help alone—as the reviewer discovered when on active service. Workers of to-day are more luxurious, and methods more complex. A beginner might find 'Davenport and Ekas' too concise to keep him from error. But to the trained statistician it will be a valuable pocket-book. If he takes it, and "Chambers, into the country he will be able to do some work without a calculating machine."

Notes on Books

How Animals Behave the seventh volume of the 'Science of Life' series by H. G. Wells, Julian Huxley and G. P. Wells forms the bridge between the six earlier volumes dealing with biology in general and the two concluding volumes devoted exclusively to man. It is published by Cassell at 4s. The authors state that two only of the various streams of evolving animal life have attained outstanding success—the vertebrates and the arthropods. Each represents a different line of mental development, the former developing intelligence, the latter relying upon instinct. Even in the co-operative communities of insects which store food and have a real economic life all behaviour is shown to be based upon the power of automatically performing unlearned actions. Anatomical considerations have limited the size of the insect's brain. With regard to vertebrates instances are given of the inferior brain power of the lower branch of mammalian stock—the marsupials. For example, the Tasmanian devil and the marsupial wolf are almost untameable, in contrast to the placental wolf, which has been tamed into the domestic dog. The final chapter, devoted to monkeys and apes, concludes with a speculation regarding the result of fifty generations of selective breeding for intelligence of chimpanzees. They are so near the critical point at which language and abstract thought begin, could one help them across it?

The *Proceedings of the Second International Congress for Microbiology* held in London in 1936, have been published under the editorship of Dr. R. S. R. Joiner Brooks. The papers, which cover a wide range, are given in abstract only. The president states in the preface that the Executive Committee decided that this method of publication should be adopted in the belief that full publication of communications to international congresses was no longer called for. The abstracts are supplied by the authors and appear in English, French or German. The volume is worthy of perusal by all medical men and four of its eight sections which include such subjects as virus diseases, pathogenic streptococci, bacteriology of milk, blood groups, and immunization are of special interest.

The first volume of the forty-seventh series of *Internal Clinics* (Philadelphia: Montreal and London: J. B. Lippincott Company) 4 vols. quarterly 50s. the set) contains nineteen articles dealing with renal diseases, hyperthyroidism and thyroid deficiency, respiratory diseases, cardiovascular diseases, the teeth as an aetiological factor in disease, chronic alcoholism as a neurosis, acute meningitis following sinus infection, the purpose and scope of diagnosis and recent advances in carbohydrate metabolism. The papers calling for special attention are those on the nephrotic syndrome in adults by Drs. Eugene M. Landis and Kendall A. Elsom of the University of Pennsylvania, on therapeutic hyperthyroidism by

Dr Israel Bram director of the Institute for the Study of Goiter, Upland Pennsylvania, on lobar pneumonia by Dr L C Montgomery physician to the Montreal General Hospital on carbon dioxide in the treatment of circulatory disorders by Dr Walter S Maclellan medical director of the Sanatoga Spa, New York and on the basis of prognosis and treatment in hypertensive disease, by Dr Robert Wilce dean and professor of medicine, Medical College of South Carolina

Diabetes A Modern Manual by Dr ANTHONY M SINDONI jun (McGraw-Hill Publishing Co 8s 6d) will not help the English doctor in charge of a diabetic patient nor, we feel the diabetic himself. Many good primers on diabetes have been written in America, but we cannot think that this is a valuable contribution. At first the Socratic method of question and answer is adopted to educate the ignorant patient. The other sections are concerned with What to Know and What to Do, and cover the same ground without any great clarity or added usefulness. There are many errors and little clear information. Few will approve of the advice to give insulin fifteen minutes after a meal instead of before. This is based on an idea contrary to accepted knowledge, that insulin acts appreciably from the moment it is injected and that carbohydrate food is slower in being absorbed. The arguments advanced for this (the only

new idea in the book) are so muddled and contradictory (pp 102, 103) as to demand revision on the author's part.

The little work on clinical observation *Der Klinische Blick* (Vienna Julius Springer RM 4 80 paper RM 6 30 bound), which Dr ERWIN RISAK has dedicated to his teachers, Franz Chvostek and Hans Eppinger, is divided into three parts, devoted respectively to the doctor, the sick room, and the patient. In the first part he shows how much the practitioner can learn about the patient by the use of his unaided senses of vision, hearing, smell, touch, and taste. The nature of the sick room in the patient's own home as distinct from the hospital ward may throw some light on the disease especially in tuberculosis, rheumatism, malnutrition, psittacosis, and diabetes. The third part which forms the bulk of the work, shows the information that can be derived without instrumental or laboratory examinations from a study of the patient's temperament, position in bed, sex, age, size, weight, skin, hair, fat, blood vessels, lymphatic glands, muscles, bones, vertebral column, hands, feet, eyes, and ears.

The Art and Craft of Loch Fishing by H P HENZELL is published by Philip Allan at 10s 6d. Many books have been written on trout fishing in general, but few on the specialized branch of loch fishing. The author has succeeded in making his subject interesting and instructive. He gives a list of centres and hotels.

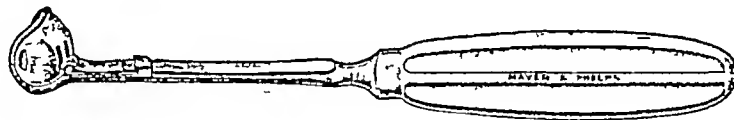
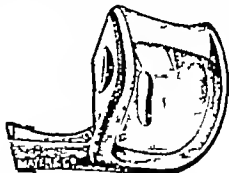
Preparations and Appliances

AN ADENOID CURETTE

Dr M O ABDEEN (Alexandria) writes

In using the ordinary adenoid curettes there are usually two drawbacks: (1) the mucous membrane of the nasopharynx is scraped when the adenotome is used vigorously with the result that bleeding or non bleeding tags are left

to keep it away from the mucosa of the nasopharynx and pharynx, even with vigorous use of the adenotome the upper edge is level with the sides so as to crush the adenoid bed while it is shaved and to minimize bleeding a shallow notch in this upper edge allows the cutting edge to be raised



behind at the time of the operation and scar tissue formation follows. (2) the uppermost part of the adenoid is sometimes left behind. In order to avoid these two defects I have devised the adenotome illustrated. The cutting edge of the blade is raised one millimetre from the sides of the curette

to remove the uppermost part of the adenoid, the lateral notch facilitates the opening of the box.

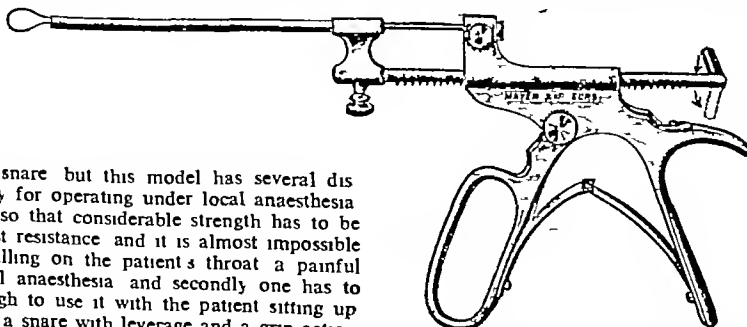
This curette was satisfactorily made for me by Messrs Mayer and Phelps 59-61 New Cavendish Street, London, W1.

NEW TONSIL SNARE

Mr GEOFFREY H BATEMAN F.R.C.S. (London W) writes

Messrs Mayer and Phelps of 59-61 New Cavendish Street, W1, have made up for me a new tonsil snare. Previously

comes these difficulties. It has considerable leverage and the finger part of the grip is movable in relation to the end of the snare. One is thus able to cut smoothly against considerable



I have used the Eve snare but this model has several disadvantages particularly for operating under local anaesthesia. There is no leverage so that considerable strength has to be used to close it against resistance and it is almost impossible to do this without pulling on the patient's throat a painful proceeding under local anaesthesia and secondly one has to get one's arm very high to use it with the patient sitting up. I therefore looked for a snare with leverage and a grip action. The Tyding snare is of this type but its disadvantage is that the finger part of the handle is fixed in relation to the point of the snare and therefore in closing it one moves the end of the snare and pulls on the pharynx. The new snare over

resistance without effort or jerk. The wire loop is passed over the tonsil and the loop shortened by pushing forward the barrel until resistance is felt, then the tonsil is cut off by several movements of the handle.

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THE HUMAN NEEDS OF LABOUR

To most readers interested in social problems the name of Mr Seebohm Rowntree recalls an important educational experience, for his study of the poor in York was their first introduction to the scientific investigation of a social evil. Charles Booth's great work was too long for the ordinary medical student to tackle, Mr. Rowntree's book was of manageable size and excited both painful and pleasurable feelings. It was painful for the ordinary middle-class youth to realize how terrible were the conditions of many fellow-citizens, it was pleasant to realize that the problem could be accurately enunciated and studied by methods not too difficult for the general reader to follow. Those who had Mr Rowntree for their first teacher are now middle aged, they, and perhaps their sons and daughters, will learn much from his latest book.

In *The Human Needs of Labour*¹ he has followed essentially the plan which informed the research of thirty-six years ago. This book is rather more statistical and rather less dramatic than the earlier one, but the guiding principle is the same. Mr Rowntree has deduced from the work of specialists in various fields the minimum requirements in food, drink, shelter, clothing, and those "luxuries," hardly to be distinguished from human necessities, which must be provided in a community of civilized people. He has worked out the cost of this minimum standard and set out the results. But, unlike many writers, he does not do sums *in vacuo*. With the help of, say, the British Medical Association's reports on nutrition and diets—which Mr Rowntree has found of great value to him—a few Blue Books, a calculating machine, and patience, a much less experienced investigator than Mr Rowntree could produce costings for families of different sizes. Indeed, given a little more patience and a few more Blue Books, one could price the needs of the whole of the families of the nation. But under the existing conditions of economic life these calculations are of theoretical rather than practical importance.

What Mr Rowntree has tried to discover is the effect of fixing a minimum wage, payable to all employed persons irrespective of their individual

family requirements. He set himself the following problem. Given the actual distribution of families of different sizes in York, when the inquiry is limited to families the mothers of which were at the time of inquiry 40 to 45 years old, assuming that up to the age of 14 years children are not earners, and assuming the minimal requirements of individuals to be known, then, working through the data on various flat rates of wage, what proportions of the children in these families would have been living for one or more years below the minimum? The arithmetical solution of this problem is indeed a heroic piece of labour. Mr Rowntree has found the solution. These are the kind of results which emerge. If our flat rate were based upon the minimal needs of families with two children, then 63.6 per cent of the children of the population of fathers receiving this flat rate would for a shorter or longer period be inadequately provided for and 58.8 per cent would be in this condition for five years or more. If three children are reckoned these percentages become 42 and 34.5, even with five children reckoned the figures are 10.4 and 4.5. "In view of these facts," writes Mr Rowntree, "it will, I think, be clear that any suggestion that minimum wages should be based on a standard providing for less than three children per family, as some authorities have recommended, is entirely ruled out of court."

The reader should be quite clear what Mr Rowntree has done. He has not calculated what would be adequate for a population at a future date, when, according to some, families of more than two children will be curiosities. He has taken the gross amounts required for families of different sizes actually in existence, allocated the particular amount to every family in his sample, and then worked out how many children would go short on each flat rate. This is an investigation of fundamental importance. It is of course open to criticisms of two kinds. Methodologically considered it is retrospective. It deals with a batch of families in existence at the date of the census of 1931 and almost complete, without paying too much attention to prophets, it is fair to believe that the census of 1941 would reveal a smaller proportion of large families in a sample taken in precisely the same way. Again it is possible that a York sample is not fully representative of the family structure of the country as a whole. These are questions of statistical method. Material criticisms might be directed to the determination of standards. Some might hold them to be too high, many more would think them too low. Mr Rowntree discusses these points quite judiciously and his arguments must be left to the reader's judgement. He concludes that

a minimum weekly wage of fifty-three shillings in towns, perhaps rather more in great cities, and of forty one shillings in the country are, at 1936 prices, necessary "I know," he writes, "it will be impossible in all trades to insist on such wages at a Trade Board's first meeting. Industry must have a breathing-space in which to adapt itself to fresh conditions. This, indeed, constitutes the argument for fixing wages by a number of Trade Boards rather than by the enactment by Parliament of a flat rate. But a definite limit must be set to the breathing-space. Doubtless sweeping changes must take place in many industries before they can conform to the new policy, but if it is inflexible, these changes will be made. Industry after all exists for citizenship, not citizenship for industry."

It is something of an anticlimax to say this is an important book. That should already be obvious. Without, however, entering into detail which would cover many pages, it is impossible to say more.

A PHYSICIAN'S SURVEY

Osler in one of his charming lay sermons to doctors recommends that the individual should at not too frequent intervals—he suggests the recurring anniversary of the birthday as appropriate—devote a short time to reviewing his attainments, determining how far they have fallen short of the aspirations with which he set out, and what circumstances have contributed to this default, so that if possible these may be avoided in future. Having thus as it were come to the surface for a breath and look round, he is advised to set a course more closely in the direction of his ideals and then to dive into work again without too much heart-burning. It is proper, too, that from time to time a leader of the profession should direct our thoughts to a survey of the scope of our work, the aims of our profession, the relationship of the profession to the community, the services we owe the community and the reciprocal advantages we may expect in return. Such a survey is offered by Dr R. A. Young in the annual oration he delivered before the Medical Society of London, published elsewhere in this issue of the *Journal*. Approaching the subject as an artist Dr Young briefly sketches the development of graphic art from the primitive line-drawing of the savage or school child to the finished pictures of the supreme artists, and shows how two great secondary factors are added in these to the accuracy of line—namely, perspective and poise or balance. Dr Young then proceeds to apply the analogy to the problems of

present-day medicine, using the term perspective in a sense removed from the original notion of a science of optics—namely, the proportion in which the parts of a subject are viewed by the mind.

In some respects the advance of medicine appears to have turned a corner in this generation. The workers of the early nineteenth century received from their predecessors a few clear descriptions of clinical entities which we now regard as classical, and many so disproportionate as to be rather caricatures. The work of morbid anatomists, and later of physiologists, and later still of biochemists, of the last fifty to eighty years has added details and shading sometimes increasing the definition, often blurring the pictures. It has remained for recent times to look less at the disease entity, or rather to envisage it in terms of its relation to the diseased body, as Dr Young says, "to discover and to study the causes of disease and the nature of the disturbances of function in the sick—in effect, the third dimension of the disease." We have thus advanced from the position advocated by Osler, or rather his advice wants restatement. He recommended an immersion in work, which in another sermon he described as the master-word in medicine. In his own activities, however, though paying lip service to work, he was led by his genius to use a balanced judgement, to work, as the old artist mixed his paints, "with brains, Sir." No amount of labour can bring about advances unless the isolated facts are associated in a working hypothesis, which can be tested by further observations and which shows the lacunae that still need to be filled in. Viewing the subject as a whole we may be led to discriminate between essentials and non-essentials. Dr Young suggests that this action of getting the perspective, getting the facts of diagnosis and prognosis not only in their relative position but in their relative proportion, is an essential function of the trained physician, and is to be borne in mind in the preparation and training of medical students.

The more enlightened social sense of to-day demands that the patient should be regarded not only as a diseased person, but as a possibly disease-bearing person among his fellow-workers and the community. Potentially infective patients are treated from the more general point of view, as well as receiving individual care. It is especially in the psychological aspect of disease that new views are developing—the psychological additions to physical disease, the care for the surroundings of the sick man and the control of the environment in which he is being treated so that as far as possible every hindrance to his progress may be

removed. More attention is paid also to the stresses and anxieties of the modern rush and speed of work in their deleterious effects on the nervous system and on resistance to disease. This enlargement of the field of medicine has brought changes in two directions, changes which readily lead to fallacies and false doctrine unless watched. The theories or hypotheses may, on the one hand, with imaginative workers far exceed the legitimate inferences from the facts observed, may indeed become fantastic, leading to useless and harmful methods of treatment. On the other hand, the increased lay interest in the general aspects of disease is often followed by impatience at the apparent slowness of real progress, and a tendency to pursue brilliant but unsubstantiated generalizations. Members of the medical profession must therefore be aware of these psychological repercussions on their work. They must be prepared to test, to accept and incorporate in their armamentarium methods that are useful though unusual, to discard those that are harmful though fashionable. They must further be prepared to guide and safeguard the people as a whole by counsel in private practice and in public concerns. There may be difficulties in performing this double duty, but modern conditions of social life demand that these difficulties should be fairly faced by scientific medicine. Science may never be dogmatic but the art of medicine consists in applying science to the alleviation of the sick and the benefit of the community, and there is need for clarity of vision and balanced judgement.

TECHNIQUE OF SYMPATHECTOMY

Since its introduction as a therapeutic measure two unexpected facts have emerged with regard to the vascular effects of sympathectomy. First, the full vasomotor relaxation which occurs immediately after sympathectomy is transient the vessels regaining a considerable tone five to ten days after operation, secondly, the improvement produced by ganglionectomy in vascular maladies such as Raynaud's disease appears to be more striking in the lower than in the upper extremities. Two independent series of observations on the experimental animal have sought to explain these facts and the results may have important bearing on the choice of operation in man. R. T. Grant with Camp, Graybiel and Rothschild¹ has shown that the regain of vascular tone which takes place in the rabbit's ear during the first few days after sympathectomy is accompanied by an increased reactivity of the denervated vessels to such substances as adrenaline, histamine and pituitrin. The denervated ear also becomes paler and cooler during exercise—a vasoconstriction attributed to the release into the circulation of a chemical substance

which comes from neither the adrenals nor the pituitary, since the ear still pales with exercise after these organs have been removed. It was also found that the enhanced responsiveness to adrenaline is less after pre- than after post ganglionic section and the authors accordingly suggest that "if the phenomena of the regain of tone are the same in man as in the rabbit then it would seem that when operative measures are undertaken for the relief of peripheral vascular disease preganglionic section is preferable to postganglionic section." Rather similar observations have recently been published by White, Okelbury, and Whitelaw.² While they differ from Grant in attributing to the release of adrenaline the vasoconstriction occurring in the denervated ear during exercise finding this almost abolished by removal of one and denervation of the other adrenal these workers also observe that the sensitivity of denervated vessels to adrenaline is greater after post than after pre ganglionic section. They find that in man adrenaline produces a much greater constriction in the sympathectomized finger than in the sympathectomized toe, and attribute the more satisfactory therapeutic results obtained in the lower extremity to the preservation of the postganglionic fibres to the leg in the ordinary operation of removing the second and third lumbar sympathetic ganglia in the familiar operation for the upper extremity in which the inferior cervical and first and second dorsal ganglia are removed the postganglionic fibres degenerate. Acting on this suggestion, Smithwick has lately introduced an operation in which the sympathetic supply to the upper extremity is interrupted but the postganglionic fibres do not degenerate. The operation consists in cutting the sympathetic chain below the third dorsal ganglion and resecting the proximal 2 cm. of the first and second dorsal nerves. A less drastic operation has been recommended in this country by Telford³ who crushes and divides the sympathetic cord below the third dorsal ganglion and divides the white rami from the second and third dorsal nerves. Smithwick's operation is said to lead in Raynaud's disease to much more striking improvement than does ganglionectomy, Telford also points out that the disfiguring enophthalmos and contracted pupil resulting from ganglionectomy do not arise after preganglionic section. At present then there are strong suggestions that preganglionic section is the operation of choice in peripheral vascular disease but final judgement must be withheld until the method has had more extended trial and until it is known to what extent the sympathetic fibres regenerate after this less drastic intervention.

THE RENAISSANCE OF OTOTOLOGY

In his presidential address to the Section of Otology of the Royal Society of Medicine at the opening of the present session Mr. Douglas Guthrie took as his subject "The Renaissance of Otology." Mr. Guthrie justifies his use of the term "renaissance" because there was in otology dating far back to the sixteenth century as the familiar names of Eustachius, Valsalva and Fallopius

¹ *Arch. Neurol. Psychiat.* Chicago 1936 38 1251
² *Brit. J. Surg.* 1935 23 448

suffice to show but he takes as his heroes Toynbee Hinton and Wilde, who transformed otology into a serious branch of medical practice. The first and greatest of these three was Toynbee, who adopted the study of aural pathology at a time when the practice of otology was largely in the hands of quacks, and his pathological researches have formed the foundation of all later advances in both pathology and surgery. Hinton followed him and elaborated his work and occupied after him the same home in Savile Row, where subsequently Dalby and finally Arthur Cheate lived. Hinton was a mystic and philosopher as well as an otologist, and exercised less influence than Toynbee but his beautifully illustrated book is a permanent contribution to the clinical side. Sir William Wilde, the father of Oscar, practised in Dublin. His contribution was on the clinical side also, and in his book on aural surgery he gives vivid clinical descriptions but much of it is devoted to controversy expressed in the forcible style peculiar to his period. Mr Guthrie relates also many other details throwing light on the otology of the first half of the nineteenth century, but his short sketches of the lives and work of these three men fill most of the paper, which makes a delightful historical document. It is proper to add that this paper was given to the Otological Section and not to the Historical Section of the Royal Society of Medicine and it seems right that the history of the various branches of medicine should form part of such study if their philosophy is to be appreciated fully as well as their practice followed with enlightenment. The Historical Section might flourish more if it were able to maintain a closer contact with the other Sections especially in the matter of publications instead of allowing the history of medicine to be regarded as a detached and isolated study. The address by Mr Guthrie is superior both in material and presentation to much that is offered to the Section of the History of Medicine and is a powerful argument for co-operation.

PINK DISEASE

The increased interest in pink disease shown in this country since the appearance of the masterly account of its principal features by A. J. Wood and I. Wood¹ is paralleled in France by a series of communications from which it seems clear that there was an outbreak of the disorder in 1934 and 1935. E. Leenhardt and J. Boucomont give an account of special investigations of forty-nine patients seen at Montpellier. Lumbar puncture in uncomplicated cases revealed a clear fluid and an absence of any constant change. No abnormalities were found in the blood or in electrocardiograms. The capillarscope however showed early dilatation of the capillary loops with a normal speed for the circulation within these loops and it is claimed that these observations together with others make capillaroscopic examination a definite method of distinguishing pink disease from acrocyanosis. C. Beutter² records observations of 127 cases of pink disease in the region

of the Loire of which 102 were examined by himself, during 1934 and 1935. There was a seasonal incidence during March, April, May and June. Males and females were equally affected. Although there is a general impression in this part of France that the disease is commoner in country districts in the series reported the incidence was equal between country and town. The altitude at which the children had lived made no difference. Discussing the possible infective nature of the condition Beutter cites the case of a child of 2 years who had been for several months in hospital with vague digestive symptoms and developed pink disease two months after being in contact with an infant suffering from an infectious form of this malady. M. Lamy and Madame Proskourakoff,³ of Grenoble from observation of fifty-two cases note a rather increased incidence from April to October and suggest that the disease "incubates" during the winter, lack of sunshine perhaps being a contributory factor. They therefore use ultra-violet light in treatment and also prescribe a sedative of the barbiturate series. L. Barre,⁴ reporting thirty-two cases of pink disease from Avignon and its neighbourhood again emphasizes the increased number of cases seen in the late winter and early spring; these cases appeared over a period of two years, were mild in type, and apparently not infectious. One patient severely affected with mutilation of the hands died of bronchopneumonia. Treatment appeared to make very little difference though it is admitted that the ultra-violet therapy was inadequately applied as most of the patients were isolated in small villages. Pink disease in a European child born in Nairobi and apparently the first case to be reported from Kenya has been recently described by R. W. Bowles.⁵

TREATMENT OF TRACHOMA

It is regarded almost as an act of ancestral piety for a writer on the treatment of trachoma to mention that copper has been used from time immemorial, and that no modern treatment has succeeded in displacing it. Even to some of the initiated copper and the treatment of trachoma appear to be inseparable. That this is not the case is apparent from a paper read by M. A. H. Attiah and A. F. El-Tobgy to the Ophthalmological Society of Egypt. They have little enthusiasm either for the parenteral administration of copper or for such things as tracholysin, adenolysin, protein shock, Jacobson's solution, injections of foreign blood, autoserotherapy, and vaccine therapy. These attempts at general treatment would seem to have no theoretical basis and to give no results in practice. With these views most ophthalmologists experienced in the treatment of trachoma will be in agreement. There is much in this condition that tempts us to look for a general underlying factor and the failure to establish a clear local pathology is an additional temptation to take a wider view. None the less we are on firmer ground in re-

¹ *British Medical Journal* 1935 1 105

² *J. Med. Lyon* 1937 18 105

³ *Ibid* 109

⁴ *Ibid* 112

⁵ *Ibid* 115

⁶ *E. Afr. med. J.* 1937 18 340

⁷ *Bull. Ophthal. Soc. Egypt* 1936 19 97

garding trachoma as a local affection. Certainly the results of local remedies are alone worth considering. Perhaps the first step in the management of a case of trachoma is to appreciate the varying clinical pictures and the different responses to treatment that the affection gives in its various phases. The newer methods of treatment cover a wide range. Of the metallic preparations, gold in the form of the sodium salt of aurothio-benzimidiazolcarbonic acid, marketed under the name of triphal, has been of some value, especially in pannus. Copper itself, which is to be used cautiously in the presence of corneal lesions, is applied as a paint in a concentration of 5 per cent. This appears to be more successful than the various proprietary preparations of copper salts that have been produced. Tragynol, an ointment containing copper and chaulmoogra oil, is a possible exception and is said to be useful in cases of papillary hypertrophy. Chaulmoogra oil, though at first its value was doubted by many, seems to be gaining favour, while hydnoceol, a combination of another vegetable oil with creosote, may also have its use, especially in superinfections. Physiotherapy on the whole has proved disappointing, but Attiah and Tobgy report that electric heat has favourable effects on pannus. Surgical treatment along the lines of the classical Heisrath and Kuhnt operation periodically finds new advocates, among whom is Martin Cohen¹ of New York. This plethora of methods points plainly to an unsatisfactory state of affairs, and is eloquent testimony against the belief that copper is the be-all and end-all in the treatment of trachoma, which at its best is still a tedious business. But the application of a saturated solution of quinine bisulphate as a paint in the follicular stage, as advocated by Selinger,² and painting with a 1 per cent solution of perchloride of mercury in the stage of freedom from follicles, which precedes active scarring, give results that are satisfactory in most cases. The value of copper when its use is restricted to the stage in which scarring is actively proceeding is undoubted, but the abuse of this valuable agent must be held responsible for much damage.

PNEUMONIA DUE TO FRIEDLANDER'S BACILLUS

The demonstration that the common cause of lobar pneumonia was a diplococcus and not the capsulated Gram-negative bacillus previously described by Friedländer led many to disregard the aetiological importance of the latter organism and to look upon it merely as a secondary invader. And although from time to time evidence has since been advanced to show that Friedländer's bacillus plays a primary part in a definite though limited proportion of pneumonias, quite a number of workers remain doubtful of the truth of this. This view finds expression in a paper published by Baehr, Schwartzman and Greenspan in 1933.³ These authors believe that Friedländer's bacillus is concerned primarily with infections of the biliary system, the genito-urinary tract, or perforating lesions of the in-

testine, and they suggest that its presence in the lungs in pneumonia is in many instances due to pre-agonal or post-mortem invasion of the blood stream with this organism from the intestinal tract. In a recent paper Solomon⁴ disputes this point of view, and reasserts the primary importance of Friedländer's bacillus in some cases of pneumonia. He describes thirty-two cases which occurred in a series of 5,000 cases of pneumonia at the Bellevue Hospital, which gives an incidence of 0.6 per cent. In nearly all these thirty-two cases (exact number not stated) Friedländer's bacillus was isolated from the sputum or juice obtained by lung puncture early in the disease. Blood cultures were made in twenty-seven of these cases and in nineteen a positive finding obtained, although unlike pneumococcal pneumonia the bacteraemia was mild or minimal. It is important to note that in seven cases Friedländer's bacillus was isolated from the sputum—an observation confirmed by lung puncture in four—from one to eight days before it was isolated from the blood, and that in six other cases it was isolated from the sputum or lung juice or both, whereas blood cultures remained sterile. As Solomon points out, these facts are certainly not in keeping with the view that this organism reaches the lung as the result of agonal invasion of the blood stream. Furthermore, in only two of these thirty-two pneumonias was any other organism associated with Friedländer's bacillus, and even here the evidence suggested that it was playing a primary part. In one patient *B. friedländeri* alone was isolated from the sputum and the blood early in the disease; the associated organisms (pneumococcus Type I and *Streptococcus viridans*) appearing later, and in the other case the associated organism was a Group IV pneumococcus, which was readily separated from the pneumobacilli present in the sputum by mouse inoculation; the latter organism alone appearing in the heart's blood. It must be admitted that Solomon makes out a strong case for Friedländer's bacillus as the primary causal agent in some cases of croupous pneumonia, and it would be of interest to know whether similar cases occur in this country. He draws attention to certain clinical features of these cases—such as the less regular, low-grade pyrexia, the rareness of herpes, the characters of the sputum (brick-red homogeneous emulsion of blood and mucus like red chocolate pudding) which serve to mark off Friedländer pneumonias from those due to the pneumococcus. The consolidation was lobar in the majority—84 per cent of these cases—and where typing of the organism present was resorted to it was found to belong to Julianelle's Type A. Recovery took place in only one of these thirty-two cases, and in five of them specific antiserum was used without apparent effect on the course of the disease.

Dr Edwin Bramwell will deliver the Croonian Lectures before the Royal College of Physicians at London on May 25, 27, and June 1 at 5 p.m. His subject is *Clinical Reflections upon Muscles, Movements, and the Motor Path*.

¹ Arch. Ophthalm. Chicago 1937 17 347
² Amer. J. Ophthalm. 1935 18 631 Arch. Ophthalm. Chicago 1936 15 31

³ Trans. Ass. Amer. Physicians 1933 48 353

⁴ J. Amer. med. Ass. 1937 108 937

INFLUENZA AND INDUSTRY

BY

W BLOOD, M R C S

Medical Officer J Lyons and Co Ltd

The following is a report of the influenza epidemic of December, 1936, and January, 1937, as it affected the employees of a large London works

When in December, 1936 it was realized that influenza was assuming epidemic proportions among the employees of a large London works it was felt that a detailed inquiry might yield useful information. To this end records were kept and a questionnaire was submitted to all employees. The works in question seemed a very suitable ground for such an inquiry as it consists of a series of modern factories and offices. The working conditions are good, and in most ways the general conditions, from a hygienic standpoint, may be said to approach the ideal. There are between 6,000 and 7,000 workers of various ages and occupations, and both sexes are represented.

Objects of the Investigation

The investigation was made from two aspects (1) general, (2) local

(1) *General*—To compile statistical evidence of the damage done to the health of wage-earners and of the derangement of industry due to epidemics of influenza, to determine the rate of incidence and the influence of sex, age, and occupation, to attempt to find out whether travel by public conveyance to and from work affected

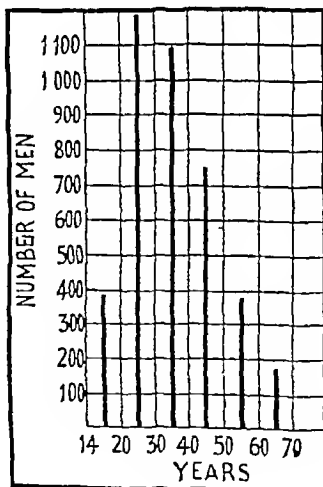


FIG 1

the incidence. Also it was hoped to be able to indicate whether or no these epidemics attack first of all the wage-earner and secondly, his family at home and whether the chief spread of the infection takes place at work.

(2) *Local*—To provide the company with figures relating to incidence and loss of time, and to consider certain factors possibly connected with the duration of the illness. Finally, to review the effect of working conditions, and whether or not they influence incidence.

For the purpose of this inquiry influenza was considered to be of epidemic proportions from December 1, 1936 to January 31, 1937. The investigation was carried out by a combination of (a) personal observations

and records, (b) questionnaires. The latter were utilized in order to gather information which otherwise it would have been impossible to obtain. Questionnaires to the number of 6,374 were issued, all of which were completed and returned. Twenty of the forms had to be destroyed for various reasons. The remaining 6,354 were included in this inquiry and were made up of question forms from 3,944 men and 2,410 women and girls.

The work performed by these people covers most trades and occupations, but classification may be made under five categories: (i) factory operatives, 2,103, (ii) clerical, 1,517, (iii) distribution, 1,157, (iv) engineers, 1,100, (v)

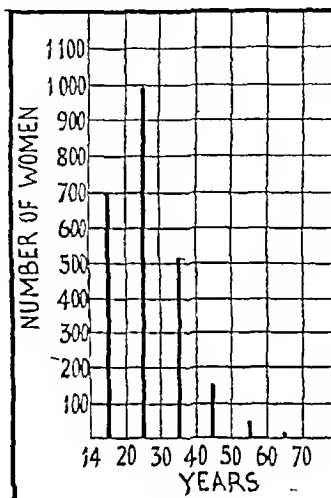


FIG 2

transport, 477. The age distribution of the staff in ten year periods, together with sex and numbers, is shown in Figs 1 and 2. It will be noticed that the description 'ten-year periods' in connexion with the age distribution charts is not strictly true, since the first group is of necessity 14-20. In each case the black lines in the charts indicate the number of employees whose ages fall between the figures immediately below and to either side of it.

Questionnaires

The questions asked of those employees who contracted influenza in December, 1936, or January, 1937, were

- 1 Name
- 2 Age
- 3 Sex
- 4 Department
- 5 Married or single
- 6 Did you contract influenza in December, 1936 or January 1937? (State which month)
- 7 How long were you ill? (Unable to attend work)
- 8 Did you have any complications?
- 9 Have you had influenza before?
- 10 How do you get to or from work? (Train, bus, tube, walk, etc.)
- 11 Were you the first of your family to contract influenza this time?

The questions asked of those employees who did not contract influenza in December 1936 or January, 1937, were Nos 1, 2, and 10 only. These were utilized for control purposes.

The chief results of the investigation are shown in the tables. The enormous damage done to the health of the wage-earners of the country by epidemics of influenza (if this study is representative of what happened in works all over the country, and it is believed that it is) is demonstrated by the fact that during two months 1,214

people out of a total number of 6,354—that is, 19.1 per cent—contracted influenza. The combined total period of incapacity of these 1,214 sufferers was 12,882 days.

Table showing Results of the Investigation

	Men	Women	Total
1 Total number of employees	3,944	2,410	6,354
2. Number of employees who contracted influenza in two months	653	561	1,214
3 Total duration of illness (in days)	6,758	6,124	12,882
4 The average duration of illness (in days)	10.3	10.9	10.6
5 The average duration of the illness of 154 married women—when calculated separately (in days)	—	12	—
6 Incidence	16.5	23.2	19.1
7 Cases that have had previous attacks	49%	42%	—
8 Cases that were the first or only ones in the family to contract influenza	74%	71%	—

Incidence

(A) *Sex in Relation to Incidence*—Women and girls at these works had an incidence rate of 23.2 per cent., whilst for men the figure was 16.5 per cent. It appears that in this epidemic females were more susceptible than males.

(B) *Age in Relation to Incidence of Both Males and Females* (Fig. 3)—It was found that the highest incidence

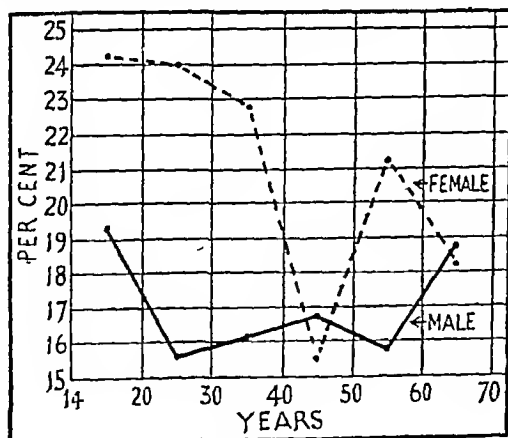


FIG. 3

rate for both sexes was between the ages of 14 and 20 years. The percentages were calculated by comparing the number of persons of the same sex in the same age group who contracted influenza with the total number of employees of that sex in that particular age group. In the case of females an abrupt descent from a rate of 22.8 per cent between the ages of 30 and 40 years to 15.4 per cent between the ages of 40 and 50 is witnessed, thereafter the rate rises to 21.2 per cent between the ages of 50 and 60 years. The 50-60 class of female represents only a small proportion of the total female sufferers and the curve obtained possibly does not truly state the case as deductions from small numbers are often misleading.

(C) *Incidence Rate as between Two Classes of Female Workers*—This was investigated, and showed that 197 female members of the office staff out of a total of 902 (21.8 per cent) and 237 female factory hands out of a total of 836 (28.3 per cent) contracted influenza. This

somewhat unexpected result (since office workers are commonly said to contract this infection with greater facility than any other class) is possibly to be explained by such factors as poorer home and sleeping conditions of the factory girls. A further point of difference between these classes of worker is that nearly 50 per cent of the factory girls are married, whilst the vast majority of the office workers are single. Married women factory hands have serious domestic and economic problems to contend with. Do these difficulties so lower the resistance of this class of employee that a higher incidence rate of infection results? The experience of the approved societies in relation to married women workers would appear to favour this suggestion.

The incidence rate in relation to four classes of male workers was investigated, with the following result:

	Case Rate
Engineers	15 per cent
Out-of-door workers	15.9
Office workers	17.7
Factory hands	19.6

It is often stated that out-of-door workers are less susceptible to influenza than indoor workers. The above figures support this belief, except those in the case of engineers. It should be mentioned that as a rule engineers are paid by the hour and get no sick pay, but in this instance about 50 per cent of this class of worker do receive sick pay. The higher rate of the factory hands is possibly due to economic reasons combined with lesser knowledge of hygienic principles.

The average duration of the illness as between four classes of male workers was studied, with the following results:

	No. of Cases	
Engineers	165	9.9 days per person
Office workers	66	10.1
Factory workers	168	10.9
Out-of-door workers	122	11.5

This small analysis was made as an experiment, and it should only be surveyed as such, since much depends on such factors as age, gravity of the infection, and complications, but it was surprising to find that engineers again hold the premier position. With regard to the out of door workers, possibly a higher degree of physical fitness is required before returning to work than in the other classes.

Of the 653 males affected in this epidemic 49 per cent stated that they had had previous attacks and of the 561 women 42 per cent had suffered from influenza before. Many of these people have had several attacks. It was found that in this study 74 per cent of the males and 71 per cent of the females who contracted influenza were the first or only ones of their respective families to contract the complaint. The suggestion is that it is the 'wage earners' who are the first to be infected and that the chief place of spread is at the works or office. This idea is supported by the fact that it was repeatedly noticed during the course of the epidemic that in some departments or offices the great majority of cases occurred in December 1936 (up to 90 per cent of the infected), whilst in other departments or offices a similar thing happened in January 1937.

Mode of Travel

It was found that of a total of 6,354 employees 4,345 travelled by public conveyance to and from work. The remaining 2,009 did not. Of the 4,345 users of public conveyances 860 (19.7 per cent) contracted influenza. Of the 2,009 non users of public conveyances 354 (17.6 per

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

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NOTES OF THE WEEK

Public Medical Service in Norfolk

The West Norfolk Division has prepared a Public Medical Service for its area. Subscription rates have been assessed on the following scale

For a family of one subscriber	6d a week.
" " two subscribers	9d "
" " three	10d "
" " four or more subscribers	11d. "

All eligible members of the household may join the service and any additional adult dependent relative other than a parent or child, who is a member of the household may join at the rate of 4d a week. Each subscriber pays 6d for his contribution card, which is renewed annually. Before subscriptions are distributed among the members each quarter certain percentages, to be decided by the committee from time to time, will be deducted for general administrative expenses and for the formation of a mileage pool to be divided annually among members in proportion to the number of subscribers resident more than three miles from the members' homes. The committee will consist of a chairman, honorary treasurer, honorary secretary and six other members of the service. Provision is made in the rules for procedure in relation to the transfer of practices, the remuneration of non-co-operating practitioners, the expulsion of members, and for the reference of any dispute to the secretary of the Medical Defence Union as arbitrator.

Swansea Medical Service

The annual report of the Swansea Medical Service for the year ended March 25, 1937 shows a satisfactory state of affairs. This service started in 1912, but at that time it was based on the poundage system which is common in parts of South Wales. It is interesting to note that it did not receive the approval of the Association when it began because it did not appear that the subscription rates were sufficient to ensure an adequate capitation fee to the doctors. The present scheme has of course received the approval of the Association and at the last

Public Medical Services Conference two of the Swansea representatives were elected to the Public Medical Services Subcommittee.

The Swansea Medical Service now constitutes the only form of contract practice in the area and there are thirty-nine practitioners associating with the scheme. The number of persons at risk through the Service has increased during the year from 14,890 to 15,770. A particularly interesting feature is the low administrative cost, 91.5 per cent of the amounts collected being paid to the medical practitioners associated with the scheme. By careful and efficient management arrears and lapses are maintained at an insignificant figure.

Colonial Medical Service

The Colonial Office has reprinted in a pamphlet, *Miscellaneous 475*, extracts from a series of articles which appeared in the *Crown Colonist* during August, September and October 1936, on the unification of the Colonial Service. The pamphlet relates briefly the events which led to the first decisive steps in 1930 to inaugurate a single Colonial Service within which special services, such as medicine, education, agriculture, etc., should be unified. In July 1932, the Secretary of State for the Colonies created a Colonial Administrative Service, the first service to which the new principle of appointment on the basis of a schedule of posts was applied. The Colonial Legal Service followed in 1933, and the unified *Colonial Medical Service* in January, 1934. Since that date a number of other services have been unified. The latter part of the pamphlet discusses the question of the standardization of conditions of service, and describes the measures which have already been taken in connexion with salary scales, pensions, widows and orphans' pensions, and leave and passages.

Owing to the great increase in the number of fracture cases dealt with in the casualty department of the Royal Northern Hospital, the board of management of the hospital is to consider the provision of a fracture clinic in which more systematic treatment would be available.

MEDICAL DEFENCE

In 1883 two Dulwich practitioners, Dr Bower and Dr Keates, attended a child who was suffering from diphtheria. The child died, and its father contracted the disease owing it was alleged, to his execution of the instructions given to him by the doctors in the treatment of the child. The two practitioners were prosecuted, first for negligence and then for manslaughter. Both charges failed, but the expenses of the doctors for the two trials amounted to over £1,000. Their plight aroused deep sympathy and concern among medical men, and, at the suggestion of a meeting called by Sir William Jenner, the profession raised by subscriptions a sum of over £1,100, and presented it to Drs Bower and Keates to cover their costs. The case demonstrated the urgent need of organized assistance for practitioners involved in legal difficulties arising from the conduct of their practice, and to it can be traced the origin of what we now know as individual medical defence.

The first attempt to provide a scheme of legal aid was made by seven laymen, who, having observed the disturbance in the profession, registered in 1885 a company limited by guarantee under the title of the Medical Defence Union and appointed a number of legal representatives and local councils in the provinces. It was from a meeting of the local council at Birmingham, when Mr Lawson Tait acted as chairman, that the Medical Defence Union as we know it to-day originated, for the Midland Branch which was then formed gained control of the whole organization, and the conduct of the new Union was soon gathered entirely into the hands of medical men. After many vicissitudes, the Union moved its headquarters from Birmingham to London, and by 1891, owing largely to the tenacity of purpose of one or two of its leaders, it had won an established position in the profession.

The foundation in 1892 of the other great English organization for medical defence, the London and Counties Medical Protection Society represented a secession of certain members from the Medical Defence Union in consequence of the reorganization of the Union in the previous year, but in the course of time the two societies have arranged a scheme of co-operation which, while providing for the members of each society the maximum security, preserves to each its independence and individuality. The profession in Scotland has formed its own society, the Medical and Dental Defence Union of Scotland, on principles somewhat similar to those of the English organizations.

The B.M.A. and Medical Defence

While the societies specially formed for the provision of individual medical defence have become an indispensable part of professional organization it has been suggested on a number of occasions that the B.M.A. should include in its benefits of membership insurance against legal risks. Although on each occasion the proposal has finally been rejected, a brief survey of the action taken by the Council will show that the desires of members have not lightly been dismissed. The first movement which was a proposal for a medical defence fund formed and administered in connexion with the B.M.A., came from the East Anglian Branch in 1886 when the Bower and Keates case was still fresh in mind. Later in the same year a meeting was convened by the Lancashire

and Cheshire Branch of members of the Association interested in the subject, and a committee was appointed to submit the views of the conference to the Council. The Council expressed its general sympathy with the idea of a medical defence association conducted under the aegis of the B.M.A., and proceeded to consider the matter in detail. Its legal advisers, however, were of the opinion that such an undertaking would be *ultra vires* and the proposal was rejected.

The subject was revived in 1894 by the East Sussex Branch, and in the following year by the London Branch. The Council on this occasion considered the alteration of the Memorandum and Articles of Association with the object of securing power to provide individual medical defence and in order that the Annual General Meeting might be in a position to appreciate the nature of the proposals, it prepared a draft scheme of medical defence. The scheme, which was voluntary and to be available only to members of the Branches, provided for an annual subsidy from the ordinary revenue of the Association for the assistance of medical men in respect of proceedings instituted against them, but not indemnity for damages incurred by them. In the event, after the scheme had been altered from a voluntary to a compulsory one, and after a referendum of all the members in this country had been taken, it was decided that the proportion of one-third which had expressed itself in favour of the provision of medical defence, was too small to justify further steps being taken to effect such a drastic alteration in the organization of the Association.

Those members who were still eager for the provision of medical defence by the Association hoped that the reorganization of the constitution in 1903 would afford an opportunity of attaining their object. A committee was indeed appointed to consider the question, but the Association's legal advisers were of the opinion that the Court had not the power to sanction the alteration of the Memorandum in order to permit the Association to undertake individual medical defence as opposed to medical defence work in cases in which general professional interests were involved. They suggested, however, that an alternative to the contemplated alteration of the Memorandum was an application for a Royal Charter. This suggestion was adopted and during the following years the question of medical defence became merged in the wider one of the further reconstitution of the Association through the medium of a Royal Charter. The application for the Charter however was rejected by the Privy Council in consequence of opposition both internal and external.

Except for some minor discussion at the time of the passing of the first National Health Insurance Act the subject of medical defence was not revived until 1921 when a verdict was given against Dr Wood Hill, who was not a member of a defence society, and who suffered a loss of about £2,000 in damages and costs. Once more the provision of individual medical defence by the Association was demanded by a section of the profession, and every aspect of the matter—legal, financial, and practical—was given prolonged and thorough consideration. The deliberations on this occasion included a conference with representatives of the defence societies for the purpose of suggesting to them, as an alternative to the provision of medical defence by the Association the conferment of special privileges on members of the B.M.A. who became members of one or other of the societies. This suggestion proved unacceptable to the societies, and in 1925 the Council recommended to the Representative Body that

the former should be authorized to prepare a draft scheme of medical defence on the basis of an annual subscription of £1, which should be available to those members who desired to take advantage of it, and to ascertain the number of members who would be prepared to join in its membership. The result of a long discussion at the A R M was the rejection of the Council's recommendation in favour of a motion expressing the view that the Association could not expect to conduct medical defence in a better or cheaper manner than the existing defence societies, and that, as the provision of individual medical defence was not within the present powers of the Association, the expense of the proposed referendum of the profession should not be incurred. The accepted motion concluded with an instruction to the Council that it should bring to the notice of all practitioners, especially those recently qualified, the urgent necessity of joining a defence society, and this resolution still governs the Association's procedure on the subject of medical defence.

Benefits Offered by Medical Defence Societies

So real is the risk of legal attack, and so obvious are the advantages of insurance with a medical defence society, that persuasion should not be necessary. Yet several thousands of practitioners in this country have failed to protect themselves. One of the first steps that a medical practitioner should take after he has qualified is to become a member of a medical defence society, and he should remain a member throughout his professional career for however careful and however skilful he may be he cannot expect to be immune from attack. Neither can he be certain that in the event of prosecution he will be able to refute, during the course of the action, charges of negligence or malpraxis. It must be remembered that, although the traditional fairness of British law governs the proceedings, the jury, upon whose verdict the practitioner's fate depends, are laymen, and that no medical expert or assessor sits with the judge. It has therefore sometimes happened that apparently in consequence of the jury's inability fully to appreciate the medical issues involved, the verdict has inflicted, in the general view of the profession, an injustice upon the practitioner. In the case of Claydon v Wood-Hill mentioned above, for example, and again more recently in Tyndall v Alcock, heavy damages were awarded against practitioners whose methods of treatment in the particular case were such as were approved by leading members of the profession. If the practitioner attacked is uninsured, the damages may cripple him financially for a long time and even if he wins his case the costs of it may inflict difficulties from which he may not easily recover.

The benefits offered by the defence societies are very wide and very cheap. In return for an entrance fee of 10s., which is waived in the case of a practitioner applying for membership within one year of registration, and an annual subscription of £1 a member receives benefits which include indemnity against the cost of defending or conducting an action undertaken by the society on his behalf, and unlimited indemnity, subject to the Articles of Association of the society, against damages or costs that may be awarded against him in such a case. The benefits of the Medical and Dental Defence Union of Scotland are defined as an insurance of £2,500, and the payment of a plaintiff's costs in a claim for liability in respect of professional negligence. Not all disputes reach the courts and the member will find that the long experience and wisdom of his defence society are invaluable to him in all sorts of personal legal difficulties. Moreover the very

fact of his membership may save him from the worry of an action in court for it is sometimes found that a patient who, in his first reaction of disappointment or indignation at the practitioner's failure to effect a cure, hastens to institute proceedings, withdraws his accusations when he learns that the practitioner is being supported by the financial resources and the legal experience of a medical defence society.

The extent to which practitioners find it necessary to invoke the aid of the societies may be illustrated by some figures from the last annual report of the Medical Defence Union, which has a membership of over 19,000. During the year 129 cases, some of which involved more than one member, were dealt with by the Union's solicitors. These cases are subdivided under the following headings: libel and slander cases prosecuted or defended 10, malpraxis cases defended, 64, prosecution of unqualified persons, 8, arbitrations and personal matters, 47. The average cost to the Union of the defence of its members in the five heaviest cases conducted during the year was £572 4s 1d. These solicitor's cases were, of course, in addition to numerous requests for help or advice dealt with by the secretary. The total expenditure during the year amounted to £18,245 16s 5d.

Any practitioner who considers the subject seriously must inevitably come to the conclusion that he cannot afford to remain unprotected in respect of his liability to legal attack. This applies not only to private practitioners but to practitioners in all branches of the profession, and even to retired practitioners. As has recently been pointed out, medical staffs in hospitals both voluntary and municipal are open to special risks and local authorities are not responsible for the negligence of their medical officers in a professional capacity. The medical defence societies have also called attention to the position of retired doctors, who are still liable to attack for misdeeds alleged to have been committed while they were in practice. Emphasis is laid on the fact that while the Statute of Limitations may be a good defence for an action brought more than six years after the event, considerable expense may be incurred before the time arrives to plead the Statute.

Practitioners Over-seas

Practitioners practising over-seas run the same risk as practitioners in this country, but although in some of the Dominions schemes of medical defence exist, for many practitioners there is no organized assistance available. The defence societies in Great Britain are unable to provide defence for practitioners over-seas, and the only method of protection is to take out an individual policy with an insurance company. This policy is often very expensive: one member pays £16 per annum for £4,000 cover. The Council is therefore investigating the practicability of arranging with certain insurance companies an agreement which will enable members practising over-seas to obtain, on specially favourable terms, policies insuring them against charges of negligence or malpraxis. It has accordingly circularized the over-seas Branches in order to ascertain what support is likely to be forthcoming if a scheme could be arranged whereby a practitioner in return for a premium of about £2 could secure indemnity to the extent of £2,000. It is not yet known whether the companies would agree to such a scheme but the Council hopes to be able to find some method of enabling its over-sea members to enjoy the same protection in the matter of individual medical defence as their colleagues at home.

economic and not to health grounds. On the question of the rate of subscription a form of words was reached after some debate. Contributions of subscribers shall be such as to ensure to the member [that is, the practitioner] a rate of remuneration commensurate with the standard of fees charged in private to those who will be eligible to participate in the scheme.

The memorandum was accepted by the committee, as was also a further memorandum on the establishment and development of Public Medical Services. It is intended to publish this letter, together with the model scheme as an Association's 'grey' book, and, with the approval of the Council to publish as a separate document the scheme for the provision of medical attendance and treatment upon persons with incomes above national health insurance limits.

Provident Schemes and Payment for General Practitioner Services

Dr Robert Forbes, as chairman of the subcommittee which is inquiring into the practicability of payments to general practitioners under provident schemes, reported the steps which had so far been taken. Representatives of two important insurance companies had stated that they were not at present interested in schemes of this kind and had no actuarial calculations upon which to base a premium, and one of them said that such a scheme would necessitate a special organization. Another insurance company, however, stated that the scheme as drafted bore a close resemblance to one of its own which had been in operation for the last two years with moderate success, and the subcommittee proposes to make a fuller investigation in this direction.

Fees Paid to Medical Witnesses

The Police Surgeons Subcommittee brought forward a draft case in support of an increase of fees for medical witnesses in criminal prosecutions. The case was approved and subject to the decision of Council it will be submitted to the Home Secretary.

Other Medico-Political Business

At the previous meeting of the committee Dr H. E. Collier of Birmingham had attended to advocate the establishment of a diagnostic consultation clinic for diseases of occupation and industrial illness and disability. The committee now had the advantage of a memorandum on the subject by one of its members (Dr J. S. Manson), as well as information as to the relevant activities of the Industrial Health Research Board, the National Institute of Industrial Psychology, the Industrial Welfare Society, the London School of Hygiene and Tropical Medicine, and the Health Education Society. After discussion the committee reached the conclusion that it was not satisfied that a case had been made out for the separation of occupational from other diseases for the purpose of clinical observation.

It was reported that a meeting of prison medical officers had taken place in response to an inquiry by the Association as to whether they were satisfied with the recent improvement in their terms and conditions of service, and that the feeling of the majority of those present was that the time was not opportune to press further the matter of increased pay. The thanks of prison medical officers were conveyed to the Association for what it had done in the past and in anticipation, for what it would do in the future.

It was agreed to inform the National Safety First Association that the B.M.A. would join with it in making representations to the Ministry of Transport on the question of the removal of injured persons by incompetent people, a proceeding which often turns a minor injury into a major one. It was suggested that some advice on this subject might be embodied in the *Highway Code*. The

attention of the committee was drawn to a scheme for medical attendance on settlers and their families under the Land Settlement Association, a body which arranges for the resettlement of families from depressed areas. The Medical Secretary was authorized to enter into discussion with a view to the formulation of a scheme.

A statement as to the duties of a Parliamentary agent was laid before the committee, and it was agreed to recommend to the Council that such an agent be appointed to act on behalf of the Association.

A member of the committee brought forward an instance of what was said to be an increasingly common practice. He had been asked by an insurance company to examine a patient on its behalf in the presence of a doctor representing the patient. He discovered, however, that the doctor who was supposed to represent the patient and to whom the insurance company paid a fee, was not the patient's medical attendant, and in fact had never seen the patient before. He had been nominated by the patient's solicitors, and on inquiry the insurance company stated that this firm of solicitors as a rule nominated this same doctor and that the practice of solicitors nominating someone other than the patient's own medical attendant was becoming increasingly common. It was agreed to bring to the notice of the Accident Offices Association the Association's views on this practice.

ASSOCIATION OF REGISTERED BIO-PHYSICAL ASSISTANTS

Change of Name

At a meeting of the executive committee of the Association of Registered Bio-Physical Assistants held on April 15 a new title for the association was discussed and it was agreed that the association should in future be known as the Society of Physiotherapists. This change of title is made necessary by the formation of the *National Register of Medical Auxiliary Services* in which the *Roll of Bio-Physical Assistants* is now incorporated.

Membership of the Society of Physiotherapists will be limited to those termed physiotherapists in the *National Register of Medical Auxiliary Services* in the same way as membership of the Association of Bio-Physical Assistants was limited to those on the *Roll of Bio-Physical Assistants*. The Society of Physiotherapists is not an examining, qualifying or registering body. It is an organization supported by membership subscriptions and its principal aim is to represent its members by making their work known to the medical profession and the public thereby promoting the expert administration of physical methods of treatment and the ultimate elimination of the unqualified from the field of physiotherapy.

The Association of Bio-Physical Assistants was started in 1932 and its membership has increased steadily since. During this period the association had to refuse many qualified assistants who were not bio-physical assistants owing to the fact that its membership was limited to those on the Society of Apothecaries Roll. This matter had the attention of the annual meeting of the association in 1935 and a resolution was passed at that meeting to the effect that if and when the *National Register of Medical Auxiliary Services* came into being the association would widen its membership to include all those on the *National Register* and change its name to make it comprehensive of this wider membership.

The association has during the last few months accepted under its new constitution a number of new members from the *National Register* who will now be members of the Society of Physiotherapists. Membership of this society does not imply or give any diploma. Those who become members of it have already received by examination the qualifying certificate of their recognized examining bodies. The annual subscription to the Society of Physiotherapists (15s.) includes without further charge a subscription to the *British Journal of Physical Medicine*.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

National Health Insurance in British Columbia

We turn aside for a moment from the home service to glance at the national health insurance scheme in British Columbia. Some of those who weathered the insurance storm of 1911 will find a reflex of the excitement in an issue of the *Labor Statesman*—owned and controlled by the Vancouver Trades and Labor Council—dated March, 1937. History repeats itself—with transatlantic trimmings. After the headlines 'Doctors Sabotage Insurance Act — "Medical Opposition is Based on Greed and Selfishness," we pass to a note of a meeting of the Labor Council, prefaced by a statement that the general public has been misled by a lot of unfair propaganda made by a greedy group of medical men, aligned with 'Big Business' and supported by a few fawning hypocrites." Then follows the report. A delegate stated that the doctors wanted to grab all that the traffic would bear and were not satisfied with the proposed remuneration which they would receive under the Act, despite the fact that it would amount to many thousands of dollars per year. The report continues:

This delegate pointed out that Walter Scribbens had called a meeting in opposition to the legislation and while this meeting was supposed to be for employees not a single union had been invited and the only union men who were present were there by accident. Employers sent representatives floor walkers foremen etc. who were supposed to be speaking for the rest of the employees in their establishments in opposition to the legislation. The meeting was held at 10 a.m. in the bosses' time. This said Delegate Showler was nothing else but a double-cross to the labor movement whom Scribbens was supposed to represent. As chairman of that meeting he was doing nothing else but taking sides with the business element and against the desires of the organized labor movement."

Secretary Bengough followed in the same vein. He said:

All kinds of tactics are being used to build up an opposition to the Act and we have just had the deplorable sight of an alleged union man acting as chairman of a meeting in which all the non union firms of the city were represented. While the Canadian Manufacturers Association and other employers organizations are actively opposing it the doctors are the spearhead of the movement. They are opposed on general principles to the State operating health insurance of any kind. And in this they have the support of the Canadian Association of the College of Physicians and Surgeons and also the American College because once this kind of legislation operates in British Columbia it will spread to other provinces and to the United States. Despite all the criticism this Act is miles ahead of the British Act and also the French Act and these two are the best in the world. If the present Act is not adequate the doctors are in the main to blame for the condition. The doctors had it scaled down from \$2 400 because it was taking away their best customers. They wanted the maximum placed at \$1 500 and in order to get the co-operation of the doctors the maximum was set at \$1 800. The British Act was limited to workers earning \$1 250 or less per year and dependants were not covered neither was hospitalization included. But even in that instance the doctors were opposed to it.

It is more informative though perhaps not so picturesque to turn from these observations and from the references to the attitude of the medical profession in the leading article to a sober statement extracted from the radio address made by the chairman of the Health Insurance Commissioners. In the course of this address he said:

At this point I should like to stress some of the good features of our British Columbia Act. It is without doubt a much broader Act than the British one. In the first place the income limit of those covered is much higher in the British Columbia Act—\$1 800 in British Columbia as compared to \$1 250 in England.

"2 Dependants of the insured are covered. Incidentally the British Medical Association is on record to the effect that their own health insurance plan should be expanded to include dependants of employees."

"3 The services of specialists and consultants are included whereas in England only the services of a general practitioner are available under the Act."

4 Hospital benefits are included and diagnostic aids, such as x rays are to be provided."

From the standpoint of providing needed medical services to the insured the British Columbia Act is a good Act.

The question of the remuneration of insurance practitioners is very much in evidence at the present time, and readers will be interested in the following further extract from the same radio address:

Is the offer of \$5.50 for each insured person per year reasonable payment for doctors' services? As for the adequacy of remuneration it is only fair to point out that the medical profession charges in accordance with the time honoured principle of ability to pay—that is, the higher the income of a man the higher the fees charged him as a rule. It is reasonable to apply this same principle to health insurance methods. At the instance of the College of Physicians and Surgeons of British Columbia the income limit of those to be covered by health insurance was reduced from \$2 400 a year to \$1 800 a year.

The Commission as the custodian of the funds to be collected from employers and employees, thinks that it is not justified in offering more than \$5.50 per insured person per year. On this basis more than \$1 000 000 will be paid each year to the doctors. For every 1 000 persons (not patients) the doctors will receive \$5 500. If a man his wife and three children are covered a total of \$27.50 per year will be paid to physicians. It should be pointed out that a considerable number of those covered will not consult physicians in any one year but the doctors will be paid for everyone whether they are ill or not.

When proper allowances are made for earnings of physicians from all sources including allowances for x ray and diagnostic services to the insured including fees from the Workmen's Compensation Board and fees paid directly to doctors by insured persons the returns of physicians in respect of insured persons will approximate the amount of \$730-\$750 per capita set by the Health Insurance Committee of the College of Physicians and Surgeons as fair payment for a complete medical service. The proposed amount of \$5.50 compares very favourably with the amounts which leading industrial contract schemes of medical practice in British Columbia now provide. In the opinion of the Commission \$5.50 will provide more money for doctors than they now collect through private practice for services to persons to be covered by health insurance. Incidentally the British Columbia Royal Commission on Health Insurance and Maternity Benefits recommended \$5.11 per insured person per year which sum included Workmen's Compensation Board work and was to apply to an insured group under \$2 400 per year. The offer of \$5.50 excluding workmen's compensation work and applying to employees under \$1 800 is a much more generous one."

As noted in the *Supplement* of May 15 (p. 294) this scheme has been postponed indefinitely.

Exemption from Emergency Night Calls

Exemption from night calls to other doctors' patients is something which can be claimed by an insurance practitioner in certain circumstances but also as we have previously noted in this column can apparently be imposed by the Insurance Committee. This has the curious result that a practitioner may have occasion to appeal

against an 'exemption' conferred upon him against his will

Here is a summarized report of a recent appeal in this connexion

On December 22 last we heard the appeal of Dr X. against the decision of the Insurance Committee exempting him from liability for emergency night calls to insured persons on the lists of other practitioners. The clerk explained that it was not the custom of insurance practitioners in the area to make claims for rendering emergency treatment to insured persons on the lists of other practitioners in the area

Dr X stated that his residence was three and a quarter miles by road from his surgery and that the journey by the route which he always followed only occupied seven or eight minutes by car. He further stated that there was a resident caretaker at his surgery which was connected by telephone with his residence. It was now a year since he moved his residence from the surgery and during that time he had been able to carry out his duties in relation to his insured patients as easily as when he resided at the surgery, and he found no difficulty in fulfilling his obligation in regard to emergency work in both places. He had had very few night calls for emergency treatment to insured persons, either on his own list or on the lists of other practitioners. No complaint had been made, whether by insured persons or other practitioners in regard to his attention to insured persons either in cases of emergency or otherwise

After reciting the contentions of the Insurance Committee and the doctor respectively the persons appointed to hear the appeal continued

It appeared to us that the number of emergency night calls in the area is very small and it has not been established to our satisfaction that Dr X. is unable by reason of the fact that he resides at a greater distance than two miles from his surgery, to fulfil his obligations in regard to emergency night calls to insured persons on the lists of other practitioners in the area or that the number of such calls which is likely to be received is materially affected thereby

"We accordingly recommend that the appeal should be allowed."

Naval, Military, and Air Force Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Rear Admiral P. T. Nicholls to the *President* for service inside the Admiralty Medical Department

Surgeon Captain R. F. P. Cory to the *President* for course

Surgeon Commanders M. B. Devane to the *Victory* for Royal Naval Barracks, J. A. Cusack to the *Pembroke* for Royal Naval Barracks, A. W. Gunn to the *Victory* for Royal Naval Barracks, A. W. McRorie to the *President* for course

Surgeon Lieutenant Commander F. Dolan to the *Drake* for Royal Naval Barracks

Surgeon Lieutenants G. H. C. R. Critien to the *Drake* for Royal Naval Hospital Plymouth, R. M. Kirkwood to the *Pembroke* for Royal Naval Barracks (May 16) and to the *Pegasus* (May 22) R. M. Bremner to the *Hastings*, D. D. Steele-Perkins to the *Ganges*, I. C. Macdonald to the *Cardiff* (May 12) and to Royal Naval Barracks Chatham (May 22) D. B. Jack to the *Pembroke* for Royal Naval Barracks

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Sublieutenant C. P. Nicholas to be Surgeon Lieutenant

ROYAL ARMY MEDICAL CORPS

Lieutenant P. Coleman to be Captain

Lieutenants (on probation) C. McNeil and F. J. S. Baker are seconded under the provisions of Article 21st Royal Warrant for Pay

The following candidates have been selected for short service commissions as Lieutenants (on probation) F. Livesey, C. E. McCloghry, C. McNeil, G. G. Sherriff, G. M. Curtis, J. B. Bunting, R. B. Robertson, A. T. M. Glen, E. Garah, K. F. Stephens, G. M. Robertshaw, R. L. Townsend, F. J. S. Baker, O. Jordan, N. Bickford, O. W. W. Clarke, J. B. Dancer

ROYAL AIR FORCE MEDICAL SERVICE

Flight Lieutenants R. E. Alderson and J. Kemp to be Squadron Leaders.

REGULAR ARMY RESERVE OF OFFICERS

Colonel C. D. Myles O.B.E., late R.A.M.C. having attained the age limit of liability to recall, has ceased to belong to the Reserve of Officers

ROYAL ARMY MEDICAL CORPS

Lieut.-Colonel G. H. Stevenson D.S.O., having attained the age limit of liability to recall has ceased to belong to the Reserve of Officers

MILITIA

ROYAL ARMY MEDICAL CORPS

Major R. D. Goldie has relinquished his commission and retained the rank of Major

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Captain E. J. G. Glass to be Major
F. C. Angior, P. Howe (late Officer Cadet, Liverpool University Contingent Senior Division O.T.C.) E. H. P. Smith (late Cadet Sergeant Epsom College Contingent, Junior Division O.T.C.) K. G. S. Bavidge (late Officer Cadet Durham University Contingent, Medical Unit, Senior Division O.T.C.) A. G. McCallum (late Officer Cadet Glasgow Academy Contingent, Junior Division O.T.C.) T. Fitt (late Cadet Sergeant Rossall School Contingent Junior Division O.T.C.) R. H. Barnes (late Cadet Sergeant Bedford School Contingent Junior Division O.T.C.) and J. D. Finlayson (late Officer Cadet Aberdeen University Contingent, Medical Unit, Senior Division O.T.C.) to be Lieutenants

TERRITORIAL ARMY RESERVE OF OFFICERS ROYAL ARMY MEDICAL CORPS

Captain D. M. Machenzie from Active List to be Captain

COLONIAL MEDICAL SERVICE

The following appointments are announced E. N. Brockway M.B., B.S. Medical Officer, West Africa A. A. Cameron M.B. Ch.B., Medical Officer Malaya Miss Euphemia Cardwell L.R.C.P. and S.Ed. L.R.F.P.S. Glas Lady Medical Officer Gold Coast R. H. Purnell M.B. B.S. Medical Officer Northern Rhodesia Surgeon Lieutenant S. R. G. Pimm L.M.S.S.A. D.M.R. Medical Radiologist Colonial Hospital Port of Spain, Trinidad J. A. Acheson M.D. D.P.H., Senior Medical Officer Northern Rhodesia H. J. Birmingham L.R.C.P. and S.Ed., Medical Officer Gold Coast, C. J. Fournier M.D. Medical Officer West Africa

Correspondence

DISPENSING CAPITATION FEE

SIR—There is one aspect of rural panel practice that I think needs investigation—namely the rates of payment for drugs to the dispensing doctor. In one county in which I practise the average cost per insured person per year for drugs supplied by the chemists was 2s. 8½d. The capitation rate paid to those of us who have all the bother of dispensing (and frequently of delivering) drugs is 2s. 3d. Obviously we are losing on the average 5½d. per person per year.

I hope the appropriate committee will take this point up when they are dealing with the revision of fees—I am, etc.

Hockley Heath Birmingham May 9

H. F. BURTT

FILM PROJECTOR SERVICE

The National Ophthalmic Treatment Board which administers the scheme popularly known as the National Eye Service has produced several sound recorded films explaining the need for medical examination in all cases of eye trouble and the simplicity of obtaining it through the National Eye Service. The Board is of the opinion that these films might be of interest to members of the British Medical Association and is prepared accordingly to lend copies for exhibition at Division Meetings free of charge. Many Divisions possess the necessary film projector but to those which do not the Board is willing to lend without charge full projector equipment together with the services of a trained operator for the projection of the films and of any other films which it might be decided to include to build up a programme of general interest to practitioners. Applications for the loan of films and for the projector service where it is desired should be made to the General Secretary, the National Ophthalmic Treatment Board 148/150 Great Portland Street London W.1

British Medical Association

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQUARE, W.C.1

Departments

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and
Business Manager Telegrams Articulate Westcent, London)
MEDICAL SECRETARY (Telegrams Medisecra Westcent, London)
EDITOR BRITISH MEDICAL JOURNAL (Telegrams Anthology Westcent
London)
*Telephone numbers of British Medical Association and British
Medical Journal Euston 2111 (internal exchange five lines)*
B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumsheugh Gardens
Edinburgh (Telegrams Associate, Edinburgh Tel 24361
Edinburgh)
Insh Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare
Street, Dublin (Telegrams Bacillus Dublin Tel 62550
Dublin)

Diary of Central Meetings

MAY

- 21 Fri Consultants and Specialists Group Committee, 2.15 p.m.
- 24 Mon Dominions Committee, 2.15 p.m.
- 27 Thurs Subcommittee *re* Case of Marshall *versus* Lindsey
County Council 2.30 p.m.
- 28 Fri Science Committee, Library Subcommittee, 2.30 p.m.

JUNE

- 1 Tues Standing Ethical Subcommittee 3 p.m.
- 2 Wed Council, 10 a.m.
- 4 Fri Subcommittee *re* Remuneration of Non professional
Medical Teachers Laboratory and Research Workers
2.30 p.m.
- 11 Fri Journal Committee Foods and Drugs (Advertisements)
Subcommittee, 11.30 a.m.
- Science Committee, Scholarships and Grants Subcom-
mittee 2.30 p.m.
- 18 Fri Science Committee 2 p.m.

ANNUAL MEETING, BELFAST

SPEAKERS AT SCIENTIFIC SECTIONS ACCOMMODATION

It is requested that all those who are speaking at the various Scientific Sections, and who require accommodation but have not yet reserved it, will communicate at once with the Chairman Housing and Lodgings Committee, Whitla Medical Institute College Square North Belfast. Accommodation is now extremely limited so far as hotels are concerned and the hostels are nearly booked up so that unless immediate application is made lodgings will be the only form of accommodation available.

HOTEL ACCOMMODATION

First-class accommodation is still available at the Shieve Donard Hotel Newcastle, Co Down Laharna and Olderslee Hotels Larne, Co Antrim Regent Palace Hotel and Royal Hotel Bangor Co Down, the Mount Royal Hotel and the Imperial Hotel, Donaghadee Co Down. These are suitable for members who intend bringing their cars. Application for these should be made direct to Messrs Thos Cook and Son 27, Royal Avenue Belfast, but applications for private hospitality, lodgings or students hostels should be address to the Secretary, B.M.A., Whitla Medical Institute, College Square North, Belfast.

GARAGES IN AND AROUND BELFAST

The following is a list of garages which has been compiled by the A.A. and the R.A.C.

Stanley Harvey and Co 20 Adelaide Street
W J McCrum 7 Antrim Road
J E. Coulter Ltd., 40 Antrim Road
O D Cars, Ltd Antrim Road
A Stringer 156 Antrim Road
Cowan and Spence Bedford Street
Jacks and Co 62, Bedford Street
Victor H Robb Ltd Chichester Street
J B Ferguson Ltd., Chichester Street
Isaac Agnew Ltd 63 Chichester Street
John Hanna 34 Chichester Street
Morrow and Wedgewood 28 Claremont Street,
W J Chambers 104-108 Donegall Pass
W H Connolly Ltd 118 Donegall Pass

Harry Ferguson Ltd Donegall Square
W H Alexander Donegall Street
Leslie Porter Ltd 24-28 Great Victoria Street
Ulster Motor Works 62 Great Victoria Street
Stanley Motor Works 19a Great Victoria Street
Victor Ltd Howard Street
R E Hamilton and Co Linenhall Street
E L Smyth 166, Lisburn Road
Great Northern Motor Works 348 Lisburn Road
W H Alexander May Street
Charles Hurst Ltd Montgomery Street
Clarence Engineering Co Ltd Ormeau Avenue
W H Reay and Co Ormeau Road
Hutchinson Haddow and Co Ltd Oxford Street
Agnew and Graham Ltd Oxford Street
J W Shaw Ltd Upper Queen Street
Belfast Car Laundry Victoria Road

BANGOR

R J Hooke, 110-112 Main Street (Telephone 622)
S C Taylor 2a Ballyholme Road (Telephone 307)

DONAGHADEE

W E Macklin Warren Road

ANNUAL DINNER JULY 22

The Dinner Committee wishes to remind members that booking for the Annual Dinner is proceeding rapidly, and in spite of the fact that there is seating accommodation for over 1,100 it is almost certain that this will be taxed to the utmost. The following tables are still available 10, 12, 13 15, 17, 19, 25 35 36, 46 54, 58, 61, 64 67, 70, 73, 76 79 80 82, 85, 88, 91, 94, 97, 102, 104-110 Applications accompanied by remittance for 10s 6d for each ticket, should be made to the Dinner Secretary, B.M.A. Office Whitla Medical Institute, College Square North, Belfast.

PATHOLOGICAL MUSEUM

The accommodation available in the Physics Laboratories where the Museum will be housed is limited to some four hundred pathological specimens. The Museum of the Institute of Pathology Queen's University can supply some 350 of these documented with clinical history, prints of radiographs electrocardiograms etc. These have already been selected and their data assembled for the preparation of the catalogue. So far as possible it is desired to avoid reduplication, and for that reason no requests for museum exhibits are being circulated. On the other hand there are certain scientific discussions which cannot be illustrated adequately out of local resources and it is the intention of the Museum Committee to approach individuals who are likely to be able to fill these gaps in the hope that they will co operate to ensure the success of the exhibition. The Museum Committee would like to make it clear that they will be glad to receive specimens of outstanding pathological interest from other persons, whether they are taking part in the scientific discussions or not. Anyone able to help in this way is asked to communicate with Dr J A Fisher, Honorary Secretary, Committee of the Pathological Exhibition at the Institute of Pathology Grosvenor Road, Belfast, not later than June 7 so that cards and labels may be supplied.

ANGLING

Those who are interested in fishing are reminded that there is a great deal of free water in Northern Ireland. In addition two of the local angling associations the Northern Flyfishers Club and the Belfast Anglers Association have granted us facilities for fishing their specially reserved and stocked waters during the meeting. Visitors are assured of enjoying this sport, and a considerable number of permits have been put at the disposal of the Local Executive Committee. These will be available on application at the Reception Room and a limited number of previous applications will be accepted at the office of the Meeting Whitla Medical Institute College Square North Belfast.

Corrigendum—The title of the paper to be read by Dr A B MacLean in the Section of Radiology at the Belfast Meeting is "Nomogram for Radiography."

Formation of Central Provinces Branch

With reference to the preliminary notice in the *Supplement* of February 20 (p 94), the Council hereby gives notice to all concerned of the formation of a Central Provinces Branch of area coterminous with the Central Provinces of India, the new Branch to come into existence as from the date of this notice

G C ANDERSON

Medical Secretary

May 22 1937

Branch and Division Meetings to be Held

ABERDEEN BRANCH CITY OF ABERDEEN DIVISION—Tuesday May 25 Dr Adolf Adler Value of Child Guidance

BATH BRISTOL AND SOMERSET BRANCH—At Royal United Hospital, Bath, Wednesday May 26 8.15 p.m. Mr A Leigh Allergy in the Ear Nose and Throat

BERKS BUCKS AND OXFORD BRANCH OXFORD DIVISION—At Radcliffe Infirmary, Wednesday May 26 8.30 p.m. Clinical meeting.

GLASGOW AND WEST OF SCOTLAND BRANCH—At Robroyston Hospital Wednesday May 26 3.15 p.m. Annual general meeting Followed by demonstration by members of the hospital staff

HERTFORDSHIRE BRANCH EAST HERTFORDSHIRE DIVISION—At Thorley House Bishops Stortford Friday May 28 4.30 p.m. Annual general meeting.

LANCASHIRE AND CHESHIRE BRANCH BLACKBURN DIVISION—A course of eight lectures on air raid precautions will be given by Dr L. T. Challenor, Home Office Lecturer for the Liverpool Centre at Blackburn Town Hall on Wednesdays May 26, June 2, 9, 16 and Thursdays May 27, June 3, 10 and 17, at 8.45 p.m.

LANCASHIRE AND CHESHIRE BRANCH ROCHEDALE DIVISION—At Bailie Street Council School Rochdale Monday May 24, and Friday May 28 8.45 p.m. Air raid precautions lectures and demonstrations by Dr L. T. Challenor Home Office lecturer for the Liverpool Centre These lectures are open to all medical practitioners in the Rochdale area

METROPOLITAN COUNTIES BRANCH KENSINGTON DIVISION—At Kensington Town Hall Friday May 28 8.45 p.m. Dr A. F. Heald Things a Panel Doctor Ought to Know A course of six lectures and demonstrations on air raid precautions will be given on Wednesday June 9 and Mondays June 14, 21, 28 and July 5 and 12 at 8.30 p.m. by Colonel J. Mackenzie Home Office Medical Instructor for the London Centre The course is open to all members of the medical dental and veterinary professions and will be held at the British Post-Graduate Medical School, Hammersmith Hospital Ducane Road W

METROPOLITAN COUNTIES BRANCH ST PANCRAS DIVISION—At B.M.A. House Tavistock Square W.C. Tuesday, May 25 8.45 p.m. Annual general meeting Consideration of Annual Report of Council election of officers etc

METROPOLITAN COUNTIES BRANCH SOUTH WEST ESSEX DIVISION—At Town Hall Orford Road Walthamstow E. 3 p.m. A course of six lectures on air raid precautions commencing on Monday May 24 At Thorpe Coombe Maternity Home, Forest Road Walthamstow Wednesday May 26 3 p.m. Dame Louise McIlroy Diagnosis of Foetal Positions by Means of X Rays Dr Helen E. Rodway Demonstration of Minnitt apparatus

METROPOLITAN COUNTIES BRANCH STRATFORD DIVISION—Wednesday May 26 2.45 p.m. Visit to the Ford Works at Dagenham

NORTH OF ENGLAND BRANCH NORTH NORTHUMBERLAND DIVISION—At Blue Bell Hotel Belford Wednesday May 26 3 p.m. Dr H. D. McPhail Minor Mental Ailments

SHROPSHIRE AND MID-WALES BRANCH—At Royal Salop Infirmary, Tuesday May 25 3.45 p.m. Consideration of Annual Report of Council election of president etc

SOUTHERN BRANCH PORTSMOUTH DIVISION—At Kimbell's Café Osborne Road Southsea, Thursday May 27 8 p.m. Annual dinner

SOUTH WESTERN BRANCH BARNSTAPLE DIVISION—At Imperial Hotel Barnstaple Friday, May 28 8 p.m. Dr A. C. Roxburgh Points in the Diagnosis and Treatment of Common Skin Diseases

SUSSEX BRANCH BRIGHTON DIVISION—At Cissbury Ring Thursday May 27 2.40 p.m. Annual summer social outing

YORKSHIRE BRANCH SHEFFIELD DIVISION—At Church House St James Street Sheffield Tuesday May 25 8.40 p.m. Annual general meeting Election of officers

POST-GRADUATE NEWS

A clinical demonstration under the direction of Mr A. O. Parker of Cardiff will be held at the Robert Jones and Agnes Hunt Orthopaedic Hospital Oswestry on Friday June 11 at 3 p.m. The programme will be mainly practical and will so far as possible demonstrate the methods by which the hospital treats common orthopaedic conditions and in particular the use of plaster splints etc. All medical practitioners in the area served by the hospital are cordially invited to be present

The Fellowship of Medicine announces the following courses: urology at St. Peter's Hospital May 31 to June 12; gynaecology at Chelsea Hospital for Women June 14 to 26; general medicine, June 5 and 6; and general surgery June 19 and 20 both at Prince of Wales's General Hospital; obstetrics at City of London Maternity Hospital June 12 and 13. Courses in preparation for the July M.R.C.P. examination will be given as follows: clinical and pathological at National Temperance Hospital, Tuesdays and Thursdays at 8 p.m. June 1 to 17; chest diseases at Brompton Hospital, Mondays and Thursdays, or Tuesdays and Fridays 5 p.m. June 7 to July 13; heart and lungs at Victoria Park Hospital Wednesdays and Fridays, 6 p.m. June 9 to July 3; neurology at West End Hospital for Nervous Diseases June 21 to July 3. The annual dinner-dance of the Fellowship will take place at Claridge's Hotel on Friday May 28. Tickets can be obtained from the Fellowship, 1, Wimpole Street W., or from any member of the Ladies Committee. All members of the medical profession and their friends will be welcome.

WEEKLY POST-GRADUATE DIARY

BRITISH POST GRADUATE MEDICAL SCHOOL Ducane Road, W.—
Daily 10 a.m. to 4 p.m., Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations Tues 4.30 p.m., Dr D. Hunter Occupational Diseases Wed 12 noon Clinical and Pathological Conference (Medical) 2 p.m. Dr Kung, Acid base Metabolism 3 p.m., Clinical and Pathological Conference (Surgical) Thurs 2.15 p.m. Dr Dunca White Radiological Demonstration 3.30 p.m. Mr A. K. Henry Demonstrations on the Cadaver of Surgical Exposures Fri 2 p.m., Operative Obstetrics 2.30 p.m. Mr Russell Howard, Diseases of the Breast 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology)

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION 1 Wimpole Street W.—Brompton Hospital S.W. All-day Course in Thoracic Surgery Princess Elizabeth of York Hospital Shadwell E. Sat and Sun Course in Children's Diseases St John's Hospital 5 Lisle Street W.C. Afternoon Course in Dermatology Maudsley Hospital Denmark Hill S.E. Afternoon Course in Psychological Medicine Annual Dinner Dance Claridge's Hotel Fri

HOSPITAL FOR EPILEPSY AND PARALYSIS Maida Vale W.—Thurs 3 p.m. Demonstration by Dr Russell Brain

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—Thurs 2 p.m. Clinical Lecture Mr J. H. Doggart Origin and Treatment of Squint 3 p.m. Clinico-Pathological Lecture Dr W. G. Wyllie Pitfalls in the Diagnosis of Tuberculous Meningitis Out patient Clinics mornings 10 a.m. to 12 noon Ward Visits afternoons 2 p.m. to 3.30 p.m.

INSTITUTE OF PATHOLOGY AND RESEARCH St Mary's Hospital W.—Tues 5 p.m. Prof E. C. Dodds Observations on the Structure of Substances Natural and Synthetic and their Reactions on the Body

LONDON SCHOOL OF DERMATOLOGY 5 Lisle Street W.C.—Mon 5 p.m. Dr H. MacCormac Treatment of Syphilis Tues 5 p.m. Dr W. N. Goldsmith Acneiform Eruptions Thurs 5 p.m. Dr W. Griffith Bullous Eruptions Fri 5 p.m., Dr A. M. H. Gray Scleroderma and Allied Conditions

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE Keppel Street W.C.—Mon., 5.30 p.m. Heath Clark Lecture by Dr G. H. Miles Time and Movement Study

UNIVERSITY COLLEGE Gower Street W.C.—Mon 5.30 p.m. Dr D. McKie Development of Theories Regarding Combustion and Respiration in the Eighteenth Century Mon Wed and Fri 5.30 p.m., Prof Lewis H. Weed The Meninges and the Cerebrospinal Fluid Thurs 5.30 p.m. Dr F. G. Young Development of Certain Aspects of Metabolism during the Nineteenth Century

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE, Hammersmith W.—Daily 2 p.m. Operations Medical and Surgical Clinics Mon 10 a.m. Dr Post A Ray Film Demonstration Skin Clinic 11 a.m., Surgical Wards 2 p.m. Surgical and Gynaecological Wards Eve and Gynaecological Clinics 4.15 p.m. Mr Green Armytage Pelvic Inflammation Tues 10 a.m. Medical Wards

11 a.m. Surgical Wards 2 p.m., Throat Clinic *Wed* 10 a.m., Children's Ward and Clinic 11 a.m. Medical Wards 2 p.m., Eye Clinic, Gynaecological Operations 4.15 p.m. Dr Redvers Ironside Trigeminal Neuralgia and its Treatment *Thurs* 10 a.m., Neurological and Gynaecological Clinics 12 noon Fracture Clinic, 2 p.m., Eye and Genito Urinary Clinics 4.15 p.m. Mr Davenport Treatment of Commoner Ophthalmic Conditions. *Fri* 10 a.m. Medical Wards Skin Clinic 12 noon Lecture on Treatment 2 p.m. Throat Clinic 4.15 p.m. Dr Owen Artificial Feeding in Infants *Sat* 10 a.m., Children's and Surgical Clinics 11 a.m. Medical Wards The lectures at 4.15 p.m. are open to all medical practitioners without fee

ABERDEEN MEDICAL SCHOOL—At Aberdeen Royal Infirmary *Tues* and *Thurs* 3.15 p.m. Mr F. K. Smith and others Injection Therapy with Demonstrations

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION—At Ophthalmic Institution, *Wed* 4.15 p.m. Dr James N Tennent Tumours of the Eye

MANCHESTER ROYAL INFIRMARY—*Tues* 4.15 p.m. Dr T. H. Oliver The New Insulins *Fri* 4.15 p.m. Dr Fergus R. Ferguson Demonstration of Neurological Cases

DIARY OF SOCIETIES AND LECTURES

ROYAL COLLEGE OF PHYSICIANS OF LONDON Pall Mall East, S.W.—*Tues* and *Thurs* 5 p.m. Croonian Lectures by Dr Edwin Bramwell Clinical Reflections upon Muscles Movements and the Motor Path

ROYAL SOCIETY OF MEDICINE

Section of Odontology—*Mon* 8 p.m. Annual General Meeting at Royal College of Surgeons of England Lincoln's Inn Fields, W.C. Election of Officers and Council for 1937-8, Sir Frank Colyer will show new specimens received in the Museum during the past year

Section of Anaesthetics—The Annual Dinner of the Section will be held at the Café Royal Regent Street W. at 8.15 p.m.

Special Meeting of Fellows—*Tues* 5 p.m. Nomination of Officers and Council for 1937-8

General Meeting of Fellows—*Tues* 5.30 p.m. Ballot for Election to the Fellowship

Section of Medicine—*Tues* 5 p.m. Annual General Meeting Election of Officers and Council for 1937-8

Section of Pathology—*Tues* 7 p.m. Summer Meeting at Wellcome Physiological Research Laboratories Langley Court Beckenham Kent. A tour of the laboratories and serological and bacteriological demonstrations (production and titration of antitoxins and general research work) will be arranged

Section of Comparative Medicine—*Wed* 5 p.m. Annual General Meeting Election of Officers and Council for 1937-8 Paper and Film by Sir Weldon Dalrymple-Champneys A Few Remarks on Snake Venom its Source Method of Collection and Uses (illustrated by an extract from the coloured film taken by the speaker in Brazil) Short Papers by Dr G. A. H. Buttle and Dr H. J. Parish Observations on the Chemotherapy of Bacterial Infections in Mice Dr A. W. Stableforth Cutaneous Streptothricosis—a Case in This Country and Mr R. Hudson Cutaneous Streptothricosis—the Disease in Other Countries

Section of Urology—*Thurs* 8.30 p.m. Mr James Carver Observations on Genito-urinary Tuberculosis

Section of Disease in Children—*Fri* 5 p.m. (Cases at 4.30 p.m.) Annual General Meeting Election of Officers and Council for 1937-8 Cases by Mr Poole Wilson and Dr C. Paget Lapage Specimen of a Case of Neuroma of the Spinal Cord Dr F. Dudley Hart (introduced by Dr B. Schlesinger) Mediastinal Neuroblastoma Dr O'Donoghue (introduced by Mr Harold Edwards) An Unusual Deformity of the Genitalia Dr Willfrid Sheldon and Mr Harold Edwards Congenital Recto-sigmoid Stricture Other cases will be shown

Section of Epidemiology and State Medicine—*Fri*, 8 p.m. Annual General Meeting Election of Officers and Council for 1937-8

Sections of Epidemiology and State Medicine and Medicine—*Fri* 8.15 p.m. Special Discussion Air Conditioning Opener Mr R. Frederick followed by Mr C. W. Price and Dr E. M. Fraenkel Members of the Section of Physical Medicine are specially invited to attend the meeting

BRITISH INSTITUTE OF RADIOLOGY—At 32, Welbeck Street W. *Thurs* 6.30 p.m. Annual General Meeting

CAMBRIDGE MEDICAL SOCIETY—At Addenbrooke's Hospital *Fri* 2.30 p.m. Clinical and Pathological Meeting

CHICHESTER CLINICAL SOCIETY—At Hotel Rembrandt Thurloe Place S.W., *Tues* 8.30 p.m. Discussion Short wave Therapy To be opened by Dr Philippe Bauwens and Dr F. Howard Humphris (Corrected date)

IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY South Kensington S.W.—*Mon*, *Tues* and *Wed* 5.30 p.m. Prof. J. M. Heilbron D.S.O. F.R.S. Chemistry of the Carotenoids and Vitamin A.

VACANCIES

All advertisements should be addressed to the Financial Secretary and Business Manager and NOT to the Editor

BANGOR CAERNARVONSHIRE AND ANGLESEY INFIRMARY—Senior H.S. (male) Salary £170 p.a.
BATH CITY—M.O. for the Council's Poor Law Infirmary and Institution Salary £500-£25 £700 p.a.
BIRKENHEAD EDUCATION COMMITTEE—Assistant School M.O. Salary £500-£25-£700 p.a.
BIRMINGHAM EAR AND THROAT HOSPITAL—Second R.H.S. Salary £150 p.a.
BLACKBURN COUNTY BOROUGH—Assistant School M.O. and Assistant M.O.H. (male) Salary £600-£25 £700 p.a.
BLACKPOOL CORPORATION—Medical Assistant (male) to the Public Health and School Medical Departments Salary £500-£25 £700 p.a.
BOURNEMOUTH ROYAL NATIONAL SANATORIUM—A.R.M.O. (male, unmarried) Salary £200 p.a.
BRAOFOED ROYAL INFIRMARY—Hon Assistant P.
BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN—H.S. (male) Salary £120 p.a.
BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL—H.P. (male, unmarried) Salary £150 p.a.
BRIGHTON SUSSEX EYE HOSPITAL—H.S. (male) Salary £150 p.a.
BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road, W.—Assistant in Bacteriology in the Department of Pathology Salary £300 £50 £500 p.a.
BURY INFIRMARY—(1) Third H.S. (2) C.O. Males Salary £150 p.a. each
BURY ST EDMUNDS WEST SUFFOLK GENERAL HOSPITAL—H.P. Salary £150 p.a.
CAMBRIDGE BOROUGH—Whole time Assistant M.O.H. and Assistant School M.O. Salary £600-£50-£800 p.a.
CHELSEA HOSPITAL FOR WOMEN Arthur Street S.W.—H.S. (male) Salary £100 p.a.
CHELTENHAM GENERAL AND EYE HOSPITAL—H.S. (male, unmarried) Salary £150 p.a.
CONNAUGHT HOSPITAL Walthamstow, E.—(1) Senior R.M.O. Salary £175 p.a. (2) H.S. (3) H.P. (4) C.O. Salaries £110 p.a. each Males
COVENTRY CITY—A.M.O. (female) Salary £500-£25 £700 p.a.
COVENTRY AND WARWICKSHIRE HOSPITAL—(1) R.H.S. (2) C.O. (3) R.H.S. for the Aural and Ophthalmic Departments Salaries £150 each.
DERBYSHIRE HOSPITAL FOR SICK CHILDREN—R.H.S. (female)—Salary £130 p.a.
DEVON COUNTY COUNCIL—R.A.M.O. (male unmarried) for Hawkmoor Sanatorium Salary £250 p.a.
DEWSBURY AND DISTRICT GENERAL INFIRMARY—(1) Senior H.S. (2) Second H.S. Males Salaries £200 p.a. and £150 p.a. respectively
DORSET COUNTY—Assistant County M.O. Salary £500-£25 £700 p.a.
DUDLEY GUEST HOSPITAL—Second H.S. (male) Salary £120 p.a.
DUNDEE CORPORATION—Deputy M.O.H. (male) Salary £750-£20-£850 p.a.
EASTBOURNE PRINCESS ALICE MEMORIAL HOSPITAL—(1) Hon S. (2) Hon Assistant P.
EDINBURGH ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL—District M.O. (female) Honorarium £30 p.a.
EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN—Second H.S. (female) Honorarium £50 p.a.
ELIZABETH GARRETT ANDERSON HOSPITAL Euston Road, N.W.—(1) Hon Assistant S. (2) Hon Junior Obstetric S.
FARNBOROUGH KENT COUNTY HOSPITAL—(1) Deputy Resident Medical Superintendent (unmarried) (2) R.A.M.O. Salaries £600-£50-£800 p.a. and £350-£25 £450 p.a.
GLANMORGAN COUNTY COUNCIL—R.A.M.O. for Llwynypia Hospital, Rhondda Salary £350 £25 £450 p.a.
GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION—H.S. (male) Salary £150 p.a.
HOSPITAL FOR SICK CHILDREN—(1) R.H.P. (2) R.H.S. Males unmarried Salaries £100 p.a. each
HOSPITAL OF ST JOHN AND ST ELIZABETH Grove End Road N.W.—Ophthalmic S.
HOSPITAL FOR WOMEN, Soho Square W.—R.M.O. Salary £100 p.a.
HUDDERSFIELD ROYAL INFIRMARY—C.O. (male) Salary £200 p.a.
HULL ROYAL INFIRMARY—(1) Second H.P. (2) H.S. to the Ophthalmic and Ear Nose and Throat Departments (3) Second C.O. Males unmarried Salaries £150 p.a. each
HULL VICTORIA HOSPITAL FOR SICK CHILDREN—R.H.P. (female) Salary £120
ILFORD BOROUGH—R.M.O. (female) for the Maternity Home Salary £400-£25-£500 p.a.
JERUSALEM St. Luke's Mission Hebron—A.R.M.O. (female) Salary £200 p.a.
KENSINGTON ROYAL BOROUGH—Deputy M.O.H. Salary £900-£50-£1100 p.a.
KENT COUNTY COUNCIL—R.A.M.O. for the County Hospital Pembury Salary £250 p.a.
KETERING AND DISTRICT HOSPITAL—(1) R.M.O. (2) Second R.M.O. (male) Salaries £160 and £140 respectively
LIVERPOOL UNIVERSITY—Research Assistant in the Department of Medicine Salary £600-£700 p.a.

LONDON COUNTY COUNCIL—Part time M.O. (female) for Cumberlow Lodge School for Senior Girls Salary £40 p.a.
LONDON HOMOEOPATHIC HOSPITAL Great Ormond Street WC—Gynaecological H.S. Salary £100 p.a.
LONDON LOCK HOSPITAL—R.M.O. to the Male Departments Salary £175 p.a.
MANCHESTER ANCOATS HOSPITAL—R.S.O. Salary £200 p.a.
MANCHESTER DUCHESS OF YORK HOSPITAL FOR BABIES—Hon. Assistant Anaesthetist
MIDDLESEX COUNTY COUNCIL—(1) A.M.O. for the Public Health and School Medical Department (2) Assistant Dental Officer Salaries £600-£30-£750 p.a. and £500 £25 £700 p.a. respectively
(3) Non resident Casualty M.O. for West Middlesex County Hospital Isleworth Salary £350 p.a.
MINISTRY OF HEALTH Whitehall SW—M.O.s Salaries £847 £30-£1 161 p.a.
NEWTOWN ROYAL GWENT HOSPITAL—Two H.S. (males) Salaries £135 p.a. each
NORTHAMPTON MANFIELD ORTHOPAEDIC HOSPITAL—J.R.M.O. (male) Salary £200 p.a.
NOTTINGHAM GENERAL DISPENSARY—Resident S. (unmarried) Salary £300-£25 £350 p.a.
NUNEATON GENERAL HOSPITAL—(1) R.S.O. (2) H.S. Salaries £275 p.a. and £125 p.a. respectively
OLDHAM COUNTY BOROUGH—R.A.M.O. (unmarried) for the Municipal Hospital Salary £200 p.a.
OXFORD RADCLIFFE INFIRMARY—R.M.O. (female) Salary £120 p.a.
OXFORD WINGFIELD MORRIS ORTHOPAEDIC HOSPITAL Headington Orthopaedic S. (male) Salary £200 p.a.
PLYMOUTH ROYAL EYE INFIRMARY—Hon. P.
PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—(1) H.S. (male unmarried) (2) R.H.S. to the Maternity Hospital Salaries £150 p.a. each
PRESTON LANCASHIRE COUNTY COUNCIL—Assistant County M.O. for the School Medical and Child Welfare Department Salary £800 £50-£1 000 p.a.
PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN Shadwell E—(1) H.P. (2) C.O. (3) H.S. Salaries £125 p.a. each
QUEEN CHARLOTTE'S MATERNITY HOSPITAL Marylebone Road NW—(1) Obstetric S. to In Patients (2) Hon. General S.
QUEEN MARY'S HOSPITAL FOR THE EAST END Stratford E—(1) R.M.O. (2) Two Casualty and Out Patient Officers Salaries £150 p.a. each (3) Two H.S. (4) H.P. (5) Obstetric H.S. (6) Resident Anaesthetist and H.P. Salaries £120 p.a. each Males unmarried
QUEEN'S HOSPITAL FOR CHILDREN Hackney Road E—(1) H.P. (2) C.O. Salaries £100 p.a. each
READING ROYAL BERKSHIRE HOSPITAL—(1) C.O. (2) H.S. to the Special Departments Males Salaries £150 p.a. each
ROTHERHAM HOSPITAL—Casualty H.S. (male) Salary £150 p.a.
ROYAL FREE HOSPITAL Gray's Inn Road WC—(1) First H.P. (male) (2) R.C.O. (male) Salary £150 p.a.
ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN Waterloo Road SE—R.C.O. (male) Salary £150 p.a.
ST THOMAS'S HOSPITAL SE—P.
SALFORD ROYAL HOSPITAL—Psychiatrist Honorarium £52 p.a.
SALISBURY GENERAL INFIRMARY—(1) R.M.O. (2) H.P. Males Salaries £250 p.a. and £125 p.a. respectively
SHEFFIELD CITY—J.A.M.O. (male) to the City General Hospital Salary £200 p.a.
SHEFFIELD ROYAL INFIRMARY—(1) Ophthalmic H.S. (2) Aural H.S. (3) H.S. Salaries £80 £100 each
SHREWSBURY ROYAL SALOP INFIRMARY—R.H.P. (male unmarried) Salary £160 p.a.
SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON REGIONAL RADIUM CENTRE—Locum tenens Radium Officer Salary £12 12s per week
SOUTHEND-ON-SEA GENERAL HOSPITAL—Surgical Registrar Salary £275 p.a.
STAFFORDSHIRE COUNTY COUNCIL—R.A.M.O. (male unmarried) for Wordsley Public Assistance Institution Salary £300 p.a.
STOKE-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.
STOKE-ON-TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY—H.S. for the Aural and Ophthalmic Department Salary £150 p.a.
STROUD GENERAL HOSPITAL—R.M.O. Salary £160 p.a.
SURREY COUNTY COUNCIL—(1) Whole time Dental S. Salary £500 £20-£600 p.a. (2) R.A.M.O. for Kingston and District Hospital Salary £375 p.a.
TUNTON BOROUGH—Part-time Assistant to the M.O.H. Salary £1 11s 6d per session
TIPTON URBAN DISTRICT COUNCIL—M.O.H. and School M.O. Salary £800 p.a.
WEST LONDON HOSPITAL Hammersmith Road W—(1) J.A.M.O. for the Venereal Diseases Department Salary £350 p.a. (2) H.P. (3) Two H.S. Males Salaries £100 p.a. each
WILLESDEN GENERAL HOSPITAL Harlesden Road NW—Hon. Clinical Assistants to the Out patient Department
WINCHESTER COUNTY OF SOUTHAMPTON AND COUNTY BOROUGH OF BOURNEMOUTH AND SOUTHAMPTON—Principal Medical Adviser to the Hampshire Joint Mental Health Institutions Committee and Medical Superintendent to Knowle Mental Hospital Salaries £1 400-£50-£1 800 p.a.
WINCHESTER ROYAL HAMPSHIRE COUNTY HOSPITAL—(1) R.S.O. (2) H.P. Males Salaries £200 p.a. and £125 p.a. respectively
WORKING AND DISTRICT VICTORIA HOSPITAL—R.M.O. (unmarried) Salary £120 p.a.

WOLVERHAMPTON COUNTY BOROUGH—R.A.M.O. (male unmarried) for New Cross Hospital Salary £200 p.a.
WORCESTER ROYAL INFIRMARY—H.S. to the Gynaecological Department Salary £140 p.a.
WORKSOP VICTORIA HOSPITAL—(1) Senior Resident (2) Junior Resident Salaries £150 p.a. and £120 p.a. respectively

CERTIFYING FACTORY SURGEONS—The following vacant appointments are announced (1) Old Meldrum (Aberdeenshire) (2) Quorn (Leicestershire) (3) Shanklin (Isle of Wight) (4) Bradford East (Yorkshire West Riding) (5) Innerleithen (Peebles shire) (6) Hestle (Yorkshire East Riding) Applications to the Chief Inspector of Factories, Home Office Whitehall SW 1 for (1) to (5) by May 25 and for (6) by June 1

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 37 38 40 41 42 43 44 45 48 and 49 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 46 and 47

APPOINTMENTS

ANSON C E H, MB B.S. Medical Superintendent Royal National Sanatorium Bournemouth
BARNET VICTORIA COTTAGE HOSPITAL—Honorary Consulting Children's Physician Alan Moncrieff MD FRCP Honorary Gynaecologist Charles D Read FRCS Honorary Consulting Surgeon E G Muir MS FRCS
GILMOUR J F R C S, Honorary Surgeon Royal Victoria Infirmary Newcastle upon Tyne
HAWKINS B E M R C S L R C P, Certifying Factory Surgeon for the Beckenham District (Kent)
LONDON COUNTY COUNCIL—The following appointments are announced at the hospitals and districts indicated in parentheses Senior Assistant Medical Officers Grade II G M Frazelle MD (St Nicholas), Kathleen M D Harding MD MCOG (St Pancras) Assistant Medical Officers Grade I R D Bruce MB ChB (Hackney) I Mackenzie MB ChB (St Giles) L I M Edwards MB, BCh (St Mary Abbots) I Rose MB ChB (St Olaves) I W Matheson FRCS (Mile End) Mary H Mayeur, MD (St James) D Y Allan MD (St Mary Islington) Assistant Medical Officers Grade II Elizabeth M James MB BS (Fulham) Olive M Browne MB ChB and W R Gauld MB ChB (Hackney) L J Wolfson M R C S L R C P (Highgate) C A Boucher BM BCh and J D Ramsay MB, ChB (New End) G C H Hogg FRCS (St James) W N Lippitt M R C S L R C P (St Olaves) Queenie I E May M R C S L R C P (St Charles) House Physicians Jane R Forge MB ChB (Downs) J Walter BM BCh (Dulwich) S Hales M R C S L R C P (St Alfiges) Sophie Bookhalter MD and E St N Brett L R C P and S L R F P S (St Andrews) G T Stockings MB BS (St Giles) J C Adams M R C S L R C P and J S H Scott, M R C S L R C P (St James) Janet F Cormick MB, ChB (St Luke's Chelsea) M Hamilton M R C S L R C P (St Mary Abbots) J F C C Cobley MB BS and P W Dill Russell M R C S L R C P (St Olaves) House Surgeons J E T Munn L.M.S.S.A. (Mile End) N J W Thompson MB BCh BAO (Paddington) W T Maguire MD (St Alfiges) R. Barraclough MB BCh A M Mackenzie MB ChB, and A W Thompson MB BCh BAO (St Mary Abbots) Clinical Assistant A R Newcombe MB ChB (St Mary Abbots) Temporary District Medical Officers A A Hayman L R C P and S I (Area V District B City of Westminster) E J Walsham M R C S L R C P (Area VII District M Baltham) First Assistant Medical Officer C R Birnie MD M R C P D P M (West Park) Second Assistant Medical Officer A. C. Dalzell MD., D P M (Bexley)

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

BIRTH

COOKE—On May 12 at 19 York Avenue Fulwood Preston to Gladys wife of R T Cooke MD a son

DEATHS

BECKETT—Suddenly at Nanyasha Kenya Colony whilst on a visit Francis Henry Mears Allden Beckett MB late of St Audrey's Ely Cambridgeshire

BRUSHFIELD—On May 16 at 3 Highbury Mansions Church Road St Leonards Thomas Brushfield MD Cantab eldest son of the late T N Brushfield MD F.S.A. aged 79

FIRTH—On May 17 1937 Arthur Marcus Firth M.A., M.D. Medical Superintendent of the Worcestershire Mental Hospital Barnley Hall Bromsgrove aged 62 years

cent) contracted influenza. This result appears to show that very little, if any, spread of infection can be attributed to public conveyances. It is realized that those people who do not travel to and from work by this means may do so after working-hours for pleasure, but in that case the 'rush hour' would be over and close contact not so likely. It is possible that the walkers or cyclists have slightly increased resistance.

Influenza is not a notifiable disease and it is impossible to obtain reliable statistics as to its incidence. In times of epidemics certain catarrhal affections of the throat and bronchial tubes are undoubtedly called influenza when possibly they are not. It is difficult to say clinically where a feverish cold ends and influenza begins. It is reasonably certain however, that the bulk of the cases under review were caused by the same virus. A very large number of the patients were seen and were sent off from work by the same medical officer. It is known that the epidemic was widespread throughout the country, and presuming that there are ten million people employed in industry to-day it would mean that something like two million wage earners contracted the disease in two months—that is if the incidence rate for industry as a whole was the same as that shown in this paper. Furthermore, the total amount of illness for all affected workers must have approached twenty million days. It is agreed that the later figures are pure conjecture, but it must be remembered that only about 25 per cent of the population have been considered.

Conclusion and Summary

A study of certain aspects of an epidemic of influenza as it affected a number of industrial workers—that is, wage earners—has been made.

It has been shown that in spite of modern premises, good food, at well arranged canteens, rest periods, and hygienic conditions generally, 1,214 workers out of 6,354 (19.1 per cent) contracted influenza within a period of two months.

In this study the virus showed a predilection for females and for the young worker of both sexes. Also the factory worker of both sexes showed a higher incidence rate as compared with other classes of worker of the same sex.

The suggestion has been made that it is industrial workers who are the first to be attacked by epidemics of influenza and that much of the spread takes place at work and is due to unavoidable contact and not to poor hygienic conditions.

The relation of public conveyances, if any, to the spread of epidemic influenza has been discussed. The evidence produced shows no relation.

Statistics have been compiled showing incidence, duration of the illness and of previous attacks.

Arrangements are being made to hold the fourth International Leprosy Conference in Cairo beginning on March 21, 1938. It is being organized by the International Leprosy Association and will be the first international conference to be arranged by that body since its inauguration in 1931. Three previous conferences of this nature have been held—at Berlin in 1897, at Bergen in 1909 and at Strasbourg in 1923. The Egyptian Government is inviting all countries concerned to send official delegates. In addition to these and the members of the International Leprosy Association, doctors and others interested in the subject are invited to be present. Full information can be obtained from the secretary of the International Leprosy Association, 131, Baker Street, London, W.1.

A MALARIAL TREATMENT CENTRE THE UNIT AT HORTON MENTAL HOSPITAL

A report summarizing the results of observations made by Dr W. D. Nicol, medical superintendent of Horton Hospital during a recent visit to the nerve psychiatric clinic at Vienna, where the treatment by induced malaria of cases of general paralysis of the insane was established originally by Professor Wagner Jauregg, has been presented to the London County Council. Dr Nicol also visited the Steinhof, a large mental hospital outside Vienna, the research department in neuro histopathology at the Kaiser Wilhelm Institute at Munich, the nerve psychiatric clinic under the charge of Professor Kleist at Frankfurt, and the mental hospital at Düsseldorf under the administration of Professor Sioli, as well as the Bayer chemical factories at Leverkusen and the research laboratories at Elberfeld between which and Horton Hospital there has been close co-operation for some years in the provision of opportunity for the use of anti malarial drugs.

A Twofold Purpose

The Mental Hospitals Committee, in bringing forward to the Council Dr Nicol's report, states that the special unit at Horton Hospital established in 1925 in conjunction with the Ministry of Health as a centre for the treatment by induced malaria of cases of general paralysis of the insane serves not only its immediate purpose but as a means for the study of malaria itself, a matter of great importance in view of the close and constant relations between this country and other parts of the Empire where malaria is endemic. The laboratory technique and the development of the entomological side of the work in breeding and infecting mosquitoes have been copied and reproduced in other centres in Europe. The clinic at Vienna has adopted the Horton laboratory technique of examining blood films, the plans of the insectarium in which mosquitos are bred at Horton Hospital have been reproduced in Germany, Rumania, and Holland. The malaria research at Horton, which has been made possible only by team work on an organized scale, has attracted outside workers from all parts of the world. The medical care of cases by one of the medical officers, the charge of the laboratory under Mr Shute and two laboratory assistants, the clerical aid given by the Ministry of Health, and the direction of the work by Colonel James have contributed to the establishment of a research centre on a sound scientific basis. Since Colonel James's recent retirement a liaison has been effected between Horton and the London School of Hygiene and Tropical Medicine, and recently a whole time worker with a research fellowship from the Royal Society has started his studies at Horton. The arrangements which were under the direction of Colonel James have now been taken over by Professor J. G. Thomson of the School of Tropical Medicine.

Research in Neurosyphilis

Active treatment of general paralysis of the insane has gone on vigorously at Horton Hospital but there has not until recently been opportunity there for the prosecution of research in general paralysis and in neurosyphilis to a degree comparable with the research in malaria. That deficiency has now been remedied and a start has been made at Horton with the appointment of a whole-time research worker (Dr E. L. Hutton) and a clerical assistant who will help in the compilation of the records upon which successful investigation of large numbers of cases must depend. Facilities are needed too for dealing with cases of asymptomatic neurosyphilis; it would appear that there is a prospect of the successful application of malaria as a therapeutic means in preventive medicine. An inquiry is now being made into the incidence of syphilis in families of general paralytics. The report to the L.C.C. adds that some 800 cases have been treated at Horton.

Hospital since 1925 and a large unexplored field of research relating to the problem of neurosyphilis is open to workers who should be attracted to the centre at Horton just as during the past ten years malarialogists have been attracted

FELLOWSHIPS AND APPOINTMENTS IN TROPICAL MEDICINE

The Medical Research Council advised by its Tropical Medical Research Committee (appointed after consultation with the Colonial Office) announces the following

Junior Fellowships—Three junior Fellowships are offered immediately for award to qualified medical men wishing to receive training with a view to careers in research work in tropical medicine. Preference will be given to candidates who have already had preliminary experience of methods of research in some branch of medical science. Subject to satisfactory reports, the Fellowships will be tenable for three years. The first year will be spent at a school of tropical medicine, the second in carrying out research in the same or other institution at home and the third largely in work under direction at some centre in the Tropics. The stipend will be at the rates of £300 £400 and £500 per annum in the successive years, with an additional allowance during service abroad and necessary expenses. The Council has every reason to believe that men who undergo this training will be eligible and well qualified for various appointments apart from the prospects of further employment under the scheme.

Senior Fellowships—In three years time at least one senior Fellowship will be available for candidates who have held the junior Fellowships mentioned above. This will be awarded for a further period of three years carrying stipend at the rate of £600 to £750 per annum, with an additional allowance during service abroad and expenses. The time will be spent mainly in research work in the Tropics. The Council is also prepared to consider immediate applications for senior Fellowships from candidates who have had adequate experience in research work whether already specially trained in tropical medicine or not.

Permanent Appointments—The Council further intends to establish in due course as suitable investigators become available as the result of the Fellowships scheme, permanent and pensionable appointments for research work in tropical medicine including senior posts. Members of this research staff will work partly in the Tropics and partly in institutions at home to which they will be severally attached. The exact terms of service are still undecided but they will be not less favourable than those which apply to other Government appointments at home or over seas for men of similar professional standing.

Inquiries may be addressed to the Secretary, Tropical Medical Research Committee, 38 Old Queen Street London SW1 with whom applications should be lodged not later than June 15 1937.

INTERNATIONAL UNION AGAINST TUBERCULOSIS

Date of Adjourned Tenth Conference

The tenth Conference of the International Union against Tuberculosis which was to have been held last year has now been arranged to take place at Lisbon from September 5 to 9 next under the chairmanship of Professor Lopo de Carvalho the secretary-general of the Conference is Dr. Castello Branco. Discussion will be limited to three main subjects: biological subject: Radiological Aspects of the Pulmonary Hilum and their Interpretation; opening report by Professor Lopo de Carvalho (Portugal), clinical subject: Primary Tuberculosis Infection in the Adolescent and the Adult, opening report by Dr. Olaf Scheel (Norway); social subject: The Open Case of Tuberculosis in Relation to Family and Domestic Associates; opening report by Drs. J. Hatfield (United States) and D. A. Powell (Great Britain). Ten speakers chosen in advance from a list presented by forty-four countries belonging to the Union have been designated to open the discussion on each of the questions on the agenda.

Members of the International Union are invited to take part in the Conference without fee. They may forward their application either through their Government or their national organization against tuberculosis, or directly to the Organizing Committee of the Tenth Conference of the International Union against Tuberculosis, Assistancia Nacional aos Tuberculosos, Avenida 24 de Julho, Lisbon, Portugal. Names may also be sent to the headquarters of the Secretariat of the International Union against Tuberculosis, 66 Boulevard Saint Michel, Paris (6e). Persons who are not members of the Union and who wish to take part as "Members of the Conference" must forward their applications together with a contribution of 200 escudos, exclusively through the medium of the National Association for the Prevention of Tuberculosis, Tavistock House, North Tavistock Square, London W.C.1. Members of the Conference who sent in their contribution last year are exempted from any further payment.

LEON BERNARD MEMORIAL FUND

A prize to the value of 2,500 French francs is to be awarded biennially by the International Union in memory of the late Professor Leon Bernard, who was its founder and for fourteen years general secretary. This will be awarded for the first time in 1938 for an original essay in either English or French on the social aspect of tuberculosis. The essay which must be typewritten and not exceeding 10,000 words must be forwarded by a Government or an association belonging to the Union to the Paris address given above not later than May 1 1938. Should the executive committee of the Union whose decision is final decide that no essay submitted is of sufficient merit the prize will not be awarded in 1938 but will be offered again in the following year.

SCHOLARSHIPS AT THE CARLO FORLANINI INSTITUTE

Members of the Union are reminded that the Italian Fascist National Federation against Tuberculosis places at the disposal of the Union six scholarships to the value of 2,000 lira respectively plus board and lodging, at the Carlo Forlanini Institute in Rome. These scholarships which are preferably given to young physicians who are already familiar with tuberculosis problems and who wish to improve their knowledge in this branch of medicine, will be awarded at the next session of the executive committee which meets in Lisbon in September next. The names of candidates, accompanied by particulars as to age, qualifications and professional experience must be forwarded by a Government or an association belonging to the Union to 66 Boulevard Saint Michel, not later than July 5 next.

In response to the desire expressed by many readers of the publications of the Health Section of the League of Nations the following changes have been made in the *Epidemiological Report* from January, 1937, onwards. The tables relating to infectious diseases and demography now appear again in monthly parts, and are issued in foolscap size. Opposite the current figures which are arranged in periods of four weeks or by months or quarters the median figures for the corresponding periods of the previous thirteen years are given for purposes of comparison as they form a valuable epidemiological index. The text of articles and monographs on epidemiological subjects will in future appear in the *Bulletin of the Health Organization of the League of Nations*. Readers of the *Epidemiological Report* who are not subscribers to the *Bulletin* will receive these articles as they are published in the form of off-prints (6½ by 9½ inches) so that they can be bound separately. The French and English texts of the *Bulletin* are issued in separate editions and the same practice will be followed for off-prints of epidemiological articles. Readers should inform the Distribution Service of the League of Nations, Geneva, whether they wish to receive the French or the English edition.

Nova et Vetera

"ISIS"

ISIS which is the quarterly organ of the History of Science Society and of the International Academy of the History of Science contains in its March number¹ four articles that are of medical interest. The first dealing with the discovery of x rays is from the pen of George Sarton D Sc, founder and editor of the journal. He introduces the subject with a short but clear summary of the progress of electrical knowledge towards the creation of a vacuum. He then gives a biography of Wilhelm Konrad Röntgen who was born in 1845, discovered the x rays on November 8 1895 whilst he was professor of physics at Würzburg, and died at Munich in 1923. The article ends with a facsimile reproduction of Röntgen's first account of his discovery. This appeared in the *Sitzungsberichte der Physikalisch medicinische Gesellschaft of Würzburg* on December 28, 1895 which was distributed to the members early in January, 1896. It attracted attention immediately, for *Nature* published a translation on January 23 1896, the *Electrician* on January 24, and *Science* on February 14 in the same year.

Dr Aydın M Sayılı of Harvard University writes on Uygur medicine, which was pre-Islamic. The climax of the political and military powers of the Uygurs—a Turkish speaking people of Central Asia—was in the eighth century of the Christian era. His study shows that the Uygurs possessed a sound and well-defined medical knowledge which appears to have been slightly in advance of Saxon medicine of the same period. The system was secular and was free from spiritual, magical, and religious elements. He then proceeds to consider Turkish medicine in the Moslem world and shows how much still remains to be done in connexion with its history. His paper is especially valuable for it proves that Turkish doctors are beginning to show an interest in the history of their profession. The Institute of the History of Medicine was founded in 1933, and was at once affiliated to the Istanbul University.

The article written by Lieut-Colonel E E Hume tells the story of the inception and growth of the Army Medical Library at Washington USA. It is illustrated with excellent portraits of John Shaw Billings and Fielding H Garrison—household words to all who use the *Index Catalogue*. Colonel Hume, like all librarians wants more room. He points out incidentally that about one thirtieth of the world's literature is medical and draws attention to the fact that the books in special libraries are much more often consulted than when they form part of a general collection.

Miss Kate C H Mead contributes an article on the medicine of the Lapps and there is an appreciative review by Miss Mary Catherine Welborn of the book on John Mirfield recently written by Sir P Horton-Smith Hartley and Mr H R Aldridge. The whole number is interesting and the printing and format do credit to the Saint Catherine Press Ltd., of Tempelhof, Bruges by whom it is printed in Belgium.

OLD MEDICAL BOOKS

A few old medical books have appeared recently in the London book market. On April 12 and following days Messrs Sotheby's auction catalogue included Gabriel Fallopius on *Ulcers and Tumours* Venice 1563. Galen's works edited by L Fuchsius Paris about 1550. Cardanus' *Commentaries on Hippocrates* Basle 1564. Miles Coverdale's most excellent and perfect homish apothecary

or homely physick booke for all the grefes and diseases of the bodye, Cologne 1561. In the sale on April 26 there were sold in several lots 199 letters by Dominique Jean Larrey (1766-1842) surgeon-in-chief of Napoleon's Armies, written during the various campaigns from 1798 to Waterloo, they deal with all kinds of medical as well as military affairs. Of medical interest, if not a medical book, in the same sale is a copy of the first edition of *Pantagruel* Paris 1546, by 'M Franc Rabelais docteur en médecine'. There are thought to be at most two other copies in existence, and possibly only one.

Reports of Societies

OTITIS MEDIA IN EARLY CHILDHOOD

At the meeting of the Section of Otology of the Royal Society of Medicine on May 7 the subject of discussion was otitis media in early childhood. The president Dr DOUGLAS GUTHRIE said that this subject had been discussed by pathologists and paediatricians for many years, but appeared to have attracted only slight attention from otologists, possibly because the cases did not come under their supervision being seen rather in general medical wards and at necropsy. The problem was whether the infection of the middle ear which was so extremely common in infants suffering from any disease whatsoever was a primary condition or a secondary phenomenon of comparatively slight importance. The council of the Section, in endeavouring to secure the views of otologists found that very few had paid much attention to the problem and to secure material for discussion which was to have been limited to otitis in infants, the subject was extended to children up to the age of 5.

French and English Experience

Dr LE MÉE of Paris opened the discussion with a few remarks on his experience of otitis in children under 15 months. He showed some excellent coloured slides of the normal and pathological tympanic membrane in infants and drew particular attention to what he called the frosted tympanic membrane dotted over with little grains. He said that this appearance was very often found in infants and was quite characteristic. There was such a condition as a latent otitis in which the external symptoms were only general or systemic. This type of otitis must be suspected whenever there was a febrile condition without evident cause. A very important symptom was a certain localized convulsion, especially ocular. On making an incision of a suspected tympanic membrane pus was not always found but it might appear later. It was well to remember that otitis media meant an infection of the whole of the middle-ear tract—mastoid, antrum, middle ear and tube. There was no barrier dividing the tympanum from the mastoid.

His indication for myringotomy was one sleepless night. If the child had one sleepless night with ear trouble he operated next day. Dr Le Mée proceeded to describe his method of operation in mastoid cases. He always carried out this operation in infants in two stages incising the periosteum and, one or two days later removing the bone. A few years ago he was impressed by the number of cases in which a very high fever had followed the carrying out of the operation in one stage. Since operating in two stages such complications had not occurred. Surgery in the infant must be minimal.

Analysis of Cases

Dr T RITCHIE RODGER gave an analysis of all cases of acute otitis media seen in children under 3 years of age.

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Nova et Vetera

"ISIS"

Isis which is the quarterly organ of the History of Science Society and of the International Academy of the History of Science contains in its March number¹ four articles that are of medical interest. The first dealing with the discovery of γ rays, is from the pen of George Sarton, D.Sc., founder and editor of the journal. He introduces the subject with a short but clear summary of the progress of electrical knowledge towards the creation of a vacuum. He then gives a biography of Wilhelm Konrad Röntgen who was born in 1845, discovered the γ rays on November 8, 1895 whilst he was professor of physics at Würzburg and died at Munich in 1923. The article ends with a facsimile reproduction of Röntgen's first account of his discovery. This appeared in the *Sitzungsberichte der Physikalisch-medicinische Gesellschaft in Würzburg* on December 28, 1895 which was distributed to the members early in January, 1896. It attracted attention immediately for *Nature* published a translation on January 23, 1896, the *Electrician* on January 24, and *Science* on February 14 in the same year.

Dr. Aydın M. Sayılı of Harvard University writes on Uygur medicine which was pre-Islamic. The climax of the political and military powers of the Uygurs—a Turkish speaking people of Central Asia—was in the eighth century of the Christian era. His study shows that the Uygurs possessed a sound and well-defined medical knowledge which appears to have been slightly in advance of Saxon medicine of the same period. The system was secular and was free from spiritual, magical, and religious elements. He then proceeds to consider Turkish medicine in the Moslem world and shows how much still remains to be done in connexion with its history. His paper is especially valuable for it proves that Turkish doctors are beginning to show an interest in the history of their profession. The Institute of the History of Medicine was founded in 1933, and was at once affiliated to the Istanbul University.

The article written by Lieut.-Colonel E. E. Hume tells the story of the inception and growth of the Army Medical Library at Washington, U.S.A. It is illustrated with excellent portraits of John Shaw Billings and Fielding H. Garrison—household words to all who use the *Index Catalogue*. Colonel Hume like all librarians wants more room. He points out incidentally that about one thirtieth of the world's literature is medical and draws attention to the fact that the books in special libraries are much more often consulted than when they form part of a general collection.

Miss Kate C. H. Mead contributes an article on the medicine of the Lapps and there is an appreciative review by Miss Mary Catherine Welborn of the book on John Mirfield recently written by Sir P. Horton-Smith Hartley and Mr. H. R. Aldridge. The whole number is interesting and the printing and format do credit to the Saint Catherine Press Ltd., of Tempelhof, Bruges by whom it is printed in Belgium.

OLD MEDICAL BOOKS

A few old medical books have appeared recently in the London book market. On April 12 and following days Messrs. Sotheby's auction catalogue included Gabriel Fallopius on *Ulcera and Tumours* Venice 1567. Galen's works edited by L. Fuchsius Paris about 1550. Cardanus' *Commentaries on Hippocrates* Base, 1562. Miles' *Cover de acries* excellent and perfect. Fomish apothecary

or homely physick booke for all the grefes and diseases of the bodye, Cologne 1561. In the sale on April 26 there were sold in several lots 199 letters by Dominique Jean Larrey (1766-1842) surgeon-in-chief of Napoleon's Armies, written during the various campaigns from 1798 to Waterloo, they deal with all kinds of medical as well as military affairs. Of medical interest if not a medical book in the same sale is a copy of the first edition of *Pantagruel* Paris 1546, by M. Frane Rabelais docteur en médecine. There are thought to be at most two other copies in existence, and possibly only one.

Reports of Societies

OTITIS MEDIA IN EARLY CHILDHOOD

At the meeting of the Section of Otology of the Royal Society of Medicine on May 7 the subject of discussion was otitis media in early childhood. The president, Dr. DOUGLAS GUTHRIE said that this subject had been discussed by pathologists and paediatricians for many years but appeared to have attracted only slight attention from otologists possibly because the cases did not come under their supervision being seen rather in general medical wards and at necropsy. The problem was whether the infection of the middle ear which was so extremely common in infants suffering from any disease whatsoever was a primary condition or a secondary phenomenon of comparatively slight importance. The council of the Section in endeavouring to secure the views of otologists found that very few had paid much attention to the problem, and to secure material for discussion which was to have been limited to otitis in infants, the subject was extended to children up to the age of 5.

French and English Experience

Dr. LE MÉE of Paris opened the discussion with a few remarks on his experience of otitis in children under 15 months. He showed some excellent coloured slides of the normal and pathological tympanic membrane in infants and drew particular attention to what he called the frosted tympanic membrane dotted over with little grains. He said that this appearance was very often found in infants and was quite characteristic. There was such a condition as a latent otitis in which the external symptoms were only general or systemic. This type of otitis must be suspected whenever there was a febrile condition without evident cause. A very important symptom was a certain localized convulsion especially ocular. On making an incision of a suspected tympanic membrane pus was not always found but it might appear later. It was well to remember that otitis media meant an infection of the whole of the middle-ear tract—mastoid antrum middle ear and tube. There was no barrier dividing the tympanum from the mastoid.

His indication for myringotomy was one sleepless night. If the child had one sleepless night with ear trouble he operated next day. Dr. Le Mée proceeded to describe his method of operation in mastoid cases. He always carried out this operation in infants in two stages incising the periosteum, and one or two days later removing the bone. A few years ago he was impressed by the number of cases in which a very high fever had followed the carrying out of the operation in one stage. Since operating in two stages such complications had not occurred. Surgery in the infant must be minimal.

Analysis of Cases

Dr. T. RITCHIE RODGER gave an analysis of all cases of acute otitis media seen in children under 3 years of age.

at the Victoria Hospital for Sick Children, Hull, during nine years. The cases numbered 599, and 249 of them were bilateral. Of these 185 were in children under 1 year of which 80 were bilateral, 200 were in children from 1 to 2 years, 86 being bilateral, and 214 were in children aged from 2 to 3, the bilateral cases numbering 83. Mastoid operation was required in 19 per cent of all the affected infants and in 26 per cent of the older children. The importance of the high incidence of bilateral involvement was that it indicated the necessity for examining both ears even when the mother had noted discharge or evidence of pain on one side only. Symptoms in the second ear might make themselves obvious several days or even two or three weeks after the first signs in the other ear. A common feature had been the coincidence of a pulmonary condition. The incidence of tuberculosis had been surprisingly low. It had not been possible to ask for a routine examination of material discharge or of the products of the mastoid operation where such had been performed, as there was no pathologist attached to the hospital and all work of that kind had to be paid for. Specimens had been sent, however, when the signs were at all suggestive. Even then the large majority of reports had been negative. As the cases which aroused suspicion were fewer than one in ten it followed that the estimate of the incidence of tuberculosis was under 5 per cent. This estimate might be compared with some of those mentioned when the subject was discussed in the Section in 1914, especially the figures from Edinburgh given by Turner and Fraser. Had the pure milk campaign made all this difference in less than a quarter of a century? It was true that in 1914 the incidence of tuberculosis in Edinburgh was accepted as being much higher than in most English towns. Moreover, the percentage of tuberculous cases in a series could be lowered by an increase of non-tuberculous cases as by a diminution of tuberculosis. With increased knowledge on the part of both parents and practitioners, and the stimulus of child welfare workers, a very much larger number of cases of the milder and more transitory type of otitis were now seen than was the case a generation ago. Further, it might be that non-tuberculous otitis media not only escaped attention less often, but was actually more common. But allowing a sufficient discount for all these factors, the comfortable reflection might be made that this generation had witnessed a large diminution in the incidence of tuberculous otitis.

Findings at Necropsy

Dr J H EBBs of Birmingham reported on the post-mortem examination of the middle ear and mastoid antrum of 880 children, of whom 80 per cent were under 2 years of age. These were children who had died from all types of medical and surgical conditions. Purulent material in one or both ears was found in 52.8 per cent. Of the children who had died in their first year 62 per cent had otitis media, though he was not implying that the children found with otitis media at necropsy had necessarily died as a direct result of that condition. An analysis also showed that 238 of the children under the age of 2 years had suffered from gastro-enteritis characterized by severe diarrhoea and vomiting. Of these 238 cases 193 had otitis media.

He added a few personal observations on the clinical aspects of this problem. He was often asked particularly by new residents, how they were to diagnose the otitis media mastoiditis, and sinusitis so often found in these cases at necropsy. They said this was quite simple in the cases which showed the classical signs and symptoms but unfortunately such conditions were rare, particularly when there was gastro-enteritis. The more common finding was either a dull red or grey lustrous drum. On incision there might or might not be a discharge. The temperature charts of these children varied greatly. The high temperatures found were associated with the acute type of

otitis media. Some cases showed a low grade irregular temperature of about 99° to 100° F. Others a normal or subnormal temperature. He had observed from the charts of these cases that a great number of them showed their infection by a distinct rise in the pulse rate rather than by a rise in temperature. Very often these infants would go for a week or ten days with a temperature of 96° or 97° F, yet the point where the infection started could be picked up by a rise in the pulse rate from 140 to 160 or 170. Out of seventy-six infants dying of meningitis other than tuberculous meningitis, fifty-eight had otitis media. Of the cases with meningococcal meningitis twelve out of twenty had otitis media, of those with streptococcal meningitis, twenty-two out of twenty-three, and of those with pneumococcal meningitis ten out of fourteen.

Finally with regard to prophylaxis, the first point was breast-feeding. Out of this large number of cases only two of the infants had been breast-fed for any appreciable length of time. When they were breast-fed they usually survived gastro-enteritis or pneumonia. The best insurance that a mother could give to her newborn child was to attempt to breast-feed it during the first few difficult months of life. It was difficult to impress upon adults the danger of exposing the infant to acute upper respiratory affections such as the common cold or influenza which they might be suffering from themselves. It must be apparent that there was a great field for co-operation between the paediatrician and the ear, nose and throat surgeon. He went on to make a few comments on general paediatric aspects.

Paracentesis

Mr W STIRK ADAMS of Birmingham showed a chart giving the number of times paracentesis was performed in the out-patient department at the Children's Hospital in that city over a period of years. It was observed that there was a winter peak, and that the curve reached its lowest point about September in each year. Mastoid operations had been performed during the last two years on twenty-six children under 2 years of age with primary otitis, and twenty-five had recovered as a result of the surgical treatment. In ten cases of secondary otitis in the diarrhoea and vomiting group the question was asked whether the surgeon could help by doing mastoid drainage. As the child was going to die unless something was done, the only possible answer was to undertake the operation. After the opening of the mastoid six infants died and four recovered. These children came into hospital dehydrated, they got the appropriate treatment on the medical side and whatever was necessary and usually within two days they were very much better. Those that were destined to recover did so quickly, the others lingered on their condition fluctuating from day to day.

Dr C E SCOTT stated that in the years 1934-6 inclusive 564 cases of suppurative otitis media had been treated in the ear and throat department of the Royal Edinburgh Hospital for Sick Children. Of this number 145 were under 1 year, 419 were over 1 and under 5 years of age. Operative treatment was given in 154 cases—thirty-four under 1 year and 120 over 1 year. In considering the value of different operations myringotomy was performed fifty-two times in this series and fourteen of these cases required a subsequent Schwartz mastoid operation. Myringotomy was not an important factor in the avoidance of subsequent mastoid operation in these age groups but this was not to be interpreted as an argument against myringotomy as other factors came up for consideration, such as the ultimate resolution and restoration of hearing. Many of the Schwartz mastoid operations had been performed in the absence of acute mastoid symptoms but with a discharge persistently profuse. The temperature was generally settled but the pulse rate remained raised. The value of tonsil and adenoid removal had not been overlooked in treatment. With regard to tuberculous infection of the middle ear this condition was at one time

much more common, but was now apparently on the decline. During the three years under consideration a series of only nine cases had been collected of which seven were under 1 year. In these cases there was a definite history of bottle feeding in four and no record in the other five. Dr R. B. LUMSDEN of Edinburgh added a few further points to his colleague's analysis. In a small series of cases in a hospital thirty-five miles from Edinburgh he had found in one year an incidence of tuberculous infection amounting to nearly 40 per cent.

General Discussion

Dr DOUGLAS GUTHRIE showed a chart he had constructed illustrating age incidence. It showed the enormous number of cases among children under 1 year of age, the curious fall at the age of 4 and the rise at 5, probably due to the fact that school life had begun and the children being more carefully examined. Unsuspected cases of otitis were revealed. Why was otitis so common in infants? One reason was that when the child was born there remained in many cases the tissue which had filled the middle ear during embryonic life. This usually was absorbed but portions might remain in the corners of the tympanum and such embryonic tissue was very liable to infection. He had been relieved to hear from Dr Le Mée and also from Dr Ebbs that on incision of a suspected tympanic membrane one did not always find pus. Dr Le Mée had referred to what he called the frosted tympanic membrane dotted over with little grains. He had said that this was usually found in very young infants but the speaker had always regarded it as denoting a milder type of infection. Was Dr Le Mée's practice of carrying out the mastoid operation in infants in two stages due to fear of the anaesthetic or of the operation? He did not think x-rays of much value in mastoiditis in children. The skiagram would give the anatomical picture but diagnostically it was of little value and of no value at all, of course, unless the two sides were compared.

Mr ERIC WATSON WILLIAMS said that the first two years of life really supplied the bulk of cases. Dr Le Mée had said truly that otitis media meant infection of the whole middle-ear tract. It was important to keep in mind that there was no barrier dividing the tympanum from the mastoid. He stressed the need for quickness in the operation of myringotomy. His own rule was a minute a month. For a child 7 months old seven minutes from incision to stitches. Mr MCNAIR SCOTT mentioned the difficulty presented by cases of an upper respiratory infection with an ear that was red but with no indication of pain. A certain number of such cases would clear up; others would have to be opened. Was there any harm in opening a drum when one was not quite sure whether there was pus behind it in the absence of such symptoms as pain and sleeplessness?

Dr L. R. MITCHELL in reply to a question said that he did not use general anaesthesia when operating on infants. He put some ice behind the ear for five minutes, that was quite sufficient for a good local anaesthesia. The opening of the bone was not painful, only the cutting of the skin was felt.

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A meeting of the Devon and Exeter Medico-Chirurgical Society was held on April 29, the president Dr R. H. NORMAN being in the chair. Mr CHARLES CARROLL read a paper prepared in association with Dr G. M. WHITCOMB on a case of acute mastoiditis in which meningitis and thrombosis of the lateral sinus had occurred as complications and Pfeiffer's bacillus had been the sole organism isolated.

A girl aged 5½ was admitted to hospital on March 17 with a large swelling of the right side of the face, about one week and more recently enlarged of the neck. The right tympanic

membrane was found to be injected and stiffness of the neck was pronounced. Paracentesis of the membrane on the following day produced blood but no evidence of pus. The cerebro-spinal fluid was found to be purulent with a leucocyte count of 8,860 per cmm, and *B. Pfeiffer* was recovered from cultures of this fluid. On March 20 the cerebral and constitutional symptoms having become progressively more grave, Schwartz's operation was undertaken and the middle fossa was exposed. Some pus was found in the cells but no extradural abscess. Lumbar puncture repeated at this stage yielded an opalescent fluid, it being noted at the time that no change in the flow was effected by pressure on the jugular veins. On April 1 despite the absence of any definite localizing sign the condition remained serious enough to warrant exploration of the lateral sinus on the right side. This was found to be full of pus, the natural appearance of the sinus having been obliterated by the effects of suppuration. Rapid improvement followed and it was possible to undertake an operation for repair of the large post-aural wound on April 15. On the day of the meeting the general condition of the patient was good and no trace of any meningeal symptoms remained.

Mr CARROLL stated that in addition to the surgical interventions tablets of prontosil album had been given throughout the patient's stay in hospital. It seemed impossible to ignore the influence of this drug in arresting the spread of the infection. In the discussion Dr W. A. ROBB said that a Pfeiffer meningitis constituted a very grave condition from which the authenticated cases of recovery were somewhere about 3 per cent. In this instance no haemolytic streptococci had been isolated and since Pfeiffer's bacillus was known to coexist with other organisms the possible explanation of the prontosil influence might be the breaking up of some symbiosis.

Severe Hypothyroidism

Dr CHARLES SEWARD read a short account of a case of toxic goitre in a woman aged 47.

Toxic symptoms had been present for some eight years and had been so severe three years previously as to limit the scope of the operation attempted at that period. Following that operation some degree of improvement had been maintained for about a year but since then there had been progressive deterioration. During the last few months palpitation and dyspnoea occurred with or without effort, the appetite had failed, there had been consequent loss in weight and the patient had complained of thirst, disturbance of sleep, tremor, irritability and a lachrymose tendency. A fortnight before admission the symptoms had culminated in those of congestive cardiac failure with resultant oedema extending up to the waist. When admitted to hospital early in April she was very thin, the eyes were staring, and there was visible pulsation in the carotids and jugulars. The thyroid was as large as half a lemon and was soft and smooth. Cardiac dilatation was obvious, the apex beat being 5½ inches from the mid line. Fibrillation was occurring up to a rate of 224, the pulse being estimated coincidentally at 200. The liver was enlarged and tender, its lower margin reaching to the level of the umbilicus. Treatment with digoxin (0.25 mg. given four hourly) and calyrgan (1 ccm daily for several days) was followed by a drop in the pulse rate and free diuresis. On the eighth day after admission iodine treatment was commenced, but was replaced by intravenous injections of sodium iodide owing to skin reactions. On the fourteenth day thyroidectomy had been performed by Mr NORMAN LOCK. Five days after the operation the pulse became regular at 80 and as observed at the meeting, there was a decided improvement in the general condition reported when the patient was admitted to hospital. The apex beat was now only 3½ inches from the mid line and the pulse was regular and well within the normal limits.

Mr NORMAN LOCK, commenting on this case, stated that when he was called in by Dr Seward to see the woman before her admission to hospital the pulse rate was so rapid as to be uncountable. He had never seen a case of such gravity. Immediately before the operation 15 grains of sodium iodide had been injected intravenously. Both lobes of the thyroid were enlarged and he had removed nine tenths of the gland. In reply to Dr MITCHELL he stated that he had avoided removing the para-thyroid, been saving a thin layer of the posterior aspect of the thyroid.

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Severe Hyperthyroidism

Dr CHARLES SEWARD read a short account of a case of toxic goitre in a woman aged 47.

Toxic symptoms had been present for some eight years and had been so severe three years previously as to limit the scope of the operation attempted at that period. Following that operation some degree of improvement had been maintained for about a year but since then there had been progressive deterioration. During the last few months palpitation and dyspnoea occurred with or without effort, the appetite had failed there had been consequent loss in weight, and the patient had complained of thirst disturbance of sleep tremor irritability and a lachrymose tendency. A fortnight before admission the symptoms had culminated in those of congestive cardiac failure with resultant oedema extending up to the waist. When admitted to hospital early in April she was very thin the eyes were staring, and there was visible pulsation in the carotids and jugulars. The thyroid was as large as half a lemon and was soft and smooth. Cardiac dilatation was obvious the apex beat being 5½ inches from the mid line. Fibrillation was occurring up to a rate of 224 the pulse being estimated coincidentally at 200. The liver was enlarged and tender its lower margin reaching to the level of the umbilicus. Treatment with digoxin (0.25 mg. given four-hourly) and salyrgan (1 ccm daily for several days) was followed by a drop in the pulse rate and free diuresis. On the eighth day after admission iodine treatment was commenced, but was replaced by intravenous injections of sodium iodide owing to skin reactions. On the fourteenth day thyroidectomy had been performed by Mr NORMAN LOCK. Five days after the operation the pulse became regular at 80 and, as observed at the meeting, there was a decided improvement in the general condition reported when the patient was admitted to hospital. The apex beat was now only 3½ inches from the mid line and the pulse was regular and well within the normal limits.

Mr NORMAN LOCK, commenting on this case stated that when he was called in by Dr Seward to see the woman before her admission to hospital the pulse rate was so rapid as to be uncountable. He had never seen a case of such gravity. Immediately before the operation 15 grains of sodium iodide had been injected intravenously. Both lobes of the thyroid were enlarged and he had removed nine tenths of the gland. In reply to Dr M Y PAGET he stated that he had avoided removing the parathyroid by conserving a thin layer of the posterior aspect of the thyroid.

Local News

ENGLAND AND WALES

District Medical Services in London

At the meeting of the London County Council on May 4 the district medical service in London was the subject of reports by the Hospitals and Medical Services and the Public Assistance Committees. In London the domiciliary medical service provided under public assistance is given by officers appointed for specified areas into which the county is divided for the purpose. About one third of the work is carried out by the staff of certain of the council hospitals and the remainder by general medical practitioners engaged on a part time basis. A conference has taken place between representatives of the Council and of the County Councils Association and the Association of Municipal Corporations to consider a Ministry of Health report on the various systems adopted by local authorities for the administration of their district medical services. These systems are principally three: the whole time system, in which officers are wholly engaged in district medical work or combine it with other duties in institutions or hospitals, the part-time system, under which general practitioners devote part of their time to district medical work in a definite area and receive a salary, and the open-choice system, which entails the appointment of a panel of local practitioners in a given area who are remunerated by the local authority on the basis of payment per person treated or at risk. The Ministry's report did not offer serious criticism of any of the foregoing methods, although it pointed out that the whole time and part time systems, the second of which was stated to be in force throughout the greater part of England and Wales, are less complicated and expensive than the third, which is of comparatively recent growth. It was the unanimous view of the conference that the report confirmed the need for local authorities to retain full discretion to administer their district medical services in such a manner as they considered best suited to the circumstances of their respective areas, and representations are being made to the Minister of Health in that sense. In London it is now proposed that the county medical officer of health shall be appointed district medical officer and delegate his duties as such to assistant medical officers who would be appointed as his deputies. The arrangement would be analogous to that which has operated for some years in the school medical service and it is considered that it would give the Council the control which it exercises in regard to practically all other staff engaged in connexion with hospitals and allied services and the necessary complete freedom to organize and administer the district medical service so as to secure the best results.

THE B.M.A. S VIEW

The British Medical Association which had already made representations now under consideration as to the method of administration of the district medical service has expressed no objection to the principle implied in the county medical officer of health becoming the district medical officer seeing that the present time may be regarded as transitional so far as the district medical service is concerned. It considers however that if the Council decides to adopt as its permanent method of organizing the district medical service that of appointing part-time general practitioners it is essential that means should be found for preserving the duties and privileges of such officers as set out in the Public Assistance Order 1930 particularly in relation to security of tenure. The Hospitals and Medical Services Committee however is not satisfied that a case has been made out for retaining the protection of the Public Assistance Order in regard to

officers engaged by the Council for the district medical service, or that the interests of the members of the community whom they serve will be in any way adversely affected by the arrangements proposed. Under the Public Assistance Order, from which, however, the Minister has power to sanction departure, the Council is required to appoint a district medical officer for every medical relief district, and such officers must be senior Poor Law officers who can only be dismissed or removed by the Minister of Health, but in 1933 the Council approved conditions of appointment of service for part time assistant medical officers (general practitioners), making all engagements of such officers on a temporary basis, and the Minister of Health has consented to that course. Therefore officers engaged in the district medical service since March, 1933, are on a temporary basis and are not senior Poor Law officers to whom the provisions of the Public Assistance Order would apply. Those district medical officers who have by virtue of prior appointment, the status of senior Poor Law Officers, will, of course, be outside the arrangement of delegation just referred to and will retain their status until they leave the service, but as vacancies occur the arrangement suggested whereby the county medical officer of health is district medical officer and delegates his duties to deputies will hold. It is considered that the Public Assistance Order contains provisions regarding appointment of district medical officers which limit the action of local authorities in the matter, other difficulties have also arisen in connexion with the Order and have prevented complete freedom in adopting the method considered best for the administration of the service.

Central Midwives Board

At the May meeting of the Central Midwives Board for England and Wales approval as lecturers was granted to Douglas Score Flew, M.D., M.C.O.G. at the Cullingworth Lecture Centre, Midwives Institute, and to Elsie Violet Crowe, M.B. F.R.C.S. at St. Alfeges Hospital, Greenwich. An application from the medical officer of health for Barking for approval of Upney Maternity Pavilion for the purpose of Rule E.2 was granted. A letter from the medical officer of health for Winchester asking for information as to the position of midwives with regard to post natal examinations, was considered, and it was agreed to reply: 'That the object of a post natal examination is to ascertain whether there is any medical or surgical condition which requires treatment or supervision. This being outside the province of a midwife, post-natal examination should only be conducted by a fully qualified medical practitioner.'

Smoke Abatement

The seventh annual report of the National Smoke Abatement Society includes a list of publications concerning the smoke nuisance, several of which are the work of medical men. Of particular interest is *Fumifugium or the Smoake of London Dissipated* by John Evelyn now republished by the society. This indictment of the smoke evil by the famous diarist was originally printed in 1661 by command of Charles II. The report states that the increasing public interest in the state of the atmosphere continues to be maintained and notes with satisfaction that more attention is being paid to this subject in the annual reports of medical officers of health and sanitary inspectors. At the society's conference at Bristol two resolutions were adopted: one congratulating the Manchester City Council on its measures to further the use of smokeless fuels, the other advocating the withdrawal of the qualified exemption enjoyed by certain industries under the Public Health (Smoke Abatement) Act 1926. A questionnaire bearing on this second resolution was sent to medical officers of health concerned with these industries and the replies received justified the drafting of a letter to the Ministry of Health suggesting the desirability of withdrawing the exemptions. The report records with regret the death of Mr R. Morton

Rowe, formerly chief smoke inspector to the City of Manchester Health Department, and for many years a member of the society's executive committee. The total income of the society from subscriptions and donations is less than £1,000, and the number of private subscriptions is surprisingly small. Membership forms are obtainable from the general secretary, National Smoke Abatement Society, 36, King Street, Manchester, 2. The minimum subscription for members (including journal) is 10s 6d per annum.

NEW ZEALAND

[FROM OUR CORRESPONDENT IN WELLINGTON]

THE PROBLEM OF ABORTION

The report has now been published of the special committee set up by the Government to inquire into various aspects of the problem of abortion in New Zealand. The investigations and conclusions of the committee are summarized as follows:

I The committee is convinced that the induction of abortion is exceedingly common in New Zealand, and that it has definitely increased in recent years. It has been estimated that at least one pregnancy in every five ends in abortion, in other words, that some 6,000 abortions occur in New Zealand every year. Of these it is believed that 4,000 at a conservative estimate are criminally induced either through the agency of criminal abortionists or by self-induction each of which is equally dangerous. It is clear that death from septic abortion occurs almost entirely in such cases. Such deaths have greatly increased in recent years and now constitute one-quarter of the total maternal mortality in some urban districts it amounts to nearly half of the total maternal mortality. New Zealand has according to comparative international statistics, one of the highest death rates from abortion in the world.

II The committee, after taking evidence from witnesses representing all sections of the community, has formed the conclusion that the main causes for this resort to abortion are (1) economic and domestic hardship, (2) changes in social and moral outlook, (3) pregnancy among the unmarried and (4) in a small proportion of cases fears of childbirth.

SOME SUGGESTED REMEDIES

III Consideration has been given to the possible remedying of these causes:

(a) In so far as economic hardship is the primary factor certain recommendations have been made regarding financial domestic, and obstetrical help by the State.

(b) To lessen any fear of childbirth where this exists, it has been recommended that the public should be informed that New Zealand now has a very low death rate in actual childbirth and that relief of pain in labour is largely used. At the same time the committee has advocated that further efforts in the direction of pain relief should be explored.

(c) For dealing with the problem of the unmarried mother the committee considers that the attack must be along the lines of more careful education of the young in matters of sex, prohibition of the advertisement and sale of contraceptives to the young and a more tolerant attitude on the part of society towards these girls and their children.

(d) The committee believes, however, that the most important cause of all is a change in the outlook of women which expresses itself in a demand of the right to limit—or avoid—the family coupled with a widespread half knowledge and use of birth-control methods—often ineffectual. These failing, the temptation to abortion follows.

CONTROL OF ABORTION

The committee can see only two directions in which abortion resulting from these tendencies can be controlled:

1 By the direction of birth-control knowledge through more responsible channels where while the methods would be more reliable the responsibilities and privileges of motherhood the advisability of self discipline in certain directions and other aspects of the matter would be discussed. The committee believes that it is through the agency of well informed doctors and to a certain extent through clinics associated with our hospitals, that this advice should be given. It is not however considered that this is a matter for the State except to a limited degree.

2 To appeal to the womanhood of New Zealand in so far as selfish and unworthy motives have entered into our family life to consider the grave physical and moral dangers not to speak of the dangers of race suicide which are involved.

This it is considered is a matter for all women's social organizations to take up seriously.

IV Certain further measures of a more general nature came under the examination of the committee. The prohibition of the promiscuous advertisement of contraceptives and of their sale to the young, the licensing of the importation of certain types of contraceptives, the restriction of the sale or distribution of contraceptives to practising chemists, doctors, hospitals, and clinics, the prohibition of the advertisement, or of the sale except on medical prescription, of certain drugs and appliances which might be used for abortion purposes—these measures are recommended.

THERAPEUTIC ABORTION

The specific legalization of therapeutic abortion (by doctors for health reasons) as a safeguard to doctors was fully examined but is not recommended. The committee is satisfied that the present interpretation of the law is such that, where the reasons for the operation are valid, the doctor runs no risk of prosecution. The risks of an alteration in the law are great.

Legalization of abortion for social and economic reasons was also put forward. The committee has discussed the matter, and strongly condemns any countenancing of this measure. Though it may be conceded that legalized performance of the operation by doctors in hospitals might reduce the incidence of surreptitious abortion and deaths from septic abortion, we do not accept this as any justification of a procedure which is associated with grave moral and physical dangers.

With regard to sterilization the committee adopts the same view as towards the specific legalization of therapeutic abortion. It is believed that where the reasons for the operation are in accord with generally accepted medical opinion there is no bar to its performance. We see, however, tendencies in the direction of extending this operation far beyond the bounds of this accepted medical opinion. For this reason we do not recommend any alteration in the present position.

The failure to obtain the conviction of the criminal abortionist even in cases where the guilt seems beyond all doubt has been discussed as a matter of serious concern, and the committee can only bring before the public its responsibility, as represented by members of juries, for the virtual encouragement of this evil practice.

Finally the committee, while fully conscious of its inability to put forward a complete and certain solution of this grave problem or one which will satisfy all shades of opinion, believes that a definite service will have been done through this investigation if full publicity is given to the facts of the situation as here revealed and if the public conscience is awakened to the fact that although State aid and legal prohibitions may do something to remove causes and to deter crime the ultimate issue rests with the attitude and action of the people themselves.

Since 1932 the incidence of diphtheria in Germany has more than doubled having risen from 64,138 or 9.9 per 10,000 inhabitants in 1932, to 149,971, or 22.4 per 10,000 in 1936.

Correspondence

Angina Innocens?

SIR,—The recent article by Dr Geoffrey Bourne (*Journal* April 3, p 695) and the correspondence which has followed prompt me to put forward an earnest plea for the abolition of the most unfortunate term "angina innocens", the synonyms "secondary angina" (Mackenzie) and "pseudo-angina" are equally disastrous. The symptom-complex described by Dr Bourne is very common, and easily recognized by the characteristic behaviour of the pain. I have nothing to add to his excellent description of it. In the vast majority of cases it is a purely psychoneurotic symptom, often a manifestation of an anxiety state and often associated with anxiety concerning heart disease. In some cases it is not primarily psychoneurotic, but occurs in connexion with a state of nervous debility secondary to a chronic toxæmia or infection. Thus it is found in patients with oral sepsis, with chronic infection of the urinary tract, with chronic cholecystitis, etc. and in such circumstances is curable by appropriate treatment of the sepsis, it is occasionally met with in the early stages of pulmonary tuberculosis, infective endocarditis, or other chronic infections, it is sometimes found with mild grades of thyrotoxicosis before any definite circulatory insufficiency or demonstrable organic cardiac change has appeared.

It is evident that in these circumstances it will occur frequently in persons whose cardiovascular systems are free from any suspicion of organic disease. It is equally evident that it may arise in persons who are the victims of an organic cardiac lesion and that in them it is not the result of the heart disease but of a superadded psychoneurotic or toxic factor. Its successful treatment depends on recognition of this fact. I have met with it not only in cases of mitral stenosis and other forms of valvular disease but even in cases of coronary disease where there has been a previous coronary thrombosis or a definite angina of effort as well. Where it complicates organic heart disease it may be toxic and curable by appropriate treatment but it is even more often psychoneurotic, dating from some definite psychological trauma accompanied by additional signs of nervous tension such as insomnia, tremors, exaggerated reflexes, and a pulse rate which is more rapid than the nature of the heart disease would appear to justify. In these latter cases treatment on psychotherapeutic lines will often remove the symptom-complex in question and though it leaves the symptoms due to the organic disease unaltered the patient's disability is usually greatly diminished in consequence.

Dr Bourne attempts to justify the use of the term "angina innocens" by laying stress on the qualifying "innocens". Now there is no doubt that whatever medical men may say or think about the word "angina" it is associated in the mind of the layman with the most serious of all forms of heart disease—inevitably leading to frequent severe attacks of pain and incapacity and to a sudden early death. During the whole of his lifetime the word "angina" has had this significance for the layman and no amount of stressing of a prefix or suffix in a few minutes conversation is going to alter this lifelong conviction. The doctor may say "angina innocens" but the anxious patient's reaction when he gets home is "I knew it—angina—the innocens is merely an attempt to soften the blow. He has sustained a further psychological trauma which is only likely to lead to perpetuation of his symptoms and incapacity."

It is rarely, if ever, necessary to give a name to the syndrome in talking to a patient—all that is required is to explain the mechanism of the pain, that it is not due to heart disease, and that recovery will occur. If we must have a name for use in discussing it among ourselves let us employ a term which emphasizes the non-cardiac causation of the syndrome, such as "precordial pain of nervous origin," or even the shorter and non-committal term "left inframammary pain"—I am, etc.,

Glasgow, May 8

ALBERT A FITZGERALD PEEL.

Technique in Knee-joint Operations

SIR—In the *Journal* of May 15 (p 1015) my friend Mr. Eric I. Lloyd describes a technique for opening the knee-joint which he claims "stops short of fussiness, and he gives an instance of what he calls "self-deception". While I cordially agree with his efforts to simplify surgical operations, I suggest that he might go still further in his efforts to reduce fussiness and to avoid self-deception.

Why, for example, prepare the whole limb from the toes to the groin? Most surgeons would agree that this is wiser than limiting the process to the operation area, but why stop there? Why not extend this cleansing to the rest of the body by telling the patient to have a hot bath and not to spare the soap? Is the painting of the skin with iodine anything more than a form of surgical "self-deception" and has it any other advantage than that of reassuring the surgeon's conscience as to the amount of skin that has been prepared? The fact that the ordinary operation for an abdominal emergency heals so promptly appears to indicate that a prolonged preparation of the skin with methylated spirit is not only unnecessary but may damage its resistance. I used to tell my students that any surgeon who strictly observed the Lane technique and would keep his fingers out of the wound, could open my knee without any special preparation. I can repeat this challenge now with even more assurance for owing to the lapse of years, I am exceedingly unlikely to tear a cartilage.

I retain a very clear mental picture of Sir Arbuthnot Lane operating on the knee joint with impunity some forty years ago: his results even then surprised his colleagues and their success undoubtedly depended on the knife and fork technique for gloves had not come into their own by then. I have long been sceptical as to the infection of operation wounds from foci of hidden sepsis and I hint to Mr. Eric Lloyd that this may be yet another instance of surgical self-deception. In some 200 cases of removal of the internal meniscus I own to having neglected any preliminary care of the patient's teeth, and any success that I may have had I attribute to my having had the privilege of being house surgeon to Sir Arbuthnot Lane. No surgeon would deny that too much care cannot be taken in the preliminary care of operation cases but hidden sepsis should not be used as a scapegoat.

After such a "rough and robustious onset" it is a genuine pleasure to find myself at one with Mr. Eric Lloyd in his castigation of another self-deception, it is probable that the use of tetra-cloths to cover the edges of the wound is again a form of surgical mesmerism. It is a relic of the surgical ritual invented and practised by an amazingly gifted surgeon. Surely the definition of ritual as a prescribed manner of performing divine service shows quite clearly that it can hold no permanent place in future surgery—I am, etc.,

Sheffield May 16

GRAHAM SIMPSON

Treatment of Pharyngeal Carcinoma

SIR—We are indebted to Mr H S Souttar (*Journal* May 1, p 909) for calling attention to this method. It is attractive and relatively simple to carry out, but I am afraid I cannot share his optimism as to the results to be expected. This method has been in use in the Radium Clinic of the General Hospital for the last five years, and frequently referred to in the annual reports to the Radium Research Council.

There are two aspects which are unsatisfactory. In the first place, we have not been able to cure a single case by this method. The immediate results are gratifying and hopeful, the growth recedes, becomes less vascular, and swallowing is improved, but subsequent doses of radium are ineffective and the end result is death. We have, therefore, reluctantly come to the conclusion that neoplasm of the pharynx is relatively radio insensitive. In the second place, and of minor importance, is the fact that the scars heal badly. The wound has to be reopened and resutured at the end of a week, and this is not conducive to good scar formation. The presence of radium or radon deep in the wound has a retarding influence on healing.

I believe that the only real hope of cure at the present time is by following where it is possible, the drastic surgical technique so brilliantly designed and carried out by Wilfred Trotter—I am, etc.,

Birmingham May 13

MUSGRAVE WOODMAN

Present-day Methods of Sterilizing Dressings

SIR,—The article by Major S N Hayes in the *Journal* of May 1 (p 911) is interesting, as it shows that research is still being done on a subject that was much discussed in the eighties of the last century. Having retired from active work some years ago my full notes of the relevant literature have long been lost, but as the designer of a sterilizing apparatus of which the Government made large use during the war I can still remember some of the data for anyone desiring to make or test such apparatus. Surgeons can hardly be expected to be able to design such auxiliary apparatus, and it is unfortunate if, as Major Hayes shows, those in current use are not entirely reliable.

Disinfectors often called stoves are large machines for sterilizing clothing, bedding, etc. while sterilizers used by surgeons are small machines on the same principle for sterilizing dressings, etc. Design to be successful depends on the following facts. Heated air is not a reliable sterilizer until a temperature of 138° to 141° C. is reached and at that temperature some textiles are apt to char. Fraser's ovens were at one time largely used and I can remember a set of such ovens in Leeds, discarded about 1889 in favour of steam disinfectors. Superheated or dry steam is much like air and does not sterilize except at unduly high temperatures. Saturated or wet steam is steam at any temperature corresponding to its pressure which condenses as soon as it impinges on a cooler object. In doing so it parts with its latent heat, and this was considered the reason why it possessed a powerful sterilizing action. Air being a bad conductor of heat bundles of textiles charged with it require much time for heat to penetrate to the centre and moreover unless the trapped air is got rid of tests of bactericidal action are apt to give anomalous results. This fact explains many of the contradictory opinions expressed by different research workers. A test should always be applied to show that all air has been expelled from the sterilizing chamber and that the articles under observation are really exposed to steam and not to heated air or for that matter superheated steam. Air being heavier than steam is easily displaced if steam be admitted gently at the top of the sterilizing chamber and an opening be provided at the bottom for the exit of displaced air. Directions for working a steam disinfecter generally stipulate

that articles to be disinfected should be hung loosely in the chamber but most sterilizers of dressings seem to be designed to trap as much air as possible.

Current steam at low pressure is a good sterilizer, but Delepine showed that to secure effective sterilization the rate of the current had to be so rapid that very large quantities of steam were necessary and a boiler or generator to produce so much steam is too cumbersome for practical use. For information the writings of the following amongst many others may be consulted: Koch (1881), Heydenreich (1885), Globig Kitt, Miquel Budde and Pfuhl, Frosch and Clarenbach, Salomonsen and Levison, Thoinot, Kremer, but Professor Delepine in articles in the *Journal of State Medicine* (1890) and Wolf Defries in *Public Health* supply much useful information which explains many of the discrepancies in the results obtained by other observers. The presence of air when they thought they were dealing with steam, was the chief stumbling-block in the past and my main object in writing this letter is to prevent present-day observers falling into the same confusion.

Major Hayes says that 'perfect sterilization should be simple. It merely consists in subjecting every part of the dressing to a certain temperature for a definite period. This is doubtful, as 'perfect sterilization' also depends on the medium in which the dressing is placed, whether air, superheated steam, or saturated steam. He refers to the varied times in which steam penetrates dressings, which may depend largely on how much air they happen to contain. Steam will penetrate rapidly if it can get in but if the dressings are charged with air the time taken to reach any particular temperature depends on how rapidly the air may conduct the heat from the steam.

Further on he writes that 'the contained moisture and air are driven off by heat or by the creation of a vacuum'. Now heating moisture and air does not drive it off, it simply makes it hotter. The driving off depends on the relative density of the surrounding medium, and steam is lighter than heated air. The creation of a perfect vacuum is one of the most difficult, if not impossible, feats in Nature. In any partial vacuum which we can produce in practice some air is bound to be left, according to Boyle's law.

Major Hayes mentions designing an electric thermometer as a control and I believe I have one lying about somewhere which must be forty years old. He says it provides absolute safety and checks the efficiency of the sterilizer. It really only shows when the inside of a dressings-container has reached the temperature of 115° C, but if that container has air in it at a temperature of 138° C would be necessary for sterilization, at which temperature the dressings would possibly be spoiled. Later he remarks that it is clear that steam is not a powerful penetrator. In my experience saturated steam is a powerful penetrator and a rapid one if air can get away and the steam reach the material in the container. In one paragraph he writes: 'The large majority of sterilizers, however use dry, saturated, or moist steam, and even when superheated steam is available the degree of superheat is not high.' Now what does that mean? Dry steam is superheated steam, and saturated steam is moist steam.

Mr Wolf Defries, being an engineer by profession was the first research worker to pay full attention to the physical properties of steam and his disinfecter was the first in which the necessary physical principles were applied. Containers for dressings are a great difficulty in securing reliable sterilization and it would be well if bacteriologists could design a technique by which dressings were sterilized in a loose condition and afterwards packed in sterilized containers—I am, etc.

Hove Sussex, May 3.

M J OLIVER, M.B., D.P.H.

Value of Liver Extract

SIR—With regard to the recent correspondence about the efficiency of certain forms of parenteral liver treatment for pernicious anaemia, especially the Dakin and West fraction 'anahaemin' (*Journal*, April 3, p 730) we should like to put on record the following untreated severe case of pernicious anaemia

A woman, aged 43, who was sent in with a diagnosis of 'chronic nephritis and anaemia', was examined on April 12, 1937, and was found to have an extreme lemon yellow tint with enlargement of liver and spleen. The blood count was as follows: red blood cells 720 000, haemoglobin 15 per cent, measurement by Eves' haemocytometer 8.6. Two ccm anahaemin were injected on April 12 and again on April 14. Further injections of 1 ccm anahaemin were given on April 26 and on May 6. Changes in the blood picture were as follows:

April 13	Reticulocytes	1.56 per cent	
" 14	"	2.62	"
" 15	"	2.1	"
" 16	"	1.82	"
" 17	"	6.0	"
" 18	"	23.8	"
" 19	"	45.3	"
" 20	"	24.8	"
" 21	"	16	"
" 26	Red blood cells	1 150 000	haemoglobin 25 per cent.
" 3	"	2 025 000	45
May 3	"	2 460 000	55
" 10	"	2 700 000	63

A subsequent test meal showed complete achlorhydria. Until recently, we should undoubtedly have transfused this patient before treating her with liver extract, but similar experience with two other severe cases treated with anahaemin have given us sufficient confidence to wait for the expected reticulocyte crisis about the fifth day.

—We are, etc,

A. P. M. PAGE, M.D., M.R.C.P.

Leicester May 11 E. M. WARD, M.B., B.S.

Blood Transfusion in Obstetrics

SIR—I quite agree with Mr R. Rutherford's suggestion that the gravity method of blood transfusion is obsolete (*Journal* May 8, p 996). I also feel that more accidents come from too rapid transfusion than from the more recognized factor of faulty grouping.

I have never used so small a needle as Mr Rutherford recommends, but I find that a gauge 12 imposes much strain on the operator's thumb and forefinger, and imagine that a gauge 17 would make this most unpleasant. Further, with the 12 size I find leakage between barrel and piston inevitable in the best syringe after three or four transfusions. I daresay this annoyance would be worse with the finer needle. Using the 12 gauge needle I have observed on occasion a mild local thickening of the vein which makes it useless for about three weeks. With a larger serum needle I have not met this difficulty. I ascribe this to the force with which the jet of blood strikes the intima and should be interested to hear if others have had this experience. To my mind this is a further point in favour of the larger needle. With self-control the blood will not be given too quickly, and if the patient is so collapsed that a No. 1 serum needle cannot be introduced it is probably best to expose a vein—I am, etc,

London SW4 May 9

GAVIN THURSTON

SIR—Dr Norman Black's survey of blood transfusion in obstetrics (*Journal* May 1) has been a valuable contribution, but as Mr Wentworth Taylor (May 15) points out many cases of post partum haemorrhage are avoidable. Excluding cases in which general ill health and

chronic uterine subinvolution are predisposing causes, prolonged and difficult labour, too free use of unsuitable anaesthetics such as chloroform, and, most important of all, faulty management of the third stage are usually avoidable.

It is disheartening to find so many attendants—midwives and doctors—"grasping and kneading the uterus." The hand 'controlling' the uterus cannot resist that fatal reflex kneading with resultant incomplete recovery of uterine tone and irregular and unnatural separation of the placenta. I would almost suggest that the Central Midwives Board supply each midwife with a twenty minute "hour glass" by which to work. As to replacing the fluid loss, the primary intravenous infusion of a gum saline solution (such as the ampoule supplied by Messrs Evans Son Lescher and Webb, Ltd) made up to 250 ccm with sterile water, administered through a Jubay syringe is a great standby pending the organizing of a blood transfusion. I have tried Dr William Hunter's solution used at Newcastle—namely, ephedrine HCl 1 grain, glucose 440 grains, gum acacia 525 grains aq. dest. up to 1 pint—and although it is dramatically effective for the first quarter of an hour following infusion the subsequent fall in blood pressure has in two cases been a serious after-effect.

To organize a blood transfusion service in a wide rural and industrial area is not so easy as it is in a large city. I have a voluntary corps of forty-five donors for midwifery cases spread all over a county, and it is essential to give an exsanguinated patient some blood volume replacement pending the comparatively long period that must elapse before a donor arrives. As in every blood transfusion a direct agglutination test is essential this again means more delay. The separation of the recipient's serum, combined with the very essential wait of at least five minutes to ensure non-agglutination with the donor's red cells unfortunately all take time.

There appears to be far more place for blood transfusion in obstetrics than is generally accepted. We are too used to being satisfied with an exsanguinated patient left with a rapid pulse after the completion of labour. Slight infection in an exsanguinated patient may become a tragedy, and in any case it takes months for such a patient to regain her normal health. When once pathologists have found some way of conserving donor bloods in ampoules transfusion should be as easy after a direct agglutination test as any other intravenous administration. That obstetrics is recovering from its primary inertia in its relation to the replacement of blood loss should mean far less maternal morbidity in the future—I am, etc,

Rossett Denbighshire May 17

R. OWEN JONES

The Maternal Mortality Report

SIR—There are some observations in the *British Medical Journal* of May 8 dealing with the recently issued maternal mortality report upon which, with your permission, I should like to comment.

In the leading article on page 978 col. 1, line 20 et seq. it is stated that the Ministry of Health and the Central Midwives Board have under consideration a proposal that a midwife should be allowed to call to her assistance such practitioners only as are selected by the local authority for this purpose. This statement is hardly correct, and if one turns to the memorandum in the *Supplement* on page 270 col. 2 para. 10 the exact recommendation will be found as follows: "The local supervising authority in consultation with the local medical profession should in future be empowered to take steps to ensure

that the best local obstetrical skill is made available in all cases in which midwives are required under the Rules of the Central Midwives Board to call in a doctor.' It seems to me that the inclusion in the recommendation of the local medical profession is a matter of great importance, and it is unfortunate that your leading article has omitted to refer to it. Quite obviously, if the best local obstetric skill is to be made available for mothers when emergencies arise, some plan must be adopted. It is equally clear that the local supervising authority as the body ultimately responsible for payment to medical practitioners for attendance in such cases must undertake the duty of formulating such a plan. This duty is bound to be a difficult, and it may be a disagreeable, one, and it is certain that local supervising authorities generally will desire the fullest information, advice, and co-operation from the local medical profession in whatever steps they take. In any case, in an important matter such as this it can be presumed that adequate safeguards will be introduced, giving the central authority power to deal with all points in dispute.

The recommendation referred to, so far as I understand it, envisages a friendly consultation between practitioners and the local supervising authority, whereby a panel of doctors would be formed from which a choice would be made. It is true that the choice might be limited, but it would only be so limited when the necessities of the case required it, and then only by a small fraction. If certain names were not placed on the panel because either the doctors themselves did not desire it, or their fellows and the local supervising authority did not think it desirable, the mother or midwife would still have a free choice of all the other doctors on the list. This follows closely the procedure under National Health Insurance, for in no area does the panel in this scheme embrace all the practitioners in it. The medical profession do desire that the best obstetric experience should be available for child-bearing women when an emergency arises and I am certain that local practitioners can be relied upon to recommend only those of their fellows whose experience and knowledge justify their inclusion in the list.

The assumption that if this recommendation was implemented the Medical Act would have to be amended goes a great deal too far, as no suggestion is made in the maternal mortality report which would imply any interference with the statutory rights of the doctor. It did not require an amendment of the Medical Act to set up a panel of doctors whom Insurance Committees would pay for their services to insured persons when sick, so also it will not require an amendment of the Medical Act to enable a panel of doctors being set up whom local supervising authorities will pay when emergencies arise in midwives cases. These authorities already employ midwives under the Midwives Act of last year and it is surely their duty to see that the midwives have efficient medical assistance when they require it.

The further assumption that newly qualified doctors are to be denied the major portion of the opportunity open to them for acquiring such experience cannot be justified by reference to the maternal mortality report. It is true that in the body of the report it is suggested (page 229) that only those practitioners who show special interest in and have considerable practical experience of midwifery should be called to the assistance of the midwife. This is a valuable suggestion and I do not gather that the author of the article referred to would wish mothers to be attended in emergencies by any who do not comply with this requirement. The General Medical

Council has tightened up the training of medical students so far as midwifery is concerned, but it cannot be claimed that even the present-day medical students are experienced in midwifery and possess the best obstetric skill. But even so, the recommendation in the maternal mortality report does not suggest that young doctors should be denied the right of being called in to assist midwives. It leaves it entirely to the committee of local practitioners and the local supervising authority to decide what names are to be placed on the panel, and if this committee were of opinion that some newly qualified doctor was a proper person to be placed on the panel the committee would so place him, and he would be available to be called in by any midwife in the area if the mother so desired.

The report seems to me to be a moderately expressed statement of a position already well known to many members of the medical profession, which as a whole has welcomed all attempts to improve the standards of its practice and as a whole has never suffered thereby—I am, etc.,

Town Hall Bradford
Yorkshire May 14

JOHN J BUCHAN

Air Raid Precautions

SIR—It is no longer correct, I find, to think of our work as one of healing. I learn from the Home Office Instructor on Air Raid Precautions in the Birmingham area that my duties in the next war are to aid the police in preventing panic to reassure the gas casualties, to get it into people's heads that 'whether they have gas-proofed rooms or not the important thing is for them to be under cover in their own houses,' that the whole danger of gas attacks lies in the lowering of national morale and that the medical profession, as a group of persons 'who can speak with authority, is to maintain that morale, in which function the Home Office considers them of only less importance than the police.'

These actual quotations from a lecture are no misrepresentation of the general tenor. Having heard pacifists maintain that the main object of the Government's air raid precautions scheme was a military one—that is to make panic or any mass protest against the continuation of war less likely, and that protection from death and injury in air raids on cities was only possible by the erection of bomb proof shelters which the Government considered too expensive to contemplate—I attended this official lecture, delivered by a doctor to other doctors on the invitation of the British Medical Association in order to learn what attitude was taken by the Home Office officials themselves. I was prepared to hear the lecturer say that with the Prime Minister he acknowledged that nothing like protection to a city population was possible short of bomb proof and gas proof shelters constructed for the purpose but that until the Government had made its plans the possibility of sudden air attack on cities existed and that the Air Raid Precautions Department offered some advice as better than none that a few lives might be saved by such advice and that he was there to tell us how we could help in this limited sense. Such an approach to the question would have had my full sympathy and co-operation.

The lecturer opened by assuring us that he had no connexion with the fighting services, the Air Raid Precautions Department had nothing warlike about it and was intended purely for the passive protection of the civil population. He told us that it would require anything from a few inches to several feet of concrete to protect buildings from air raids, and that "nobody had

suggested that it was possible to protect the whole population in this way.' He went on to describe how we might advise people to erect on scaffolding three layers of filled sandbags on their roofs, with two feet interval between the layers, to protect them from splinters from high explosives. No enemy, he continued, would use gas bombs only, high explosives would first be used to demolish important centres like railway stations, public buildings—including hospitals, which would become too dangerous to be used for other purposes than as casualty clearing stations—and generally to do as much damage to structure as possible. Thermite bombs would follow in thousands with the aim of starting a general conflagration in the city beyond the powers of the fire brigades to deal with. Gas would next be sent down by spray or bomb, and it was then that doctors and first-aid services would be needed to 'prevent panic, to reassure' those affected, and to persuade people to remain in their houses. A passing mention was made of the difficulties of protecting the aged and children and invalids, but respirators 'were a second line of defence' and the main thing was that people should stay indoors. No mention was made of the impossibility for most working class families of providing a room for gas proofing (a room rendered uninhabitable because of boarded windows and blocked ventilators or chimney), and although the lecturer said that the modern bombing plane could aim accurately to within seventy-five yards no mention was made of the certainty that windows and gas-proofing would certainly be destroyed over a wide area surrounding the fall of a high explosive torpedo.

No opportunity was given for questions or discussion, and one is therefore unable to say how far the audience of some thirty doctors accepted the role indicated to them of persuading their neighbours that the Air Raid Precautions Scheme could really save them and their children when it must be perfectly obvious to the meanest intelligence that it can do nothing of the sort, and that the whole apparatus of the scheme is designed to deceive people into thinking that it will. I am not accusing the lecturer of deception: he was painfully honest. It is obviously much more satisfactory, from a military point of view, that people should die quietly in their homes than that they should run about the streets and possibly mob Cabinet Ministers: they might even, fearing retaliation, try to persuade our own airmen from their efforts to destroy French, German, Italian, or Russian cities. But I should judge that the audience was almost entirely uncritical, accepting war as inevitable and their duty that outlined by the lecturer. The lecturer, by the way, inadvertently said these will be your duties, but corrected himself and hoped we might avoid seeing the actuality. I put it to one member of the audience after the lecture that we were being asked to perform a military duty and to help deceive people into thinking that protection was possible on the lines proposed in order that mass protest against war should be made less likely. His reply was that if an enemy attacked us in this way we might as well make it possible for our Air Force to do the same to his cities.

I should personally be sympathetic to any Government which if it thought that the risk of war could not be avoided sought power to tax the people to the utmost limit to provide them with protection, putting the facts in an unvarnished way before them and placing the responsibility upon them. But I hold that our people have the democratic right of deciding for themselves now in time of peace whether modern warfare can justify itself by having none of the facts hidden from them. I call the

Government's Air Raid Precautions Scheme wilful deception of the people. I believe also that it is a deception which will defeat its own object. Panic is a mild word for the wrath which the people, rudely enlightened by the first English *Guernica*, will display against their rulers and officials when they survey the ruins and the dead—I am, etc,

DUNCAN LEYS M.D. Oxon
Selly Oak Hospital, Birmingham May 9

Medical Peace Campaign

SIR—The death in early April of Dr Cecile Booyesen the secretary of the Medical Peace Campaign has been a great loss to her colleagues. It was chiefly through her inspiration and energy that the work of such a campaign was conceived and initiated. As we, who were closely associated with her, interpret her thought it was that our profession has a duty to strive for the prevention of all human suffering and pain by penetrating to their causes and removing them. If war came to be outside the medical purview one of the main sources of such suffering would be eliminated. A calm scientific approach is needed and the profession as a whole should be urged constantly to debate the problems associated with war and its causation much as it debates the aetiology and prevention of disease.

It is in this spirit that her work will be carried forward. We do not anticipate spectacular results, for the point of view will require discussion among our colleagues before it is likely to receive full acceptance. But primarily it is this discussion that we wish to initiate and foster.

An account of the activities of the campaign up to date will be found in the three bulletins that have so far been issued, but we feel that our activities are only beginning. We hope soon to issue a short book on the causes and characteristics of war as considered from a strictly medical point of view. Suggestions on possible research will be welcome, as will any other proposals for furthering the objects of the campaign.

Finally, we express our hope that all members of our profession who are convinced of the urgency of action will place themselves in some relation with the existing peace organizations such as the peace councils and the branches of the League of Nations Union—I am, etc,

JOHN A. RYLE
May 17 President Medical Peace Campaign

Birching of Children

SIR—Corporal punishment in any form should probably only be administered deliberately under conditions when the administrator can truly assert 'This pains me more than it pains you.' The occasions for its use will therefore be infrequent, and when the administrator is a judicial authority and the victim a child such a condition certainly never occurs.

Birching appears to be the expression of magisterial exasperation at being faced with the unfair responsibility of having to give some kind of guidance to a child whose own parents probably have failed it and who while still under the influence of such parents or guardians, has not responded to milder measures. At the same time no expert help is available for the bench in dealing with the psychological problem. Theoretically psychological help is available but in practice the number of trained child psychologists medical or lay is so small—and they have already so much to do—that such help is not readily available and so in fact in many cases its value and

even the possibility of obtaining it is apt to be overlooked

Another factor also contributes something towards such help being sought reluctantly. That is the tendency of the psychological experts to consider the child's problems and expect to dictate to the magistrates as to the disposal of the case. The part played by the psychologist is a limited one. It consists in determining what treatment is likely to produce a social and co-operative attitude in the individual offender. The court, though primarily concerned with the same problem, must consider also other aspects to some extent. The experts part must be limited to giving advice which the court has the responsibility of accepting, modifying, or rejecting entirely. If this were clearly understood and the position accepted, the courts would, I think, more readily be prepared to call for expert assistance, and if, as a result of experience, it was found that the advice tendered was good, undoubtedly it would be put to good use.

It avails little for experts to assert that magisterial birching should be prohibited in any circumstances. This amounts to a criticism of a body of individuals who deserve well of their fellows but who act, I believe, unwisely in inflicting such punishment as birching under any conditions, but it should not be impossible to ensure that in every case where a sentence of birching is contemplated the offender should be remanded for a psychological investigation and report both as to his condition and as to the possible lines of treatment that might be adopted. Under these circumstances I believe that judicial birchings would very rapidly become a thing of the past—I am, etc.,

W J T KIMBER
Medical Director

St Albans Nerve Clinic May 10

SIR—I hold no brief for or against whipping, but desire a tolerant view and recognition of the folly of dogmatism.

Dr G W Garde (*Journal* May 8, p 998) says 'that a very large element of sadism is responsible' for the advocacy of whipping. The *New English Dictionary* defines sadism as a form of sexual perversion marked by a love of cruelty. Then he expresses surprise that few psychologists have contributed to the discussions on whipping in this *Journal*. Also, among other things he states 'Psychologists are universally agreed that no child should be whipped'.

The task of mental science is to trace to its origin the kink which leads to odd or anti social behaviour and to suggest a remedy, but homely psychological lessons can be drawn from everyday life by anybody. As an instance a child promises not to play with the fire but conscience fails to restrain it, and automatically painful punishment ensues which has a powerful and permanent deterrent effect to the infant and to others knowing it. *Punch* in a cartoon once gave another example: a child is told that if he is naughty again he will be punished and he inquires which form it will take—be put to bed or beaten?

Mr Rudyard Kipling discussing this matter many years ago gave it as his opinion that many of the child problems could be solved with the slipper. Was Dr Richard Busby able to boast that sixteen pupils were on the bench of bishops due to his habit of birching or in spite of it? The old theological brimstone is seldom smelt now in ethical teaching but reward and punishment for good and evil is still upheld. In animal life the young are licked into shape: many human delinquents have much the same quality of conscience and bodily pain makes the only appeal.

To whip or not to whip, that is the question to be answered by an informed intelligence without prejudice in each case—I am, etc.,

Southampton, May 9

ARTHUR KING

SIR—I am in entire agreement with Dr G W Garde (*Journal* May 8, p 998) that whipping can never do any good and often does much harm. Unfortunately there are still a certain number of angry-looking old gentlemen both in the House of Lords and on the magistrates' bench who think that every form of juvenile delinquency is best treated by a dashed good thrashing, by gad, Sir! All psychologists are agreed that sadism is responsible for corporal punishment, however much the parent, teacher, magistrate, or whoever is concerned, may deceive himself. The fact of the matter is that whipping is a survival of a barbarous age, and our descendants will look upon the idea of inflicting pain on the body in order to train the mind much as we look upon the idea of burning men's bodies to save their souls.

It is a significant fact that, whereas corporal punishment is a traditional feature of English schools, it is almost unknown in most Continental ones. Charles Reade, author of *The Cloister and the Hearth* in referring to the immoderate thrashings he received at school said, 'It was supposed to make men of us. I only wonder it did not make devils of us.' So far as schools are concerned the most outrageous fact of all is that prefects are often given the right to cane. I should like to hear the view of a competent psychologist on the idea of allowing an adolescent, in the state of emotional and sexual instability peculiar to that age, to indulge in sadistic practices at his own sweet pleasure—I am, etc.,

Hove Sussex May 9

W N MAPLE

Recovery from Severe Syphilis without Medicine

SIR,—When I was a medical student at University College Hospital I apparently infected my left eye with syphilis from some out-patient, for I suffered for two or three weeks from what must have been a hard chancre on the lower lid, but in my ignorance I did not consult any of the staff. This was soon followed by a very hard gland at the left socket of the lower jaw about the size of a child's marble. A few weeks afterwards I had a very severe sore throat and a glandular swelling below the right half of the lower jaw about the size of a hen's egg. I consulted Sir William Gowers, but omitted to mention the previous eye trouble, as in my ignorance I saw no connexion between the two. He diagnosed hospitalism and overwork, and sent me home for three months. My brother, Professor Rushton Parker, took me to Mr Fred Lowndes, the Liverpool police surgeon, who diagnosed syphilis, at which I scoffed, as I had never exposed myself to such infection in the ordinary way, and had forgotten about my eye trouble.

After qualifying M.B. I spent a year as house physician in each of two Liverpool hospitals, in both of which I had continuous bad health, my throat looking like the interior of a cardiac ventricle with its muscular papillae, chordae tendineae, etc. A string of glands could be felt behind the neck, and I was becoming gradually deaf in the left ear. I therefore took two years travelling in Australia and New Zealand and across USA under the impression that I was merely suffering from overwork. As this had not the desired effect on my return I consulted Sir James Paget (who diagnosed tuberculosis of the throat). Sir Jonathan Hutchinson (who diagnosed either lupus or syphilis, but eventually, finding a minute per-

foration of the soft palate through which he could pass a probe, pronounced positively for syphilis), and Sir Morell Mackenzie (who told me not to worry about the diagnosis but to come daily to his house for eight weeks, by which time he would promise to cure) Sir Morell cauterized my throat every day (Sundays and weekdays) for eight weeks, at the end of which time I was quite well except for the complete deafness of the left ear. But he also prescribed 10 grains of iodide of potassium thrice daily, which I never took after a very few days, partly because they had a depressing effect but chiefly because I still obstinately declined to acknowledge that I could have syphilis which I guessed he had secretly diagnosed.

I did not suffer from any eruptions on the skin, nor did I lose any hair but several others besides those mentioned positively diagnosed syphilis so that one has to choose between an unusual case of severe syphilis and some other infection that could mislead some of the highest authorities. I am now in my eighty fourth year, and for half a century have enjoyed excellent health—I am, etc.,

WM. RUSHTON PARKER, M.A., M.D.

London W1 May 8

Osteochondritis Dissecans

SIR—I think many surgeons will be surprised by the views put forward by Drs Stevenson and Henderson in their article on osteochondritis dissecans in the *Journal* of May 8 (p 963). The authors suggest that this condition is brought about by an upset of the calcium metabolism of the body. They quote in support of their claim the case of a boy in whom a loose body of the elbow was found. They state that the radiographs revealed a general decalcification and that the blood chemistry showed an upset of the calcium balance. They feel that the cause of osteochondritis dissecans is a decalcification of the bones, in which condition trivial injuries may cause loose bodies.

I think most orthopaedic surgeons will disagree with this view, and I feel that the case reported by the authors does not prove their theory. The accepted view of the causation of osteochondritis dissecans is that it is undoubtedly due to trauma, which causes bruising of the articular cartilage with later exfoliation, usually in adolescents but always in perfectly healthy persons who have otherwise normal bones and a normal blood chemistry. These facts are fully expounded in the article on the subject in the *British Journal of Surgery* (1933) by H A T Fairbank. Further, to-day, Mr Timbrell Fisher tells me that he still adheres to the view of its causation as put forward by him in his book *Internal Derangements of the Knee Joint*—namely that articular cartilage easily bruises and that a relatively trivial injury such as slight hitting of the tibial spine against the cartilage of the condyle of the femur or a squeezing action as in rotation abduction movements of the elbow may be sufficient to produce a shearing strain which cleaves the layers of the articular cartilage or its underlying cancellous bone. He found also that the flaked piece of cartilage presented no change in its microscopical appearance or calcium content. The article by Mr Fairbank contains many excellent radiographs as also does the article quoted by Dr King in the *Journal of Bone and Joint Surgery* (1932). Again I have looked through the *Proceedings* of the Royal Society of Medicine and have seen the radiographs of several cases shown during the last few years and I submit that in none of these is there any evidence of decalcification either in the bones involved or in the other bones.

Drs Stevenson and Henderson declare that the bones are deprived of calcium, I admit that in the radiograph of their case these are rarefied but I suggest that another causation for this must be sought—acute traumatic or disuse decalcification may be other factors.

The authors are apparently endeavouring to lump together osteochondritis dissecans and osteochondritis. The former is a misnomer for a purely traumatic process affecting normal cartilage while the latter is a dysplasia of growing epiphyseal cartilage which is characterized by variations in the local calcium content, this possibly may be in some way related to a metabolic disorder. This point, however, is on a different matter—I am, etc.

London W1 May 10

G O TIPPETT FRCS

Obituary

S A KINNIER WILSON, M.D.,

D.Sc., FRCP

Physician to the National Hospital, Queen Square and to King's College Hospital

Dr Kinnier Wilson, whose death on May 12 after a short illness we regret to announce, was a neurologist of world wide reputation. He was physician to King's College Hospital, and to the National Hospital, Queen Square, for Nervous Diseases, and consulting physician to the London County Council.

Born in New Jersey, Samuel Alexander Kinnier Wilson received his education at Edinburgh University, where he took the degrees of M.A., D.Sc., and M.D. After graduating in medicine in 1902 he was house physician to Sir Byrom Bramwell whose enthusiasm for neurology turned Kinnier Wilson's interest into the same channels. He then went to the Salpêtrière in Paris, at that time the Mecca of neurology. Charcot was dead but his tradition was being ably carried on by Pierre Marie aided by Babinski and many others whose names are familiar to all neurologists. This teaching and environment kindled his enthusiasm and moulded his outlook on neurology. He also visited



Leipzig and returned from his *wanderjahre* with a fluent knowledge of French and German, which was a great asset in his later work. Thereafter his life was bound up with neurology and the National Hospital, Queen Square where he passed from house physician to registrar, pathologist and honorary physician. He was for a time assistant physician at the Westminster Hospital and later became physician and neurologist to King's College Hospital. At the National Hospital he came under the influence of Hughlings Jackson whose philosophy of approach to neurology greatly attracted his young disciple.

Fame came early to him from his discovery of the disease which he called progressive lenticular degeneration but which has always been known as Wilson's disease. To realize the excitement which his description of this disease caused we must remember the state of

knowledge in 1911. At that time little or nothing was known of the function of the lenticular nucleus. Its connexion with abnormal movements had scarcely been suggested, and the term 'extrapyramidal' was unknown. The red nucleus and the cerebral cortex were the only recognized sources of motor paths to the limbs, the movements of athetosis and chorea being attributed to disturbances in the cortex and those of paralysis agitans to dysfunction of the red nucleus. Kinnier Wilson's demonstration that spasticity and tremor could be produced by a symmetrical lesion in the putamen and caudate nucleus was the first definite proof of a relationship between abnormal movements and the lenticular nucleus. His thesis was therefore much more than a description of a new disease entity. It opened the sluice gates to a spate of observation and speculation on the motor functions of the basal ganglia. In 1912 he read a short paper before the Neurological Society of Paris on this disease. His power of lucid presentation and his familiarity with French speech and thought gave added interest to his subject, and he received an ovation. The interest taken by German neurologists in his discovery was scarcely less, and the name "Wilson's disease" seems to have been first used in that country. He followed up his clinicopathological description by experimental work on the basal ganglia in monkeys in Sir Victor Horsley's laboratory with the aid of a scientific grant from the British Medical Association. His physiological and pathological work was however, interrupted by the war and thereafter his clinical work left him little time for the laboratory. The epidemic of encephalitis lethargica in 1918-20 increased interest in the extrapyramidal motor system and Wilson was appointed neurologist to the Metropolitan Asylums Board with special interest in the hospital for post-encephalitic cases which had been established in the London area. His wide knowledge of nervous and mental disease in childhood made his help very valuable, and when the Metropolitan Asylums Board lost its identity he continued as consulting neurologist to the London County Council.

In 1925 he gave the Croonian Lectures before the Royal College of Physicians of London, choosing as his subject "Disorders of Motility and Muscle Tone," and in 1930 he gave the Morison Lectures to the Royal College of Physicians of Edinburgh. Honours from foreign neurological societies fell thickly on him. He was made Officier de l'Instruction Publique du Republique Française, honorary Fellow of the Royal Medical Academy of Turin and honorary corresponding member of the Royal Academy of Medicine in Belgium, as well as honorary member of the American Neurological Association and of the Neurological Societies of Italy, Poland, Paris, Vienna, Philadelphia, Germany and Japan and of the Medical Society of Copenhagen. He was president of the Sections of Neurology and of Psychiatry of the Royal Society of Medicine and secretary (1911) and vice-president (1925) of the Section of Neurology and Psychiatry of the British Medical Association. He was secretary general of the International Neurological Congress in 1935 and the success of this congress and of the congress of 1931 at which he acted as secretary of the British section were largely attributable to his work and personality.

As a teacher and lecturer he had unique gifts. His unusual command of descriptive language, the clarity of exposition which often made the subject appear simpler than it actually was, his commanding presence and natural dramatic powers made his lectures a delight rather

than a task, and the halls where he lectured were often uncomfortably crowded. The same facility of expression is seen in his many writings. In addition to articles in medical papers he published books on *Aphasia* and on *Modern Problems in Neurology*, and for many years had been engaged in writing a textbook of neurology, but unfortunately did not live to finish it. In 1920 he started the *Journal of Neurology and Psychopathology* of which he continued as Editor when it was taken over by the British Medical Association. He married the daughter of the late Dr Alexander Bruce of Edinburgh, who founded and edited for many years the *Review of Neurology and Psychiatry*. She, with two sons and a daughter, survives him.

Dr R G GORDON writes

After the end of the war the *Review of Neurology and Psychiatry* did not resume publication, and in 1920 Kinnier Wilson and a few others decided that a second journal devoted to neurology would be beneficial, if not necessary, for the promotion of this branch of medicine in Great Britain. The stimulus of war experience had inspired a large number of neurologists in this country, and the study of nervous disease was going through a very active and rapidly developing phase. At the same time the almost new science of psychopathology was very much in the public eye, and, moreover, in serious danger of losing its moorings by becoming entirely divorced from the study of the anatomy, physiology, and pathology of the nervous system. In these circumstances a small committee was formed, representative of the various neurological and psychological interests concerned, to found a journal devoted to both branches of study. Kinnier Wilson was unanimously elected editor and continued in that office until his untimely death.

The *Journal of Neurology and Psychopathology* first appeared in May, 1920, being published by Messrs John Wright and Sons Ltd of Bristol. A few years later the publication was undertaken by Messrs Heinemann Ltd, and in July 1926 the British Medical Association undertook its publication as one of its special journals. This association has continued up to the present day and the Editorial Committee has nominally acted as a subcommittee of the Journal Committee.

One of the last acts of Wilson's life was to express his regret that he would no longer be enabled to continue the editorial work of the journal which lay so near his heart and to which he gave such unbounded labour and devotion. The *Journal of Neurology and Psychopathology* has come to take an honoured place in neurological literature and the credit of this achievement rests almost entirely with Wilson. He was a man who travelled widely and wherever he went attracted affection and admiration both for his personal qualities and for his enthusiasm for his subject and his interest in its many unsolved problems. This wide circle of friends and admirers enabled him to obtain articles of great value not only from British neurologists but also from those of America and the Continent of Europe and his editorial comments on current problems and the collection of abstracts and reviews which he established were very generally appreciated.

The *Journal of Neurology and Psychopathology* can never be the same without him whatever may be its future, and neurological literature must be the poorer for his loss.

[The photograph reproduced is by Elliott and Fry Ltd.]

SIR GEORGE BADGEROW, CMG, CVO,

MD Toronto F.R.C.S.Ed

Formerly Surgeon Golden Square Throat, Nose and Ear Hospital

The death took place suddenly in London on May 9 of Sir George Badgerow, consulting laryngologist and aurist of Harley Street. He was a Canadian, and although he had lived and practised in this country for a generation he never lost his Canadian affiliations, and was one of the best-known unofficial representatives of the Dominion in London. He was honorary secretary of the Canada



Club, and during the war he served as lieutenant colonel in the C.A.M.C., while thus serving he was mentioned in dispatches.

George Badgerow was born in Toronto in 1872, and received his education at Upper Canada College and Toronto University. He graduated in medicine in 1903, and six years later took the MD degree at Toronto. He then came to England and continued his studies at University College Hospital and Middlesex Hospital, and in 1910 became a Fellow of the Royal College of

Surgeons of Edinburgh. He had determined to devote himself to laryngology, and became attached to the Throat, Nose, and Ear Hospital, Golden Square, London, with which in one capacity or another, latterly as consulting surgeon, he was associated until the end of his life. Among the positions he held during the war were those of consulting surgeon to the Duchess of Connaught's Red Cross Hospital, Cliveden, Bucks; the Ontario Military Hospital, Orpington; the King's Canadian Hospital, Bushy Park; and the Officers' (Daughters of the Empire) Hospital. He was made a Commander of the Order of St Michael and St George in 1918, received a knighthood ten years later and was decorated CVO in 1930. He was an officer of the Order of the Hospital of St John of Jerusalem in London.

The number of appointments which Sir George Badgerow held in connexion with various institutions makes a long list. He was aural surgeon to the Royal Normal College and Academy of Music for the Blind at Upper Norwood, an institution in which he took a special interest, and the musical successes of the pupils gave him a professional as well as a personal pleasure. He was also consulting surgeon for diseases of the throat, nose and ear to the Reedham Orphanage, Purley; honorary laryngologist and aurist to the Warehouse Clerks and Drapers' Schools, Russell Hill, Surrey; and acted in a similar capacity to the Livingstone Hospital at Dartford. He did much good work as a member of the Education Committee of the King's Residential Open Air School for London Children, Bushy Park. But his work at Golden Square, where he began as senior resident surgeon for three years and served for a number of years as dean of the attached school, is his most memorable achievement.

His many appointments and a busy consulting practice left him little time even if he had the inclination to pursue literary and society activities. Papers from his pen made an occasional appearance in the medical periodicals, but he resisted the temptation, if he ever

experienced it to write a book. He was a member of the Section of Laryngology of the Royal Society of Medicine, and for a time on its council, but he did not often take part in sectional discussions. He was sometimes to be seen at clinical meetings of the Chelsea Clinical Society, and he was a member of the British Medical Association, which he joined immediately on coming to England in 1910, resigning shortly after the outbreak of war in 1914 and rejoining later. In 1933 he was elected a vice president of the Metropolitan Counties Branch.

Sir George Badgerow was a man of many parts, respected for the thoroughness with which he undertook anything he did—his work as a member of the Imperial War Graves Commission is specially remembered—and much esteemed in his profession while among those who knew him well, notably his fellow Canadians in London, he was regarded with much affection. He collapsed in a taxicab while on his way to Waterloo Station; the driver took him to St Thomas's Hospital, and on arrival there he was found to be dead.

[The photograph reproduced is by Elliott and Fry Ltd.]

J HAMBLEY ROWE, MA, MB CM., FSA

We regret to announce the sudden death of Dr Joseph Hambley Rowe on May 11 at his residence in Horton Grange Road, Bradford. Born at Hayle in Cornwall in 1870, and educated at Hayle Grammar School, he entered Aberdeen University in 1890, and in 1894 graduated M.B. CM. For three years he acted as an assistant in a general practice in Burnley, and then started to practise on his own in Cowling, Yorkshire. In 1900 he came to Bradford and was in general practice there till his death. During the war he held a temporary commission in the R.A.M.C., and subsequently became one of the chairmen of the Bradford Pensions Board. He was also surgeon in charge of the venereal diseases department at the Bradford Royal Infirmary, 1917-19, and for some years acted as honorary anaesthetist to the Bradford Children's Hospital and Waddilove's Samaritan Hospital. In 1919 he became a member of the British Medical Association.

In the period of his thirty-seven years in Bradford Dr Rowe was a member of many scientific societies among which may be mentioned Bradford Medical-Chirurgical Society (president, 1923), Bradford Scientific Association (president, 1906 and 1927), Bradford Historical and Antiquarian Society (president, 1910 and 1928), Royal Cornwall Polytechnic Society (president, 1930), Society of Antiquaries of London, Brontë Society (chairman of council and vice president). He was a Deputy Bard of the Cornish Gorsedd under the title of Tolzethan, and he was also an Honorary Welsh Bard.

Dr Rowe took a very deep interest in all things pertaining to his native county and he was a recognized authority on Cornish books. During his lifetime he collected a library of some 6,000 Cornish books and papers and this is regarded as one of the most comprehensive and representative collections of Cornish literature in the country. Pedigrees and parish registers also greatly interested him and he was the author of several books and pamphlets on these subjects. Another of his hobbies was the study of fossils and stone implements of which he had got together a fine collection. In 1924 when the Annual Meeting of the B.M.A. was held in Bradford Dr Rowe was entrusted with the compilation of the *Book of Bradford* and it has been authoritatively stated that his production was the best history of the city written so far. He was essentially a scholar

but instead of following the better-known highways of scientific scholarship he preferred to delve into the more or less untrodden byways of knowledge and learning and in 1931 the University of Leeds granted him the degree of M.A. for a thesis on Cornish lore.

Dr Rowe was a very lovable man, kindly and good-natured to all with whom he came in contact, and he had acquired a wide circle of friends in the city of his adoption. He had a keen sense of humour, and had collected a large number of medical stories in Yorkshire dialect, which he had intended to publish some day. He is survived by two sons and two daughters, his wife having predeceased him by only five weeks.

W N W-W

R T WILLIAMSON, M.D., F.R.C.P.

Consulting Physician Royal Infirmary, Manchester

Dr Richard Thomas Williamson, who died on April 28, was born at Burnley in 1862. He was a student of the Owens College, Manchester, and graduated in 1884 with the M.R.C.S. and L.S.A., as many able men did at that time, the Apothecaries' licence allowing them to dispense and charge for medicine if they wished. The M.B. B.S. of London University followed next year and the M.D. in 1887. He also studied for a time in Vienna, and this awakened an interest in the affairs of Middle Europe which he wrote about in later life. After six months' residence in the Manchester Infirmary as house physician he went to Birmingham, where he lectured on physiology in the medical school. His next hospital appointment was as clinical assistant at the Central London Ophthalmic Hospital, and this was followed by an appointment as house physician at the National Hospital, Queen Square. These London posts developed his leaning to neurology, and taught him the great value of examining the fundus of the eye in nervous and other diseases.

On returning to Manchester Williamson became medical registrar at the Royal Infirmary, and, in time, honorary physician at Ancoats Hospital, editor of the *Medical Chronicle* and in 1902 honorary assistant physician to the Royal Infirmary. He began in 1892 and continued for many years writing papers for *Brain* and other journals on subjects of neurological interest, and published small works on syphilitic and on vascular diseases of the spinal cord in the nineties. In this same decade he took a special interest in diabetes mellitus, and wrote a monograph on it in 1898. It was an impressive volume of 417 pages and in addition to relating his own experience of ten years he gave an exhaustive account of what was then known about the disease with references to the work of other observers. It gained him a reputation for treatment in those seemingly far away pre-insulin days and no little work in his consulting practice. For many years he was assistant lecturer in medicine to Professor Dreschfeld at the Manchester University taking neurology as his subject. In 1908 he published the material of fifteen years' teaching in a volume on *Diseases of the Spinal Cord*. Although it contained no fewer than 183 illustrations drawn by himself or from photomicrographs of his own sections he considered it merely as an introduction to the subject and a textbook for students. There was much original work in it and it established his distinct claim to be one of the leading neurologists of the day. A second impression was called for in 1911.

Williamson took a great deal of trouble in preparing diagrams and illustrations for his classes and his teaching was much appreciated by students. He was a man below the average height, and had in manner a good deal of

natural shy reserve. He became a Fellow of the Royal College of Physicians in 1900, and for a time acted as examiner in medicine for London University. During the war he served in the R.A.M.C. with charge of a neurological unit of the Second Western General Hospital in Manchester. At this time, however, he was suffering and for some months previously had suffered from ill-health which interfered with his writing, teaching, and general work. As his health did not improve he retired from practice, and left Manchester to live in the South of England in his fifty-fourth year. His retirement from the teaching staff was a great loss to the Manchester school. He then took an interest in general and medical history and wrote several articles, not for scholars, he said, but for students and practitioners without any previous acquaintance with the subject so written about. These he published in small paper-backed editions. The first was entitled *English Physicians of the Past* (1923), and contained very brief notes of about a dozen leading men of the eighteenth century. Next year appeared *Stories from English History Retold* consisting of essays on kings, monks, or other persons or episodes of interest before the Norman Conquest. In 1927 he published the *Log of an Old Physician* which contained some of his own experiences written in a semi-fictional style.

He married a Thuringian lady, and this led to travel and to his taking an interest in Continental history, especially that of Czechoslovakia. He wrote some thirty-four stories and sketches about this country, which were published in the New York journal *Slovak and Amerike*.

GEORGE SCOTT MACGREGOR, M.D.

Late Senior Surgeon and Superintendent Glasgow Hospital for Women.

On May 4 one of Glasgow's best-known medical men, Dr Scott MacGregor of Buckingham Terrace, passed away with tragic suddenness. He had had a severe illness in the early weeks of the year but had recovered sufficiently to be able to carry on his work without discomfort. On the morning of his death he had been attending patients as usual but a heart attack developed in the afternoon and he died before medical aid could be summoned.

A native of Tayport, Fife, George Scott MacGregor matriculated as a medical student at Edinburgh University in the year of the tercentenary celebrations. On completing his curriculum he continued his medical studies in Berlin, Vienna, and Paris before graduating M.B., Ch.M. at Edinburgh in 1888. After taking his degree he became first a medical and later a surgical resident in Edinburgh Royal Infirmary. His terms of office as such completed, he was appointed resident to Dr Halliday Croom of the gynaecological department at the Infirmary, and subsequently Dr Halliday Croom's assistant. In the middle nineties Dr Scott MacGregor took up general practice in Glasgow. During his early days there he acted as clinical tutor at Queen Margaret College, where he taught the first women medical students of Glasgow University and was an assistant surgeon at the Glasgow Hospital for Women. On the retirement from the latter of Dr Robert Bell, Dr Scott MacGregor, who was now devoting himself entirely to gynaecological work, was appointed senior surgeon and medical superintendent of the hospital positions which he held until three years ago. His long association with the hospital was not, however, then ended for he continued to act as honorary surgeon up to the time of his death.

It is in connexion with his work at the Women's Hospital that the late Dr Scott MacGregor will be best and

most widely remembered Established in 1887, the Glasgow Hospital for Diseases Peculiar to Women was one of the first public hospitals to receive patients on a contributory as distinguished from a charitable footing George Scott MacGregor threw himself into its work and welfare with his whole heart Trained in its methods, he had a warm side for the Edinburgh school and for those who came from it During the last months of the war and for some years afterwards his staff at the Women's Hospital with one exception consisted entirely of Edinburgh-trained men Mr J Hogarth Pringle, the consulting surgeon, Scott MacGregor himself and Dr E H. Lawrence Oliphant, the acting surgeons, and Drs Fraser Macdonald and Ross Scott, the acting physicians, had all been students in Edinburgh about the same time in the early 'eighties In a letter to Dr Scott MacGregor Sir John Halliday Croom, commenting on this fact, expressed his opinion that it was probably unique for so many ex-students of one professor to find themselves, over a quarter of a century later, associated together in this way

In his younger days Dr MacGregor was a keen athlete He never lost his taste for long walks, and only a few months ago expressed the opinion that he questioned if anyone else in Glasgow spent as little in tramway fares as he He is survived by his wife and a son, Dr Gordon MacGregor, who holds a professorial appointment in Singapore

ANDREW SMITH, M D

Dr Andrew Smith of Balgonie House, Ryton on Tyne, died on April 4 at the age of 57, and with his death a family medical sequence of sixty five years has been broken He had been ill for nearly a year, but kept in touch with his work until quite recently He was the son of the late Dr James Wilkie Smith who died in 1928 and who had one of the largest private and colliery practices in the North, covering the Ryton Crawcrook and High Spen districts It was said that during the war he had the medical care of 10,000 people Andrew Smith was educated at Newcastle Grammar School and at Edinburgh and took his medical course at the College of Medicine Newcastle graduating M B B S of the University of Durham in 1903 and taking his M D in 1910 He was house surgeon to Mr Rutherford Morison at the Royal Victoria Infirmary and began practice as a partner with his father He followed his father as medical officer of health to the Ryton Council in 1922 and issued a comprehensive booklet on the health of the district annually from that time He held the posts of police surgeon and vaccination officer and was in charge of the Castle Hill Convalescent Home Wylam attached to the Royal Infirmary, Newcastle-on Tyne He was a life president of the James Wilkie Smith Medical Institute Newcastle the institute having been given by his late father in memory of his son James Wilkie Smith who died in 1914 In this he took the greatest interest the fact that it fills a prominent place in the medical life of the district was very dear to him and the knowledge that he would be followed in this office by his cousin would have been most gratifying He joined the British Medical Association in 1905, and was a member of the Representative Body at five Annual Meetings Dr Smith was a keen rider with the Braes of Derwent Hunt up to 1914 One of his chief characteristics was his interest in clinical medicine and his presence at all the clinical meetings was always looked for He took post graduate courses up to the last year of his life, with the result that he was a very fine clinician From one of his pits came the

first case of Weil's disease, due to *Spirochaeta ictero-haemorrhagiae* diagnosed in this district by himself He could always be relied upon to have some interesting case on hand We shall all miss his cheerful presence, and his memory will long remain a pleasant one in this district. Our sympathy goes out to his widow and two daughters
J H

We regret to announce the death on May 7 at a nursing home in Dundee of Dr CHARLES KERR, consulting physician to the Dundee Royal Infirmary, medical examiner to the Shipping Federation, and formerly lecturer in clinical medicine at St. Andrews University Dr Kerr studied medicine at University College, Dundee, and the University of Edinburgh, graduating M B, C M Ed, with honours, in 1893 He then served at house surgeon and house physician at the Dundee Royal Infirmary, and was for a time resident medical assistant at Barnwood House Hospital for Mental Diseases before settling down to practise as a physician in Dundee During the war he was officer in charge of the medical division of a military general hospital in Egypt, with the acting rank of major R A M C, and received the O B E for his services Dr Kerr was for many years an active member of the Forfarshire Medical Association and had been a member of the British Medical Association since 1894 He contributed notes on clinical cases to the *Edinburgh Medical Journal* in 1910 and 1914 The funeral service was held on May 10 in the Cathedral Church of St. Paul, Dundee

Dr JAMES ADAMS who died on May 10, was born in South Devon eighty seven years ago, and studied medicine at St Bartholomew's Hospital and the University of Aberdeen taking the M R C S Eng and the M B A Aberd in 1873 the M D in 1875, and the F R C S in 1888 Before settling in practice at Eastbourne he had been house surgeon at the West London Hospital and assistant medical officer at Brook House Mental Hospital In the eighties and nineties he contributed papers on surgical subjects to the *Lancet* and the *Transactions of the Pathological Society* He was surgeon to the V A D hospital at Eastbourne during the war Dr Adams joined the British Medical Association as long ago as 1877, and had been president of the Eastbourne Chess Club

Dr ROBERT STORI BROWN died at Bootle in Cumberland on May 6 and by his death Bootle and district have lost a true friend The size of the funeral with a church full to capacity was indicative of the love and esteem in which he was held by his patients and all who knew him The following tribute from R T R gives some indication of the respect felt by his colleagues What struck me forcibly was his complete unselfishness his strong sense of duty and his kindness to everyone with whom he came in contact He never spared himself, and one is almost tempted to say he gave his life for others, for if ever a man worked hard and single handed in a scattered country practice R S Brown did It has sometimes been said that we country practitioners are inclined to get out of date and rusty in our work that could not be said of him for he kept himself abreast of the times in all branches of his professional work—and did it well What impressed me too was his punctilious adherence to the unwritten law of medical ethics and his promptness in correspondence over professional matters These together with a most lovable character endeared him to his brethren in the profession his patients and his many friends

We regret to announce the death in London on April 30 of Dr WILLIAM HENRY SARRA of Leigh on Sea Essex A student of the London Hospital he obtained the M R C S and L R C P diplomas in 1916, served at sea as temporary surgeon R N., and held the posts of house physician and clinical assistant in the surgical out patient department at the London Hospital After the war Dr Sarra joined the medical partnership in Southend

and district of which Dr J F Walker is the senior partner, and was appointed police surgeon for Leigh-on-Sea. He became a member of the British Medical Association in 1920 and last year was elected chairman of the South Essex Division.

Dr A CHARLES E GRAY who died at Cowden, Kent, on May 12, was a native of Edinburgh, where he studied medicine. He graduated M.B., C.M. in 1890, and proceeded M.D. in 1898, after holding the posts of resident physician at the Royal Infirmary and resident surgeon at the Royal Maternity Hospital. In his early days of practice in London he was appointed clinical assistant to the Paddington Green Children's Hospital. During the war he was officer in charge of the medical division of the Fulham Military Hospital and of cerebro spinal fever cases in the London area, holding the rank of Major R.A.M.C. He joined the British Medical Association in 1892.

A most promising professor of medicine in Strasbourg, GEORGES FONTES, has died after a short illness at the age of 43. When he first came from Montpellier to Strasbourg he taught biological chemistry. In 1927, when only 33 years old, he was appointed a professor without a chair. The death of Professor Paul Blum meant the appointment of Fontes to the chair of hydrology. He was a magnetic and inspiring teacher, and he had already conducted valuable research into the metabolism of water.

Medico-Legal

APPEAL BY DOCTOR'S WIDOW DISMISSED

Mrs Connolly widow of a patient, sued Dr Rubra, his doctor for failing to diagnose tuberculosis of the lungs, so that he suffered prolonged sickness and finally died. During the course of the action Dr Rubra died, and Mrs Connolly obtained leave to continue the action against his widow as his personal representative (the person who held his property in trust after death). Until recently an injured person could not maintain a personal action against the representatives of a dead person, for the right of action died with him. At the end of July, 1934, however, Parliament passed the Law Reform (Miscellaneous Provisions) Act, 1934, which changed the common law rule and provided that certain forms of personal action should be open to or available against the representatives of a deceased person. It is now possible therefore, for the widow of a deceased patient to claim damages from the estate of a deceased doctor.

An account of the hearing before Mr Justice Greaves-Lord appeared in this *Journal* on December 5 1936 (p. 1174). The learned judge found that the doctor had been negligent and awarded Mrs Connolly £5,000 damages against Dr Rubra's estate. Mrs Rubra appealed and her appeal was dismissed by the Court of Appeal on April 7. Lord Justice Greer, the president of the court, agreed with the learned judge's conclusion that the doctor had been negligent in his treatment of Mr Connolly, chiefly on the ground, which will hardly be questioned by any medical man, that if a doctor is in doubt whether tuberculosis is present or not he must make a further examination and satisfy himself that nothing more can be done for the patient. Dr Rubra had taken only one specimen of the sputum. Lord Justice Greer also found, on considering the whole of the evidence, that the doctor's negligence shortened the life of the patient, in that it was probable that if Mr Connolly had been treated with reasonable competence and skill his life would have been prolonged and probability is the standard of proof—at any rate in civil actions. As the judge had, in the opinion of the court, duly considered everything which he ought to have considered, his judgement was upheld.

The new state of the law undoubtedly introduces a possibility that surviving relatives of deceased doctors

may have to defend actions for negligence under the severe handicap of not being able to call the principal witness, the doctor himself, to defend his treatment. The present case, however, does not seem to be a good illustration of this handicap. So far as it is possible to judge from the available reports of the action, the negligence of the treatment was proved up to the hilt, and it is difficult to see what difference the presence of the doctor could have made. If he had survived, his estate would in all probability have been impoverished by the same amount as is now taken from it. It is a very grave misfortune for a widow to lose a large sum of capital through a fault that is not hers, but it is an even graver misfortune for a woman to lose a husband on whom she is dependent. The court will have constantly before its mind the peculiar difficulty of the defence, and will doubtless make allowances for it. To ascertain whether the new Act really operates harshly it will be necessary to examine a future case in which the element of doubt is much larger than in the present one. The most serious of all the consequences of the Act was at first that, whereas the doctor if alive would have been defended and indemnified by his protection society, his widow would not. The leading societies now extend their protection to doctors' widows.

The Services

The King has conferred the Efficiency Decoration of the Territorial Army upon Major Alfred Pam R.A.M.C.(T.A.) under the terms of the Royal Warrant dated September 23, 1930.

DEATHS IN THE SERVICES

Major General JOHN DALLAS EDGE, C.B. late R.A.M.C., died in Dublin on April 30 aged 89. He was born on March 9 1848, the son of Mr Joseph Edge of Timahoe, Queen's County, and was educated at the Meath Hospital, Dublin, taking the L.R.C.S.I. in 1870 and graduating M.D. of the Queen's, later the Royal, University of Ireland in the same year, subsequently he took the F.R.C.S.I. in 1889. Entering the Army as assistant surgeon on September 30 1871 he was specially promoted to surgeon on August 20 1873, became full colonel on June 1, 1901, and surgeon general on November 11 1903, retiring on March 9 1908. Soon after entering the Army he was sent to British Honduras and attached to the 1st West India Regiment. On September 1 1872 the fortified barracks at the small town of Orange Walk, where he was then serving, was surprised and rushed by a party of some 200 Yucatec Indians. The only other British officer present Lieutenant Smith was severely wounded and the defence fell on Edge who conducted it successfully, some fifty Indians were killed and almost half of the defending party were wounded. For this exploit Edge was specially promoted to surgeon. This was only the first of a long series of war services. He took part in the Zulu War of 1879 when he was present at the Battle of Gingulovo and the relief of Eishowe receiving the medal with a clasp. Immediately afterwards he was transferred to India where he served in the Second Afghan War taking part in the Battle of Maiwand and the defence of Kandahar and received the thanks of the Government of India as well as the Afghan medal with a clasp. In 1882 he accompanied the Indian contingent to Egypt, where he served at the Battle of Tel el-Kebir and the forced march to and occupation of Zagazig, receiving the Egyptian medal with a clasp, the Khedive's bronze star and the fourth class of the Osmanieh. He next served in the Burmese War of 1887 receiving the Frontier medal with two clasps. On the outbreak of the South African War he went with Buller's army to Natal but was soon after appointed P.M.O. of the Third Division under General Gatacre and was present in the action at Stormberg. Subsequently he served as P.M.O. of lines of communication and of Johannesburg district, took part in operations in the Orange Free State, Cape Colony, and the Transvaal, was mentioned in dispatches in the *London Gazette* of June 17 1902, and received the Queen's medal with three clasps and the King's medal with two clasps and the C.B. After the war he remained in South Africa as P.M.O. first of Cape Colony and then of the South African Command. In February 1905 he returned home and served as P.M.O. of the Irish Command until his retirement. In 1914 he received a good service

pension. He rejoined for service in the war of 1914-18 and from May 1915 to June 1917 was in charge of the Queen Alexandra Military Hospital at Millbank. In 1890 he married Jane daughter of Mr John Ruskell of Ballyrickard County Wicklow and had one son.

Major-General Sir PATRICK HEHIR KCIE CB, CMG Bengal Medical Service (ret.) died at Hove on May 1 aged 77. He was born at Templemore Tipperary on May 27 1859. Educated at Calcutta Medical School he entered the Bengal Submedical Department as a hospital apprentice in October, 1873, became assistant apothecary on January 31 1882, and resigned on February 8 1884. After his resignation he returned to Great Britain and entered Edinburgh University. He took the LRCSed and LSA in 1883 the MD at Brussels and the LRCPed the same year the FRCSed and the MRCS in 1885 the DPH Cantab in 1886 the DTM at Liverpool in 1904 the MRCPed in 1904 and the FRCPed in 1907. He entered the IMS as surgeon on April 1, 1886 passing second into Netley, became lieutenant-colonel after twenty years service colonel on March 25, 1912, surgeon general (the title being afterwards changed to major general) on March 13 1918 and retired on December 9 1919. He had a very distinguished career seeing much war service. Burma, 1886-7, medal with clasp. North West Frontier, Tirah 1897-8 medal with clasp. War of 1914-18 Iraq as ADMS of Colonel Townsends force in Kut advance on Kut, battle of Ctesiphon and defence of Kut taken prisoner at Kut but released by the Turks soon after mentioned in dispatches in the *London Gazette* of April 5, July 13 and October 19, 1916 and May 18 1918. Afghanistan and North West Frontier 1919. He received the CB on October 29, 1915, the CMG on February 15, 1917 the CIE on June 4, 1918, and the KCIE on January 1, 1920. After his retirement from the Service he acted as medical adviser to the British Red Cross Society's mission for the succour of Greek refugees. He was the author of many professional works: *Sanitation for Indian Schools* 1890. *Alcohol and its Effects* 1890. *Hygiene of Water Supplies* 1891. *Medical Jurisprudence for India* second edition 1891 with J B Gribble, 1CS (the first edition, by Gribble alone 1885). *Report of the First Hindurabad Chloroform Commission* 1892. *Hygiene and Sanitary Science* 1894. *Prevention of Disease in Indian Frontier Warfare* 1911. *The Medical Profession in India* 1923. *Ministry in India* 1927. In 1908 he married Dora granddaughter of Edward Lloyd, founder of the *Daily Chronicle* and had one daughter.

Lieut Colonel ROBERT LINDSAY LOVE, RAMC (ret.) died at Maidenhead on March 22 aged 84. He was born on February 19 1853 and was educated at the Queen's Colleges of Galway and of Belfast and at University College London graduating as BA in 1875 and as MD and MCh in 1877 at the Queen's later the Royal University of Ireland. Entering the Army as surgeon on July 31 1860 he became lieutenant-colonel after twenty years service and retired on February 19 1908. He served in the South African War of 1899-1902 taking part in operations in Natal and in the Transvaal including the defence of Ladysmith and the actions of Laings Nek Lombards Kop Belfast and Lydenberg was mentioned in dispatches in the *London Gazette* of February 9 1901 and received the Queen's medal with five clasps and the King's medal with two clasps.

Universities and Colleges

UNIVERSITY OF OXFORD

The Board of the Faculty of Medicine has co-opted Professor H W B Cairns FRCS Fellow of Balliol College for the statutory period.

The next Deans' dinner will take place in the Chantecler Restaurant Frith Street Soho W.C., on Thursday May 27 at 7 for 7.30 p.m. Those who wish to attend should inform the Dean at the Department of Medicine not later than Monday May 24.

The second B.M. Examination begins on Wednesday June 16. Names must be received by the Registrar before 10.30 a.m. on Tuesday June 1.

The examination for the Diploma in Ophthalmology begins on Monday June 21. Names must be received by the Registrar by Monday May 31.

The M.Ch. Examination begins on Thursday June 24. Names must be received by the Registrar not later than 3 p.m. on Saturday June 5.

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 14 the following medical degrees were conferred:

MD—D G Macdonald J M Vazey C A Clarke
M.B. B.Chir.—*W Raffle *O L Lander C Adamson R S Castle
*M.B.—*D W C Gawne *P R Goodfellow D C G Ballingall
*C E Bevan O C Lloyd P E C Manson Bahr E C Herten
Greaven J R Kerr D F Lawson T W S Hills J R C Williams

* By proxy

UNIVERSITY OF SHEFFIELD

At its meeting on May 14 the University Council received a promise of an additional donation of £10,000 from Sir Robert Hadfield towards the University Buildings and Endowment Fund. The Council recorded its high appreciation of this offer which brings Sir Robert Hadfield's contributions to the University during the last three years to a total of £25,000 and the chairman was requested to convey to him the Council's deep sense of gratitude.

The Council accepted an offer from the Local Medical and Panel Committee of the West Riding of Yorkshire to award annually to final year students a prize of £25 in clinical medicine.

Dr M S Spink was appointed assistant bacteriologist and demonstrator.

The Council received with regret the resignations of Dr G Clark and Dr T E Gumpert of the posts of junior assistant bacteriologist and honorary demonstrator in physiology respectively.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

A Council meeting was held on May 13, with the President Sir Cuthbert Wallace in the chair.

The Council congratulated the President on the appearance of his name in the Coronation Honours List as a baronet.

Mr Ernest Eric Young and Mr Arthur George Wells were admitted to the Fellowship.

Diplomas and Awards

Diplomas of Membership were granted jointly with the Royal College of Physicians to 208 candidates whose names were published in the report of the meeting of the Royal College of Physicians of London in the *Journal* of May 15 (p. 1049). In this list four names were misspelt: W D Benyon should be D W Beynon G W V Grieg should be G W V Greig J A Guest should be I A Guest and H E W Hardenbergh should be H E W Hardenberg.

Diplomas in Tropical Medicine and Hygiene were also granted jointly with the Royal College of Physicians to the thirty-one candidates whose names were published in the report of the meeting of the Royal College of Physicians of London in the *Journal* of May 15 (p. 1050).

The Honorary Gold Medal of the College was awarded to Sir James Frank Colyer KBE LL.D. FRCS L.D.S., in recognition of his many contributions to scientific odontology and to the service of the College.

The following hospitals were recognized for the six months surgical practice required of candidates for the Fellowship: Cumberland Infirmary (second house surgeon additional post) Bradford Royal Infirmary (resident surgical officer, first second and third house surgeon).

The President was appointed *ex officio* a member of the Governing Body of the British Post Graduate Medical School to hold office from July 10 1937 to July 9 1938.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH

At a meeting of the Royal College of Surgeons of Edinburgh held on May 13 with the President Mr Henry Wade, in the chair the following candidates having passed the requisite examinations were admitted Fellows: Alice M Ross G S Adam J F Birrell A G Butters J A M Cameron L Chanock G B A Cowie Gladys H Dodds T B Field G C H Hogg B S Jones A C Kanaar, A A Klass W M Martin J D Mill W R D Mitchell J Montgomery, W A Morton F L Riskill R D Rowlands S K Sen R S Trueman D Wainwright W D Whyte J Wilton.

The Ivison Macadam Memorial Prize was awarded after a competitive examination in inorganic and organic chemistry to E. Stone. The Henry Arthur Dalziel Ferns Bursary was awarded after a competitive examination in organic chemistry in its application to medicine to H Fernbach. The Bathgate Memorial Prize was awarded after a competitive examination in materia medica and therapeutics to E. W Langs.

Medical News

Professor Edward Mapother will deliver his presidential address before the Listerian Society of King's College Hospital at the hospital on Wednesday, May 26 at 8.15 p.m. His subject is 'The Psychiatry that is Coming'.

Professor J. G. Fitzgerald, M.D., Director of the School of Hygiene at the University of Toronto is now on a year's leave of absence to study the teaching of preventive medicine in medical schools in the United States, Canada, the British Isles and other countries of Europe for the Rockefeller Foundation. Professor Fitzgerald has accepted the Chadwick Trustees' invitation to give a Chadwick Public Lecture at 26, Portland Place W. on Wednesday, May 26, at 5.30 p.m. His subject is 'Preventive Medicine—an Avenue of Good Will'.

A lecture on 'The Biochemistry of Milk Secretion' will be delivered by Professor H. D. Kay, D.Sc., director of the National Institute for Research in Dairying at the Royal Society of Arts, John Street, Adelphi W.C., on Wednesday, May 26 at 8.15 p.m. Applications for tickets should be made to the secretary of the society.

We are informed that the next meeting of the Chelsea Clinical Society will be held at the Hotel Rembrandt, Thurloe Place S.W. on Tuesday, May 25 at 8.30 p.m., and not on May 18 as previously announced. A discussion on 'Short wave Therapy' will be opened by Dr. Philippe Bauwens and Dr. F. Howard Humphris.

A meeting of the Royal Sanitary Institute to be held in conjunction with the Northern Branch of the Society of Medical Officers of Health at the Connaught Hall, Y.M.C.A. Buildings, Blackett Street, Newcastle upon Tyne, on Friday, May 28 at 5 p.m., will be given up to a discussion on 'The Difficulties of Nutritional Assessment', to be opened by Dr. H. E. Magee, Dr. G. C. M. Mongie, and Dr. J. C. Spence.

The annual general meeting of the British Institute of Radiology will be held at 32 Welbeck Street W. on Thursday, May 27 at 6.30 p.m., and not on May 20 as previously arranged.

A special meeting of Fellows of the Royal Society of Medicine will be held at 1 Wimpole Street W. on Tuesday, May 25 at 5 p.m., for the nomination of officers and council for 1937-8.

A meeting of the Association of Industrial Medical Officers will be held at Swansea on Friday, May 28 when members of the Association will be the guests of the Mond Nickel Co. Ltd. The following programme has been arranged: 9.30 a.m. business meeting at Metropole Hotel Swansea; 10.30 a.m. visit to Nickel Refinery, Clydach; 12 noon visit to Clydach Hospital with demonstration of x-rays etc. by Dr. A. J. Amor; 1 p.m. lunch at the Mond Recreation Club as guests of Mr. A. Parker Hague; 2.30 p.m. visit to Trefri Colliery; 7.30 for 8 p.m. members will be the guests of the Mond Nickel Company at dinner at the Metropole Hotel Swansea.

The annual missionary breakfast of the Medical Prayer Union will be held in the Refectory of University College Gower Street W.C. on Wednesday, May 26 at 8 a.m. when the speaker will be Dr. Clement C. Chesterman. Those wishing to attend should notify Dr. Tom J. Jays, Livingstone College, Leyton E.10.

The first congress of the Journées Internationales de Pathologie et d'Organisation du Travail will be held in Paris from June 1 to 6 under the presidency of Professor V. Balthazard. The fee is 100 francs (French) entitling the subscriber to take part in the various meetings and excursions and to receive the publications of the reports of lectures. The secretary is Dr. G. Hrusser, Institute Médico-Legal, Place Mazas, Paris XVIe.

The third congress of Austrian laryngologists will be held at Innsbruck on May 28 and 29 under the presidency of Professor Urbantschitsch, when the chief subjects for discussion will be progress in the functional examination of the ear and its diagnostic and therapeutic results and the relation of the upper respiratory tract with the general constitution.

The Royal Institute of Public Health and Institute of Hygiene are holding a congress in Margate from May 25 to 29 under the presidency of Lord Horder. The five sections and their presidents are: State Medicine and Industrial Hygiene (Captain G. S. Elliston, M.P.), Women and Children and the Public Health (The Marchioness of Reading), Tuberculosis (Dr. R. A. Young), Rheumatism and Allied Diseases (Sir Robert Stanton Woods), Nutrition and Physical Training (Sir Stanley Woodward). The social functions include two receptions and dances, a tour of Canterbury Cathedral, visits to medical institutions, a dinner, and a day excursion through Kent.

On the occasion of the fiftieth anniversary of the Bassini operation, the University of Padua publishes two volumes of 'Writings on the Surgery of Hernia' containing a reprint of the original papers of Bassini as well as contributions to the problems of hernia by surgeons of the whole world. The Italian Surgical Society has called for June 6 in Padua an extraordinary meeting of the society in the course of which, after two reports on the 'Surgery of Inguinal Hernia' (by S. Spangaro) and on the 'Surgery of Crural Hernia' (by A. Austoni), the various problems of hernial surgery will come under discussion. The meeting will last only one day. The ceremony will take place at 10 a.m. in the Aula Magna of the University before the scientific meeting. Special facilities are granted by the Italian railways during the Padua Sample Fair. British surgeons wishing to attend the meeting are requested to give in their adhesions to the Clinica Chirurgica della R. Università di Padova, which puts itself at their disposal for detailed information.

Miss Sophia Gifford Edmonds of London has given the sum of £500 a year to enable poor persons living outside a radius of fifty miles from the town to obtain treatment at Droitwich Spa. The fund will be known as the Droitwich Brine Fund for the Treatment of Rheumatism.

As only a limited number of patients can be accepted under the scheme, participation in it is being offered to certain general hospitals in England and Wales. The founder hopes however that in time other charitably disposed persons will be led to enlarge its scope.

Mr. J. W. Thomson, general surgeon, and Mr. Lionel Wells, ophthalmic and aural surgeon, have resigned from the honorary surgical staff of Clayton Hospital, Wakefield, after thirty years' service, and the hospital board has elected them honorary consulting surgeons.

In view of the growing public interest in the activities of the National Institute of Industrial Psychology shown in recent years, the council has been considering what steps should be taken to cope with its increasing work. As a result, Mr. T. G. Rose, M.I.Mech.E., has been appointed general director of the Institute to collaborate with Dr. C. S. Myers, F.R.S., the principal who will retain the position held by him since its inception sixteen years ago.

Professor W. Löffler, director of the polyclinic at Zurich, has been nominated successor of Professor O. Naegeli in the chair of clinical medicine at Zurich.

Runwell Hospital near Wickford, Essex, a large modern institution for the treatment of nervous and mental disorders, will be opened by the Minister of Health on June 14.

The sixty-sixth annual inter-hospitals sports will be held at the Duke of York's Headquarters, Chelsea, S.W., on Wednesday, May 26 at 2.30 p.m.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE, TAVISTOCK SQUARE, W.C.1

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

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QUERIES AND ANSWERS

Chronic Glossitis

"APPLEBY" would gratefully receive hints on treatment for an obstinate chronic glossitis (following general debility consequent upon septicaemia) which resists all the familiar forms of medication.

Gas Dispersion in Pyelography

"BORBORGYNIUS" writes: Is there any satisfactory method of obtaining a clear field unobstructed by intestinal gas in cases in which intravenous pyelography has to be done? If so how long beforehand must the patient be prepared for X rays?

Treatment of Keloid

F.R.C.S. (Chikmagalur) writes: A patient aged 46 with a small papilloma in her breast and a history of bleeding from the nipple had her breast excised nine months ago and has developed a keloid eight inches by half an inch all along the scar of the operation wound (Stewart's incision) round which she has been feeling pins and needles. Would radium help to relieve her condition? If so would any of your readers give details of its application mentioning the dosage etc. If not, what other measures for her relief might be suggested?

Income Tax

Cash or Earnings Basis

"D.L." inquires whether it is correct that inspectors of taxes accept the cash basis in the case of medical practitioners, he has made only one year's return and already finds the earnings basis "confusing and incorrect."

** It is of course a truism to say that the assessable profit is the excess of the gross income over the expenses of the practice. The gross income for income tax purposes is strictly the amount of the bookings for the year less a carefully estimated deduction for loss by bad and doubtful debts. When a practice has been running for some years and is neither expanding nor contracting the gross income so calculated for a year will normally be the same as the amount of the cash receipts in that year. In such circumstances the revenue authorities will often accept returns on the cash receipt basis. In the first two or three years of a practice the cash receipts do not provide a true indication of the amount of the gross earnings and this indication applies at present to our correspondent. The apparently applies at present to our correspondent. The earnings basis may be "confusing" but should not be unfair if a proper deduction is made for probable loss by bad debts.

Income from Abroad—Remittances

"M.R.C.S." to whom a reply was given in our issue of March 27—inquires further as to the scope of liability on remittances.

** There is an old law case authority for the view that any amounts remitted to this country would be liable as income even though ostensibly capital if there was foreign income sufficient to cover the amount. But that has been modified by more recent decisions which have however left the position rather complex. Taking the specific points raised by "M.R.C.S." (a) sums representing savings and transferred to England prior to arrival here would in our opinion not be liable to tax unless the remittance was made in the same financial year (ending on April 5) as the visit to this country and (b) a sum paid by cheque on a bank outside the United Kingdom would be liable as a remittance of income if paid for current living expenses, but not if paid for capital goods—for example furniture of a house.

LETTERS, NOTES, ETC

Short-wave Therapy

Dr C. H. DALTON D.M.R.E. (Ipswich) writes with reference to Dr H. J. Taylor's letter (*Journal* May 8 p. 1008). Research work has been carried out on the Continent for over ten years by Dr E. Schliephake and others and these observers produced considerable evidence that the ultra-short wave lengths (for example 6 metres) act quite differently in acute infections from the longer wave lengths (for example 30 metres). A representative of one American firm that markets a short wave machine in this country informed me that this operates on a fixed wave length of 25 metres and if other work in America has been conducted on this wave length the results may well suggest that a specific action has not been obtained. I have been working with ultra short waves (6 metres) for over two years and I am convinced that there is a specific action obtained from the nature of the radiation itself. A matter of this description cannot be entered into adequately in the course of a brief letter but under this treatment I have seen a number of acute infections such as acute streptococcal lymphangitis in nurses and members of the resident medical staff at the East Suffolk Hospital subside in forty-eight hours. Regarding chronic rheumatic infections I agree that heat is the main consideration. In a superficial joint that is easy to approach—for example a knee joint—I doubt if there is any considerable improvement on the results obtained by long wave diathermy but in the case of deep structures—for example a hip-joint—there is no doubt that the results of short wave treatment are considerably better.

Explanation and Apology

RICHARD COSTAIN LTD. (London W.C.1) write: In the booklet recently issued by our firm in connexion with a block of flats in Dolphin Square the name of Mr Hope Carlton, F.R.C.S. was mentioned as being a doctor in residence there and available in emergency. We regret to say that Mr Hope Carlton's name was inserted in this booklet without any authority from him without his authority being sought and without his knowledge and we desire to express to him our sincere apology for the unauthorized use of his name and any inconvenience that he may have been caused thereby. Mr Hope Carlton is not practising at or from Dolphin Square which is his private residence but he is continuing to carry on his practice as a consulting surgeon as before.

Corrigenda

In the paper on "Endometrial Biopsy" by Drs Sharman and Sheehan on page 965 of the *Journal* of May 8 a printer's error occurs involving the omission of a line. The paragraph under the heading "The New Technique" should begin "To overcome these various imperfections in the technique the present instrument has been devised and has proved eminently satisfactory after extensive trials."

In the bibliography to the article on hereditary sebaceous cysts by J. T. Ingram and M. C. Oldfield (*Journal* May 8 p. 960) a reference printed as Bosellini P. L. (1898) *Arch. Derm. Syph. Chicago* 45 81 should have read Bosellini P. L. (1898) *Arch. Derm. Syph. Wien* 45 81.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

397 Dangers of Salt-free Diet

J. CLAUSEN (*Ugeskr. Laeg* March 18, 1937 p 301) considers that a salt free diet is most beneficial in chronic nephritis accompanied by oedema but when there is no oedema or when it has been banished by appropriate treatment a salt free diet may in certain cases be directly injurious. In support of this opinion he records the case of a woman, aged 28, with a history of nephritis since the age of 15. On admission to hospital she suffered from drowsiness lassitude and oedema. The urine contained albumin leucocytes, and casts but was sterile. Its specific gravity was 1009, and the blood urea was 297 mg per 100 ccm. She was put on a salt-free diet and after about ten days her oedema vanished. The salt free diet was continued, however, with the result that the sodium chloride content of the serum fell from 360 to 294 mg per 100 ccm at the same time that the urea content of the blood rose to 402 mg per 100 ccm. There were signs of progressive uraemia and loss of weight due to dehydration. Accordingly on four successive days she was given an intravenous injection of 100 ccm of a 10 per cent solution of sodium chloride. The sodium chloride content of the serum rose in four days to the normal figure of 350 mg per 100 ccm. At the same time the weight rose owing to retention of fluid, and the uraemia abated.

398 Gastric Secretion

By means of a double gastro-duodenal tube with continuous separate removal of gastric and duodenal contents and of saliva G. WELIN and A. R. FRISK (*Acta med scand* 1936 90, p 542) have studied quantitatively the gastric secretion in empty human stomachs after intravenous insulin injection in normal individuals, and in cases of hyperacidity hypo acidity and achylia. They consider that a secretion of 100 to 200 ccm of gastric juice in sixty minutes after insulin injection may be accepted as normal, over 200 ccm represents hypersecretion and less than 100 ccm hyposecretion. Achylia exists when there is no augmented secretion. The total chlorine content of the gastric juice becomes equimolecular with the total fixed base of the plasma and the total acidity may closely approach the total chlorine content. Total chlorides and acidity are frequently lower than maximal, and are then positively correlated. There is no correlation between the rate of secretion and total chlorides or total acidity. There is a negative correlation between the amount of mucus and the total acidity and total chlorides. Submaximal concentrations of acidity and chlorides are thus explained by the diluting effect of mucus which has a low chloride concentration and is alkaline. Hypo acidity therefore results from the diluting effect of mucus on a hyposecretion—that is a reduced rate of secretion of a normal juice. In hyperacidity the pathological disturbance is hypersecretion of a juice of normal composition and there is often an absence of mucus.

399 Parathyroid Insufficiency and Epilepsy

According to K. HOESCH (*Munch med Wschr* March 19 1937 p 467) chronic parathyroid insufficiency is now more commonly detected and is a fairly frequent cause of epileptic phenomena. It may take a chronic course for many years until suddenly there occurs, often after violent exertion infections or pregnancy—a severe attack of tetany or tetany with epilepsy. Not seldom its course is monosymptomatic the chief features being one of the following: headaches impetigo or eczema syncopal attacks epilepsy tetany or migraine. The diagnosis is confirmed (1) by detection by the slit lamp of the charac-

teristic opacities in the lens (sight may be little or not at all affected) (2) by the electrical hyperexcitability of the median and ulnar nerves (3) by estimation of the blood calcium which by Holtz's method shows a decrease that may be slight, and (4) possibly by the detection of characteristic QT changes in the electrocardiogram. Hoesch gives a preliminary account of thirty cases in which he is satisfied that epilepsy was due to chronic parathyroid deficiency. In treatment calcium and/or parathyroid therapy gives transitory improvement but Hoesch greatly prefers AT 10 (0.5 per cent oily solution of dihydrotachysterin), given orally in doses diminishing from 20 to 30 ccm to 6 to 10 ccm in the course of a week. Careful control by blood-calcium estimations is essential. This treatment may have to be continued indefinitely it is important that the blood calcium should not exceed 12 mg per 100 ccm.

Surgery

400 Echinococcus Disease of Bone

E. ETTORRE (*Arch Ital Chir* January 1937 p 149), who records a personal case of echinococcus disease of the scapula, states that localization of the disease in bone is rare as Ivanissevitch among 1734 cases of echinococcus disease notified in the Argentine Republic found only twenty-nine cases (1.6 per cent) in which a bone was involved. Ettorre could collect only eight cases besides his own in which the scapula was affected. His patient was a woman aged 28 a native of Milan, who at the age of 12 had received a violent blow on her left shoulder. About three years later she began to feel pain in the shoulder, which was attributed to pleurisy and treated as such. During the last three years pain was felt in movements of the shoulder, especially on abduction and internal rotation and a diagnosis of arthritis was made. Shortly afterwards a swelling appeared gradually increasing in size. As the result of radiological examination and exploratory puncture a diagnosis of echinococcus disease of the scapula was made and the cysts successfully removed. Complete recovery took place.

401 Hyperthyroidism

F. LAHEY (*Surg Gynec Obstet* February 15 1937, No 2a, p 304) presents views on the management of severe hyperthyroidism based on 15200 thyroid operations carried out during a period of fifteen years upon 13000 patients. The mortality rate counting all patients who died from any cause while in the hospital was 0.85 per cent in the series. Of this number 40 per cent died of thyroid crises 10 per cent of cardiac failure, and 10 per cent of emboli. The remainder died of carcinoma or other causes. During this time there were fifty three non-operative deaths in patients with such advanced degrees of hyperthyroidism that no operation could be contemplated. It is suggested that this mortality is largely due to delay in bringing the patient for operative treatment. Operation may not be advised until a thyroid crisis or some severe cardiac lesion has developed. Even if patients are first seen when in a state of acute hyperthyroidism the application of proper principles will cause such an improvement as to remove temporarily the danger of immediate death and ensure that subtotal thyroidectomy can be carried out with a risk rate of only 3.5 per cent. It has been shown that before operation 70 per cent of cases have an abnormally high blood iodine which drops to normal after subtotal thyroidectomy. As the active principle of the thyroid gland thyroxine is over 60 per cent iodine it is suggested that hyperthyroidism is due to an excessive introduction of thyroxine into the blood. The author also considers it probable that during

an acute thyroid crisis with delirium vomiting diarrhoea and a rise of temperature, these reactions are the result of effects on the liver, and may be combated by intravenous injection of glucose and fluids in addition to the control of hyperthyroidism by iodine rest, and sedatives. Subtotal thyroidectomy is advised for all patients who show no obvious improvement after four weeks of non-operative treatment. Any patient with mild cardiac failure or cardiac arrhythmia should be operated on immediately, and also those whose condition is complicated by diabetes or pregnancy. Patients who have recovered from a thyroid crisis can be operated on, after taking a high carbohydrate diet for three weeks, by the two stage method without undue risk. In some cases a preliminary ligation is of value, and in certain cases multiple stage operations will lower the operative risk.

402 Headache in Head Injuries

H J SVORODA (*Zbl Chir* March 13, 1937, p 624) discusses the biological action of hypotonic and hypertonic solutions, and proceeds to record his successes with hypertonic solutions of glucose in increased intracranial pressure following injuries to the skull. He suggests that urotropine should be administered prophylactically and three injections of 50 ccm of a 30 per cent solution of glucose should be given after the appearance of the headache.

403 Heredity in Peptic Ulcer

L UGELLI (*Polichinico Sez Prat*, March 22, 1937, p 558) reviews the literature showing the frequency of hereditary and familial predisposition in gastric and duodenal ulcer, and records his observations on 334 cases of peptic ulcer admitted to the Flajant pavilion of the Littorio Hospital, Rome, from 1932 to 1935. Of these, nineteen patients (5.68 per cent) gave a history of direct heredity and five gave one of collaterals affected with ulcer, so that in twenty four (7.18 per cent) there was a history of familial peptic ulcer. The most remarkable example in Ugelli's series was that of two brothers, aged 28 and 33, whose father was a gastric patient; they both underwent gastroenterostomy for duodenal ulcer and subsequently were operated on again for a recurrence of an ulcer at the site of anastomosis. Ugelli comes to the conclusion that a hereditary and constitutional factor plays some part in the causation of peptic ulcer.

404 Conservative Gall-bladder Surgery

F MANDL (*Wien klin Wschr* March 19, 1937, p 371) relates his experiences with the operation of mucoclasia. This consists in the incision of the gall bladder removal of the stones, and cauterization of the mucous membrane of the gall-bladder down to the serosa. Either the thermocautery or the diathermy current may be used for this purpose although the author prefers the thermocautery. Of the thirty two patients treated in this way twenty two were cured completely, six remained uninfluenced and four died. In two cases of carcinoma of the gall bladder pain was relieved following the cauterization of the mucous membrane.

405 Common Bile Duct Obstruction

E TANTINI (*Riv Chir* February 1937, p 73) who records an illustrative case, remarks that though the occurrence of jaundice due to obstruction of the common bile duct by new growths is a frequent occurrence the localization of a tuberculous process in the lymphatic glands at the hepatic hilum as a cause of jaundice is not so well known. Tantini's case was that of a woman aged 40 who in October, 1927, was suddenly seized with severe pain in the right hypochondrium followed by jaundice the next day. The symptoms subsided in a fortnight but similar attacks took place in March 1928 and December, 1929, when a tender swelling was found in the right upper

abdominal quadrant. A diagnosis of cholelithiasis was made. On laparotomy no calculi were seen, but only large lymphatic glands at the hilum of the liver, which were removed and proved to be tuberculous. The patient made a complete recovery.

Therapeutics

406

Paraffin for Local Heat

F KRUSEN (*Proc Mayo Clin*, February 3, 1937, p 73) describes a method of using a simple paraffin bath in districts where electricity is not available for the application of local heat. The use of hot towels, hot salt bags, or hot fomentations is often unsatisfactory, and a simple method of applying heat is described. About eight pounds of paraffin are placed in the inner pan of a 1½-gallon double boiler, the outer pan being filled with water and heated on a stove until the paraffin has reached melting-point. It is then allowed to cool to 75°C. A clean paint brush is then immersed in the melted paraffin and the part to be treated is painted with about a dozen coats of liquid paraffin. This hardens and retains its heat for about twenty minutes, when it can be lifted off in a single sheet and returned to the boiler for subsequent use. Massage may be applied immediately after removal of the paraffin. Applications of warm paraffin are particularly indicated in the treatment of arthritis, fibrositis, sprains, stiffness of joints and muscles, or in the treatment of fractures after bony union has been established.

407

Hay Fever

E URBACH (*Munch med Wschr* March 26, 1937, p 488) has devised a new method of treating hay fever. The patient's reaction to any particular pollen is tested by applying the different pollens to the mucous membrane of the nose. The rare hay conjunctivitis is tested in a similar way by applying a suspension of pollen to the conjunctiva. The treatment consists in the oral administration of the different pollens according to the specific sensitiveness of the patient. The author uses three kinds of pollen preparations. These are known under the names of 'polysemin,' 'polyfrumin,' and 'polyflorin.' Successful results are reported in 74 per cent of patients suffering from hay fever, and a considerable improvement was achieved in another 22 per cent of cases. The treatment appears to be not only palliative; patients who have been treated for two successive years lose the pre-disposition to hay fever.

Neurology

408

Chronic Subdural Haematoma

G HORRAX *et al* (*New Engl J Med* March 4, 1937, p 381) point out that chronic subdural haematomas occur more often than is generally realized. They have treated eighteen cases in two years. Most cases are misdiagnosed as cerebral arteriosclerosis, old encephalitis or post-traumatic headache, and may only be recognized after small bilateral burr openings have been made in the skull, visualization is then possible. This step should be taken in (1) patients whose histories strongly suggest the presence of a haematoma, (2) those with indefinite mental symptoms who relapse into deep drowsiness and coma and are often diagnosed as post-encephalitics, (3) those that are thought to have a brain tumour. In the third group a complete investigation is usually made but patients in the first and second groups are usually left to die or are sent to mental institutions when actually their condition is curable. For purposes of exploration two small trephine openings are made in the parieto-occipital region 4 cm lateral to the median line. If a white or pinkish white dura is seen there is usually no

clot present, but for certainty needles should be inserted into the ventricles for 4½ to 5 cm emptying them and filling them with air so that subsequent x rays will show compression or distortion of one or both ventricles if haematomas are present. If a clot is present the encapsulating membrane is incised the liquefied contents sucked out with a catheter attached to a syringe, and the cavity gently washed out with normal saline. In their eighteen cases the authors had a post operative mortality of nil and a case mortality of 5.5 per cent. Bilateral haematomas were found in 27.7 per cent. The authors strongly advocate their simple method of tapping rather than the more dangerous bone flap operation. Only when the haematomas are well organized as in four of their eighteen cases, is this flap operation necessary. The prognosis is excellent. Fifteen of their patients recovered entirely and went back to their usual occupations two required further institutional treatment and one died six months later from a cause unrelated to the subdural haematoma.

409 Blood Sedimentation Tests in Brain Disease

E. SINGER and E. EDEL (*Wien klin Wschr* March 26, 1937, p. 406) have examined the blood sedimentation rate in 115 cases of brain disease in ninety of which an exact diagnosis was made. A sedimentation rate of 3 to 10 mm an hour was taken as normal. Normal rates were found in three cases of hydrocephalus, in four of serous meningitis, in four of neurofibromata, in one of haemangioma, in three old cases of cerebral trauma and in some cases of cerebral arteriosclerosis. A moderate increase in the sedimentation rate was found in seven cases of tumour of the pituitary in six cases of meningioma and in one case of eysticercosis. A great increase in rate was found in two cases of pachymeningitis in one case of metastases from a hypernephroma, in one case of actinomycosis and in one of acute multiple sclerosis. The authors point out that the value of the sedimentation test to the neurological surgeon lies in the possibility of making a differential diagnosis between cerebral tumour and other conditions with a similar symptom-complex. The sedimentation rate is moderately increased in cerebral tumour. In hydrocephalus and serous meningitis it is normal. In acute encephalitis it is very greatly increased. In haemorrhagic pachymeningitis it is greatly increased. In differentiating between arteriosclerosis and tumour a great increase in rate points to the former when it is normal or moderately increased no diagnosis can be arrived at on account of the variability of the rate in arteriosclerosis. The test is of no value in differentiating between meningioma and glioma as in both the rate is increased. Metastatic cancers have a greatly increased rate and can thus be differentiated from benign tumours.

410 Labyrinthine Disturbances in Cerebellar Tumours

M. AUBRY and J. LEREBOLLET (*Ann Oto laryng* January 1937, p. 1) record their observations on twenty-one cases of cerebellar tumours and four cases of cerebellar abscesses. In one group (eight patients) the tumours were purely cerebellar, situated at some distance from the vestibular centres and there were no labyrinthine disturbances. In a second group tumours situated more anteriorly involved the vestibular centres, in this group of cases the tumours were either in contact with the vestibular centres (twelve) or had actually destroyed the centres from which the vestibular roots of the eighth nerve arises (five). The clinical signs on which the authors lay special stress are hearing tests which usually show a normal cochlear function, spontaneous nystagmus absent in the first group but nearly always present in the second group and spontaneous deviation of the index finger usually present when the vestibular centres are involved. Caloric tests may indicate a hyperexcitable vestibular function or *syndrome d'irritation* sometimes seen in the first group or the tests show that

the centre has ceased to function *syndrome de deficit*. An analysis was also made of the histological nature of the tumours (papilloma, haemangioma, tubercle, abscess, etc.) in relation to the vestibular reactions. The results of this investigation were mainly negative. The vestibular signs which often accompany tumours and abscesses of the cerebellum and of the fourth ventricle do not depend on the histological nature of the tumours. Further they do not depend on the increased intracranial pressure which may have resulted. The vestibular reactions depend solely on the situation of the tumour in relation to the vestibular centres in the floor of the fourth ventricle. The cerebellar tumours which lie well away from the fourth ventricle in the posterior part of the cerebellum are the more favourable ones.

411 Epileptic Symptoms of Brain Tumour

A. REUTER (*Möschers Krebsbekämpfung* March, 1937, p. 73) draws attention to the importance of excluding cerebral tumour in epilepsy. He quotes a case in which tumour could only be diagnosed after twelve years fits, and adds two records of the diagnosis of a tumour four weeks and seven years respectively after the first convulsion. In the former case suspicions were aroused first by the report of an unpleasant taste and smell preceding the attacks (this may occur, however in non organic epilepsy) and secondly by a unilateral distribution of the clonic phenomena. Other signs pointing to an organic cause (not necessarily tumour however) are (1) increase of proteins in the cerebro spinal fluid, (2) residual signs of organic nervous disease—for example hemiparesis—following an epileptic convulsion. Four weeks after the first attack in Reuter's case (a man aged 20) an encephalogram showed ventricular displacement to the right and an arteriogram showed vascular displacements near the fissure of Sylvius and the fronto parietal region. A large meningioma was successfully removed from the left temporal cortex.

412 Experimental Epilepsy

S. K. KAPRAN and A. F. SLINKO (*J. méd. Ukraine* 1936, 6, 1, p. 45) have investigated the appearance of epileptic attacks after the freezing of a portion of the cerebral cortex, and the effect of morphine, ether, and chloroform on the severity of these attacks. They have further investigated the influence of sectioning all the meningeal layers over the frozen portions of the cerebral cortex on the development of the attacks. Their experiments on animals proved that freezing of part of the cerebral cortex through the intact dura has different results according to the nature of the general anaesthetic. The attacks were always of a more severe nature when either morphine or ether were used. The attacks were milder when the dura overlying the frozen part was sectioned after the freezing. The authors therefore conclude that the epileptic attacks following freezing portions of the cortex are caused by an increase of the intracranial pressure and by an intoxication of the brain. Theoretical considerations lead them to deprecate the use of morphine and ether in intracranial operations. Chloroform appears to be less toxic in such cases.

413

Schizophrenia

M. STECK (*Rev. med. Suisse rom.* March 10 1937, p. 129) states that at Cery cures or very great improvements are now attained in some 43 per cent of cases of schizophrenia. Schizophrenia has no extensive cerebral lesions and in a first attack the prognosis is in general good. The most important feature in treatment is the adoption of re-educational methods with occupational therapy from such "corrective psychotherapy" all psycho-analytical treatment should be rigidly excluded. At Cery the proportion of occupied has risen since 1904 from 44 to 86 per cent for men and from 53 to 85 per cent for women as a consequence katatonia is very rarely

seen. The assessment of the true value of new treatments is difficult in a disease in which spontaneous remissions are frequent, but in Steck's judgement there is satisfactory evidence of a good effect in many cases from (1) intraspinal injections producing aseptic meningitis, (2) pyrotherapeutic measures, of which pyrifur treatment, being relatively mild is greatly preferable to malarial therapy, (3) repeated insulin shock-treatment. Insulin has been used at Cery for five years first to treat anorexia, then for psychomotor or katonomic states (on the lines of Klemperer's insulin treatment of delirium tremens), and recently for the production of protracted coma according to Sackel's recommendations. To Steck insulin shock-treatment seems less dangerous and more nearly physiological than treatment by prolonged narcotization by somnifen, dial, etc. Narcotization is not free from the danger of inducing pulmonary complications and much of its effect is due to the psychic contact attained with the patient after his sleep rather than to the sleep itself. In spite of the increasingly good prognosis it must not be forgotten that schizophrenia may be transmitted by those cured to future generations.

Obstetrics and Gynaecology

414 Bilateral Extra uterine Pregnancy

A JESSING (*Hospitalsdende* March 16, 1937, p 307) notes that recurrence of extra uterine pregnancy in the Fallopian tube of a woman previously operated on for extra-uterine pregnancy is such a common event that some gynaecologists have suggested supplementing an operation for extra uterine pregnancy by the removal of the non-pregnant Fallopian tube to prevent this accident. On the other hand, it is most rare to find more than one extra-uterine foetus at one and the same operation. The patient presenting this phenomenon was a married woman aged 42. In June, 1936, she was admitted to hospital suffering from what were taken to be the manifestations of a twisted ovarian tumour or an extra uterine pregnancy with intra abdominal haemorrhage. On laparotomy a right-sided tubal pregnancy with a haematocoele was found, the age of the foetus being between 3 and 4 months. The left uterine appendages formed a tumour which on dissection proved to consist of a 3 to 4 months old foetus and of placental tissue which had become extensively calcified. There was no sign of a recent haemorrhage in this tumour which evidently was the outcome of an interrupted extra uterine pregnancy that had been suspected and treated conservatively two years earlier. Parts of the foetal skeletons could still be identified, although the foetus on the left side was mummified. It is remarkable that with only conservative treatment the patient should have recovered from her first extra uterine pregnancy without the development of an infected haematocoele or of any troublesome adhesions. In 1876 Parry collected 529 cases of extra uterine pregnancy 366 of which terminated fatally. Since the introduction of operative treatment for this condition by Lawson Tait in 1883 the mortality has been reduced to 4 per cent or less.

415 Intra-ovular Injections of Formalin

C A MASSON (*Gynec et Obstet* February 1937 p 115) recalls that Professor A Boero of Buenos Aires has recommended and practised in certain cases the intra amniotic injection of formalin. Interruption of pregnancy was desired on medical grounds but retention for a time of the dead foetus was sought in order to eliminate pregnancy intoxication without immediately exposing the mother to the ordeal and risks of parturition. Masson in a series of animal experiments, has proved that formalin injections in sufficient doses lead to immediate death of the foetuses but to their subsequent retention for several days. His clinical cases include three four to five months pregnancies in consumptives, and one of hyperemesis at

the end of the third month. In the first three the ovum was expelled (*en bloc* in two) with little or no haemorrhage after fifty-four hours, fifty one days, and eight days respectively. In two instances the Friedman pregnancy test was negative three days after the injection. The patient with hyperemesis ceased to vomit after four days, although the small dose of formalin injected had not caused foetal death: a living foetus was born forty five days later. The injections were given through the abdominal wall and were preceded by aspiration of some of the liquor amni.

Pathology

416 Effect of External Temperature on Sedimentation

D B ROSENTHAL (*Med J Austral* January 30, 1937, p 172) points out that the profound influence of the external temperature on the blood sedimentation rate has been largely ignored. He floated tubes in conical flasks maintained at temperatures of 40°, 60°, 80° and 100° F. estimated the sedimentation rate according to Culter's technique, and plotted graphs of the results. He found that the higher the temperature the more rapid the fall within the temperature range indicated. With "slow" blood the difference in the sedimentation index corresponded roughly to the difference in temperature. With "fast" blood the end point a measure of cell volume gave no indication of the effect of temperature on the rate. A mathematical correction for room temperature variation is not yet practicable. Rosenthal emphasizes the need for greater accuracy in recording sedimentation rates, and suggests (1) that a standard temperature of 68° F be used, or, if this is impracticable, that the room temperature be included in the report in order to make provision for variations, (2) that the cell volume be recorded. This can be done by centrifuging the tube or immersing it in a water bath at 100° F and noting the height of the sediment as a percentage of the total height of the blood column. In "fast" blood the sedimentation index is a measure of the cell volume not of the sedimentation velocity and the disparity between the sedimentation index and the cell volume indicates approximately to what extent the former is a measure of the sedimentation velocity. In the absence of any thermometric standards comparison of tests performed at different times on blood from the same source provides no reliable information.

417 Adrenal Insufficiency

S THADDEA and D ALBERS (*Klin Wschr* March 27 1937, p 448) have found thickening of the blood in experimental and clinical adrenal insufficiency. The haemoglobin and the number of erythrocytes were increased the viscosity of the blood was equally increased the sedimentation rate of the red blood corpuscles was slowed while the albumin content of the blood showed no appreciable variation. The administration of the missing suprarenal substances brought the blood more or less to normal. The authors consider that the blood thickening is caused by capillary changes similar to those observed in serous inflammations although there is no question of a true inflammatory reaction.

418 Red Cell Diameters

H MAIER and T SCHUH (*Med Welt* April 3 1937 p 456) have investigated the diameter of the red blood corpuscles in 310 cases of affections of the central nervous system. They found an average diameter of 7.5 microns varying between 6.8 and 8.4 microns. The relation between the diameters of the oval was 2.0. These average measurements can be considered as normal but the maximal measurements were above the normal maximal measurements. The authors are unable to give a satisfactory explanation for these changes.

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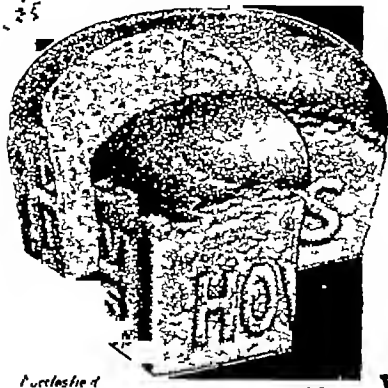
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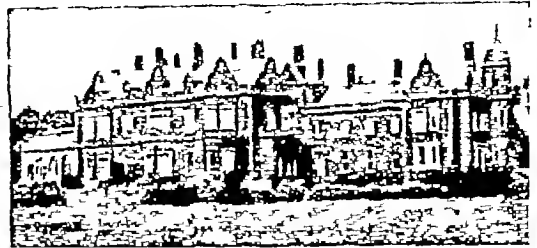
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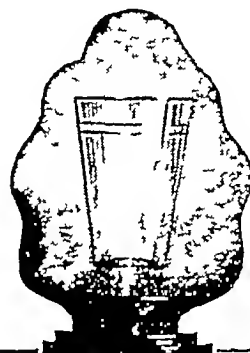
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UNIVERSITY OF LONDON DIPLOMA IN MEDICAL RADIOLOGY

A COURSE OF STUDY IN PHYSICS AND
MEDICAL RADIOLOGY qualifying for the
Diploma in Medical Radiology of the University
of London and the Royal Colleges of Physicians
and Surgeons will begin on Tuesday, October 5th
1937 at the Royal Cancer Hospital (Free) Fulham
Road London S.W.3. Full particulars can be
obtained on application at the above address to
the Secretary

CLEMENT COBBOLD Secretary

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BRITISH POST-GRADUATE MEDICAL SCHOOL

REFRESHER COURSE FOR GENERAL PRACTITIONERS

May-June, 1937

1937	10.30 to 1.0	Conducted by—	2.0 to 4.30	Conducted by—
Monday 31st May	Principles of the Examination of Patients.	Prof THOMAS BEATTIE, M.D. F.R.C.P.	Haemorrhoids, Fistula and Fissure in Ano.	Mr C. I. NAUNTON, MORGAN, F.R.C.S.
Tuesday 1st June	Rheumatoid Arthritis	The Staff of the Red Cross Clinic for Rheumatism	Dyspepsia	Dr T. C. HUNT, D.M., F.R.C.P.
Wednesday 2nd June	Surgery of the Colon	Prof G. GREY TURNER, D.Ch. M.S. F.R.C.S. F.A.C.S.	Common Respiratory Diseases.	Dr JAMES MAXWELL, M.D., F.R.C.P.
Thursday 3rd June	New Therapeutic Agents.	Dr E. R. CULLINAN, M.D., F.R.C.P.	Common Types of Anaemia Their Diagnosis and Treatment.	Dr JANET AL. VAUGHAN, D.M., M.R.C.P.
Friday 4th June	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital, Gray's Inn Road W.C.1	Diagnosis of Nervous Diseases.	The Staff of the National Hospital, Queen Square W.C.1
Saturday 5th June	Eye Conditions in General Practice	The Staff of the Royal London Ophthalmic Hospital City Road E.C.1	—	—
Monday 7th June	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1
Tuesday 8th June	The Acute Abdomen	Mr R. J. McNEILL LOVE, M.S., F.R.C.S.	Common Gynaecological Conditions	Dr J. CHASSAR MOHR, M.D., F.R.C.S. F.C.O.G.
Wednesday 9th June	Diseases of the Skin	Dr R. T. BRAIN, M.D. F.R.C.P.	Infectious Fevers.	Dr W. GUNN, M.A. M.R.C.P., D.P.H. North Western Hospital, Lanes Road N.W.3
Thursday 10th June	Demonstration of Local Anaesthesia	The Staff of the School	Injuries of the Ankle and Wrist.	Mr ST. J. D. BUXTON, F.R.C.S.
Friday 11th June	Heart Attacks.	Dr D. E. BEGFORD, M.D., F.R.C.P.	Thyroid Dysfunction.	Dr H. GARDINER HILL, M.B.E., M.D. F.R.C.P.
Saturday 12th June	Psychiatry in General Practice.	Dr J. R. REES, M.D. M.R.C.P.	—	—

Early application is recommended as only a limited number can be admitted

Fee 5 guineas.

Similar courses lasting a fortnight will commence on the following dates

June 28th

September 20th

October 18th

November 15th

Detailed programmes and any further information can be obtained from the Dean British Postgraduate Medical School Ducane Road W.12.

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1937

The POST-GRADUATE COURSES to be held this year comprise

(1) A COURSE IN OBSTETRICS AND GYNAECOLOGY from July 12th to July 31st. Fee £8s.

(2) A GENERAL PRACTITIONERS COURSE from August 16th to September 11th

Fee £10 10s for whole Course £6 6s for two weeks.

(3) A GENERAL SURGICAL COURSE from August 16th to September 11th

Fee £10 10s for whole Course £6 6s for two weeks

(4) A COURSE ON INTERNAL MEDICINE from October 18th to December 10th. Fees £13 15s.

In addition to the above Courses in the following Subjects will be held at various periods of the year

INTERPRETATION AND SIGNIFICANCE OF MODERN DIAGNOSTIC

METHODS Fee £3 3s

DISEASES OF THE BLOOD Fee £3 3s.

ENDOCRINOLOGY Fee £3 3s

DISEASES OF THE NERVOUS SYSTEM Fee £3 3s

UROLOGY Fee £10 10s

X-RAY PHYSICS AND ELECTRO-TECHNICS Fee £3 3s.

ULTRA VIOLET RADIATIONS AND THEIR USES Fee £3 3s.

OPHTHALMOSCOPY Fee £5 5s.

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES Fee

£3 3s.

NEUROLOGICAL SURGERY Fee £2 2s.

DISEASES OF NOSE, EAR AND LARYNX (Royal Infirmary) Fee

£10 10s

DISEASES OF EAR, NOSE, AND THROAT (Ear and Throat Dispensary).

Fee £4 4s

OPERATIVE SURGERY OF THE EAR Fee £2 2s

VENEREAL DISEASES Fee £10 10s

SURGICAL PATHOLOGY Fee £4 4s

ORTHOPAEDIC SURGERY Fee £4 4s

CLINICAL MEDICINE, INCLUDING CHILD LIFE AND HEALTH Fee

£5 5s

CLINICAL SURGERY Fee £4 4s

MODERN METHODS IN ANAESTHESIA Fee £3 3s

The Courses will be held only if a sufficient number of entries are received

Further particulars may be had on application to the Hon Secretary Post-Graduate Courses in Medicine University New Buildings Edinburgh

THE TAVISTOCK CLINIC

(Institute of Medical Psychology)

MALET PLACE, LONDON, W.C.1

THE YEAR'S COURSE IN PSYCHOTHERAPEUTIC THEORY AND METHOD

begins on October 4th, 1937

The number to be admitted to this Course is limited to twelve and all applications should be received at latest by the beginning of September

For full particulars of the Course apply to the EDUCATIONAL SECRETARY, Malet Place W.C.1

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Continuous Clinical Instruction daily from 10a.m. to 4p.m. —Post Graduates may enrol at any time for any period from 1 week to 3 months —Special facilities for 'Study Leave' and for those wishing to take a course under the Grant aided Scheme for Post-Graduate Study by Insurance Practitioners —Anaesthetic Courses —Clinical Assistantships —Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith W 6

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST-GRADUATE TEACHING in Glasgow during the Summer of 1937

A A General Medical and Surgical Course from August 16th to September 10th
Fee £10 10s or £6 6s for first or second fortnight

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association, The University Glasgow

POST-GRADUATE COURSES

Open only to Members Annual subscription £1 1s.

THORACIC SURGERY (Brompton Hospital May 24th to 29th all day) UROLOGY (St Peter's Hospital, May 31st to June 12th all day) CHILDREN'S DISEASES Week-end (Princess Elizabeth of York Hospital May 29th and 30th all day Saturday and Sunday) MEDICINE Week-end (Prince of Wales Hospital all day Saturday and Sunday June 5th and 6th) M.R.C.P. COURSES CHEST (Brompton Hospital twice weekly 5.0 p.m., June 7th to July 3rd) CHEST and HEART (Victoria Park Hospital Mondays and Fridays 6.0 p.m. June 9th to July 2nd) CLINICAL and PATHOLOGICAL (National Temperance Hospital Tuesdays and Thursdays 8.0 p.m. June 1st to 17th)

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Write at once for our Guide to Medical Examinations stating in which Examination you are interested and a copy will be sent post free by return
Medical Correspondence College, 19, Welbeck Street, W1

ROYAL COLLEGE OF PHYSICIANS OF LONDON

The next ordinary PROFESSIONAL EXAMINATION for the MEMBERSHIP will commence on Tuesday July 13th 1937

Candidates are required to give twenty-one days notice in writing to the Registrar of the College to whom all certificates and testimonials required by the By-laws must be sent at the same time

Candidates who propose to submit published work under the regulations now in force are required to give twenty-eight days notice and should apply in writing to the Registrar without delay for detailed instructions as to the procedure they should follow

RAYMOND CRAWFORD M.D.
Fall Mall East, S.W.1 Registrar

ROYAL COLLEGE OF PHYSICIANS OF LONDON

Dr. EDWIN BRANWELL will deliver the CROONIAN LECTURES on MAY 25th 27th and June 1st at 6 o'clock at the COLLEGE, FALL MALL EAST S.W.1

Subject *Clinical Reflections upon Muscles Movements and the Motor Path*

Any member of the Medical Profession admitted on presentation of card.

By Order of the President,

H. M. BARLOW Secretary

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September and December. For Regulations apply to the Secretaries College of Preceptors, Bloomsbury Square, London, W.C.1

UNIVERSITY OF LONDON

A Course of three Lectures on "THE MENINGES AND THE CEREBRO-SPINAL FLUID" will be given by Prof. LEWIS H. WHEED (Director of the School of Medicine and Professor of Anatomy in the Johns Hopkins University, Baltimore) at UNIVERSITY COLLEGE, LONDON (Gower Street, W.C.1) on MAY 24th, 26th and 28th at 5.30 p.m. At the first lecture the Chair will be taken by Prof. H. H. WOODLAND, D.Sc., M.D. B.S. (Professor of Anatomy in the University) Lantern Illustrations
Admission free without ticket.

S. J. WORSLEY Academic Registrar

UNIVERSITY OF LONDON

The Senate invite applications for the UNIVERSITY READERSHIP in OBSTETRICS AND GYNAECOLOGY tenable at the British Post Graduate Medical School Salary £800 a year rising by annual increments of £50 to £1000 Applications (12 copies) must be received not later than first post on June 4th 1937 by the Academic Registrar University of London, W.C.1 from whom further particulars should be obtained

FRCS (Edin)

POSTAL and ORAL COURSES

Full details of above and Private Tuition—H. C. ORRIN F.R.C.S. Surgeon's Hall Edinburgh

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THE EXAMINING BOARD IN ENGLAND

BY THE
ROYAL COLLEGE OF PHYSICIANS
OF LONDON
AND THE
ROYAL COLLEGE OF SURGEONS
OF ENGLAND

Notice is hereby given that the following Examinations will commence on the dates stated below
Diploma in Tropical Medicine and Hygiene
Diploma in Ophthalmic Medicine and Surgery
Friday July 2nd
Diploma in Medical Radiology
Friday July 9th.

Candidates who have fulfilled the necessary conditions and who desire to present themselves for Examination must give notice in writing to the Secretary Examination Hall 8/11 Queen Square London W.C.1 at least twenty-one days before the date of the Examination transmitting at the same time such certificates as may be required by the Regulations of the Board

HORACE H. REYNOLDS Secretary

A CLINICAL DEMONSTRATION, under the direction of Mr A. O. Parker of Cardiff will be held at the Robert Jones and Agnes Hunt Orthopaedic Hospital Oswestry on Friday June 11th, commencing at 3.0 p.m.

The programme will be mainly practical and will as far as possible demonstrate the methods by which the Hospital treats common orthopaedic conditions and in particular the use of plaster splints etc. etc.
All medical practitioners from the area served by the Hospital are cordially invited

JOHN C. MENZIES
Secretary Superintendent.

BRITISH POST-GRADUATE MEDICAL SCHOOL (University of London)

Department of Pathology

Applications are invited for the post of ASSISTANT IN BACTERIOLOGY in the Department of Pathology at the above named School to commence duty on September 1st 1937 Salary £300 per annum rising by annual increments of £50 to £500

Further particulars can be obtained from the Dean of the School Duane Road Shepherd's Bush W.12, to whom applications accompanied by two testimonials should be sent to arrive not later than first post on Tuesday June 15th 1937

THE UNIVERSITY OF LIVERPOOL

RESEARCH ASSISTANT in the DEPARTMENT OF MEDICINE.

The Council invite applications for this post. The appointment will be for a period of three years as from October 1 1937 at a salary of £600 rising to £700 per annum. The person appointed will be required to comply with the conditions of the Federated Superannuation System for Universities. Further particulars may be obtained on application to the undersigned by whom applications must be received not later than June 9th 1937 the names of three referees should be given.

EDWARD CAREY

May 1937

Registrar

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL REGIONAL RADIUM CENTRE.

LOCUM TENENS RADIUM OFFICER required for period August 30th-October 9th Experience in radium treatment essential Remuneration 12 guineas per week Applications to be sent to House Governor and Secretary as soon as possible

COUNTY OF DORSET

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER.

The Dorset County Council invite applications from registered medical practitioners with at least three years experience since qualification not exceeding 40 years of age for the appointment of Male Assistant County Medical Officer.

Salary £500 per annum rising (subject to satisfactory service) to £700 by annual increments of £50 together with travelling and out-of-pocket expenses according to the County Scale.

Experience in the treatment of venereal diseases as required by the Local Government (Qualifications of Medical Officers) Regulations 1930 experience in refractions and the possession of the Diploma in Public Health will be considered important additional qualifications.

The candidate appointed will be required to reside at Dorchester to devote his whole time to the service of the County to act under the direction of the County Medical Officer and to perform such duties in connexion with the County Council's Health Services as may be allotted to him.

The post is designated under the Local Government and Other Officers Superannuation Act 1922, and the successful candidate will be required to pass a medical examination.

Candidates must apply in their own handwriting on the prescribed form to be obtained on receipt of a stamped addressed foolscap envelope from the undersigned by whom applications accompanied by copies of not more than three recent testimonials must be received not later than Saturday June 26th 1937.

Canvassing in any form will be a disqualification. County Offices, Dorchester, May 13th, 1937.

C. P. BRUTTON
Clerk of the County Council

LANCASHIRE COUNTY COUNCIL

SCHOOL MEDICAL AND CHILD WELFARE DEPARTMENT

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER

The Lancashire County Council invite applications from registered Medical Practitioners for the post of Assistant County Medical Officer.

Applicants must not be over 40 years of age and must possess the Diploma in Public Health. The duties of the post include the Medical Inspection of school children, work under the Maternity and Child Welfare Acts, general Public Health work, and such other duties as may from time to time be imposed by the County Council.

The person appointed will be required to devote whole time to the service of the County Council. The salary will be £800 a year rising subject to satisfactory service by annual increments of £50 to a maximum of £1000 a year together with travelling expenses.

The person appointed will be required to pass a medical examination and to contribute to the Council's Superannuation Fund.

Applications must be made upon a form which can be obtained together with further particulars from the County Medical Officer of Health, School Medical and Child Welfare Department, County Offices, Preston, to whom the completed forms should be returned not later than June 7th 1937. All communications must be endorsed Assistant County Medical Officer.

Any form of canvassing is strictly forbidden and will disqualify. County Offices, Preston, May 1937.

GEORGE ETHERTON
Clerk of the County Council

GLAMORGAN COUNTY COUNCIL

PUBLIC ASSISTANCE COMMITTEE.

LLWYNPIA HOSPITAL (RHONDDA)

APPOINTMENT OF RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners under 45 years of age for the appointment of Resident Assistant Medical Officer at Llwynpia Hospital (14 beds).

Applicants must have held resident hospital appointment and experience in treatment of diseases of children is desirable. Previous experience in Orthopaedics will be of advantage.

Salary £350 per annum rising by £50 annually to £450 per annum with residential emoluments valued for superannuation purposes at £50 per annum.

The appointment which will be terminable by two months notice on either side is a designated post under the Local Government and Other Officers Superannuation Act 1922. The successful candidate will be required to pass an examination as to physical fitness.

Applications stating age and qualifications and accompanied by copies of not more than three recent testimonials must be received by the County Medical Officer Glamorgan County Hall, Cardiff not later than the first post on Thursday May 13th 1937.

HENRY ROWLAND
Glamorgan County Hall, Cardiff
Clerk of the County Council
May 6th 1937

COUNTY COUNCIL OF MIDDLESEX

ASSISTANT DENTAL OFFICER

Applications are invited for the above appointment on the pensionable staff. Applicants must be fully qualified and registered Dental Surgeons.

The duties of the post include the dental inspection and treatment of school children and of women and young children under the Maternity and Child Welfare Act.

The officer appointed will be required to devote whole time to the duties of the post and will not be allowed to engage in private practice and will work under the supervision of the County Medical Officer and the Senior Dental Officer.

Salary £500 per annum rising by annual increments of £25 to £700 together with out-of-pocket travelling expenses while on duty.

The appointment will be held during the pleasure of the Council and terminable by one month's notice on either side.

Applications, stating age and qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 31st.

Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed Assistant Dental Officer.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, "Z."
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
May 5th 1937

COUNTY COUNCIL OF MIDDLESEX

WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH

CASUALTY MEDICAL OFFICER (non-resident)

Applications are invited from registered Medical Practitioners for the above appointment. Candidates must have held the posts of both house physician and house surgeon at a general hospital and have had considerable all round experience.

Salary £350 per annum with a cash allowance in lieu of board and residence at the rate of £100 per annum. No other emoluments.

The officer appointed will be required to deal with casualties and admissions to the hospital and to carry out such other duties as may be allotted to him. The hours of duty are 10 a.m. to 6 p.m. daily with Saturday afternoons and Sundays free.

The appointment which will be subject to medical examination is for a period of six months in the first instance may be extended for an additional six months and is terminable by one month's notice on either side.

The officer appointed will work under the control of the Medical Superintendent will devote his whole time to official duties and will have no rights under the Council's superannuation scheme.

Applications stating age and qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than May 29th. Application forms are not provided. Envelopes must be endorsed Casualty Medical Officer West Middlesex County Hospital. Relationship to any member or officer of the Council must be disclosed in the application.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, "Z."
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
May 3rd 1937

CITY OF BATH

MEDICAL OFFICER with adequate clinical and other experience wanted for the COUNCIL'S POOR LAW INFIRMARY and INSTITUTION. The practitioner appointed must be on the staff of the Medical Officer of Health and will be required to undertake certain other duties associated with the Health Department. The successful candidate must pass a medical examination for superannuation purposes. He must live near the Institution.

Salary £500 (more according to experience) rising by annual increments of £25 to £700.

Further information conditions of service and form of application may be obtained from the undersigned to whom applications must be delivered not later than June 3rd 1937.

Sawclife JAMES F. BLACKETT
Bath Medical Officer of Health

CORPORATION OF BLACKPOOL

PUBLIC HEALTH AND SCHOOL MEDICAL DEPARTMENTS

Applications are invited for the post of an ADDITIONAL MEDICAL ASSISTANT (male) in the above Department. Salary £600 rising by annual increments of £25 to £700 per annum subject to satisfactory service by the Local Government and Other Officers Superannuation Act 1922.

The duties of the post will be to assist the Medical Officer of Health in his duties as Medical Officer of Health, School Street, Blackpool. To a Hall.

J. H. KENT
May 12th 1937

COUNTY COUNCIL OF MIDDLESEX

ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment on the pensionable staff of an ASSISTANT MEDICAL OFFICER in the Public Health and School Medical Department. Salary £600 per annum rising after two years service by annual increments of £30 to £750 together with out-of-pocket travelling expenses.

Applicants must be duly qualified registered Medical Practitioners and should have had special experience of ante-natal work. The possession of a degree or diploma in Public Health will be an additional qualification.

The duties of the post are the medical inspection of school children, the supervision of treatment of minor ailments, the carrying out of work under the maternity and child welfare scheme, and such other duties as may be required by the Council.

The officer appointed will devote whole time to the duties of the post act under the supervision and control of the County Medical Officer of Health and reside in such district as may be required.

The appointment will be held during the pleasure of the Council and terminable by one month's notice on either side.

Applications stating age and qualifications and previous experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than May 13th. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed Assistant Medical Officer.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE "Z."
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
May 4th 1937

COUNTY BOROUGH OF BLACKBURN

Applications are invited from registered medical practitioners for the post of ASSISTANT SCHOOL MEDICAL OFFICER AND ASSISTANT MEDICAL OFFICER OF HEALTH (Male) to act under the supervision of the Medical Officer of Health who is also the School Medical Officer.

The person appointed must devote the whole of his time to the service of the Corporation.

The duties of the office will consist largely but not exclusively of work in the School Department and a knowledge of such duties is essential. Preference will be given to candidates with a Diploma in Public Health and having experience in infectious diseases.

The salary will be at the rate of £600 per annum increasing by annual increments of £25 to a maximum of £700 per annum.

Forms of application and further particulars of the duties and conditions of the appointment may be obtained from the Medical Officer of Health, Victoria Street, Blackburn.

Completed forms accompanied by copies of three recent testimonials must reach me by FRIDAY June 18th and should be endorsed on the envelope Assistant School Medical Officer.

Canvassing will disqualify.
Town Hall, CHAS S. ROBINSON
Blackburn Town Clerk

KENT COUNTY COUNCIL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Resident Assistant Medical Officer at the County Hospital Pembury (10 beds).

The salary for the appointment is £250 a year with residential emoluments which are valued at £10 a year. A superannuation scheme is in operation and the successful candidate will be required to pass a medical examination.

The appointment is a whole-time one and will be for a period of one year only and not renewable.

Forms of application can be obtained from the Public Assistance Office, 1, Bridge Road, Maidstone, to whom applications must be sent by 10 a.m. on Monday June 7th 1937.

SEYMOUR HOUSE W. L. PLATT
Maidstone Clerk of the County Council
May 14th 1937

CITY OF SHEFFIELD-CITY GENERAL HOSPITAL

JUNIOR ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified medical men for the appointment of Junior Assistant Medical Officer at the above hospital.

The Medical Officer appointed will be required to take duty in the Medical, Surgical, and Maternity Departments as directed by the Medical Superintendent.

The appointment will be for one year only and the salary offered is £100 per annum with the usual retainer of 10 shillings per week.

Previous medical experience is desirable. Applications stating age and qualifications and experience and accompanied by not more than three recent testimonials must be sent to the Medical Superintendent, City General Hospital, Sheffield 4.

HIS MAJESTY'S COLONIAL SERVICE

COLONIAL MEDICAL SERVICE

The Secretary of State for the Colonies proposes to select within the next few months not less than 10 Medical Officers to fill vacancies the majority of which will occur in Tropical Africa or in Malaya

QUALIFICATIONS Candidates must be British subjects of European parentage under 35 years of age and must possess a medical qualification registrable in the United Kingdom. Preference will be given to candidates who have held Hospital or Public Health appointments or who have special knowledge of anaesthetics, radiology, surgery, medicine, ophthalmology, gynaecology and midwifery, diseases of the ear, nose and throat, venereal diseases, etc.

SALARY Initial salaries vary from £600 to £700 and rise by increments to a maximum of between £1000 and £1200

PRIVATE PRACTICE Private practice is not allowed as of right but in the case of some appointments it is permitted on certain conditions

QUARTERS In Tropical Africa free quarters or an allowance in lieu, are provided. In Malaya quarters are provided at an annual rental not exceeding 6% of the officer's salary

PASSAGES Free first-class passages are provided on first appointment and when proceeding on and returning from leave. Assistance is also given towards family passages

TERMS OF APPOINTMENT The appointments are pensionable, subject to a probationary period which varies from two to three years

COURSES OF INSTRUCTION IN TROPICAL MEDICINE AND HYGIENE. Selected candidates will normally be required to attend a course of instruction leading to the Diploma in Tropical Medicine and Hygiene before proceeding overseas

DUTIES Although Medical Officers are appointed in the first instance for general service, there are opportunities for work in special branches of medicine and surgery in public health and in medical research

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service), 2, Richmond Terrace, Whitehall, London, SW 1

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post-Graduate Study

Copies of the regulations for entry and conditions of Service, including rates of pay and allowances, may be obtained from the Medical Director-General of the Navy, Admiralty, SW 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than May 31st, 1937

THE ROYAL BOROUGH OF KENSINGTON

APPOINTMENT OF DEPUTY MEDICAL OFFICER OF HEALTH

Applications are invited for the post of Deputy Medical Officer of Health. Applicants must possess the qualifications prescribed by the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations 1930 for a Tuberculosis Officer and must hold the Diploma in Public Health.

The appointment will be a whole-time one and the successful candidate will be required to act as Clinical Tuberculosis Officer for the Borough and to carry out other duties in the Public Health Department under the direction of the Medical Officer of Health.

Salary £900 per annum rising by biennial increments of £50 to £1,100 per annum plus an annual travelling allowance of £50.

The age limit for candidates is 45 years.

Canvassing will disqualify.

Terms and conditions of appointment may be obtained from the undersigned.

Applications with copies of three recent testimonials, must be submitted not later than 5 p.m. on Wednesday May 26th 1937 to

Town Hall F WEBSTER
Kensington W 8 Town Clerk
May 1937

CORPORATION OF DUNDEE—PUBLIC HEALTH DEPARTMENT

DEPUTY MEDICAL OFFICER OF HEALTH (Pre-School and School Medical Services)

Applications are invited from medical practitioners (males) for the post of DEPUTY MEDICAL OFFICER OF HEALTH (PRE-SCHOOL AND SCHOOL MEDICAL SERVICES). Age must not exceed 45 years on the date of appointment. Salary will be at the rate of £750 per annum rising subject to satisfactory service, by annual increments of £20 to £850 per annum.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination.

Further particulars may be obtained from the Medical Officer of Health 9 West Ball Street Dundee.

Canvassing, directly or indirectly, will be a disqualification.

Applications stating age, experience etc with copies of three recent testimonials must reach the undersigned on or before WEDNESDAY June 2nd 1937.

City Chambers DAVID LATTO
Dundee Town Clerk
May 10th 1937

BOROUGH OF CAMBRIDGE

Applications are invited from qualified medical practitioners not over 40 years of age for the post of whole-time ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER. Salary £600 per annum increasing subject to satisfactory service, by annual increments of £50 to a maximum of £800 per annum. Previous experience in a similar capacity will be taken into account in fixing the commencing salary. Duties to commence October 1st 1937.

Applicants must have had at least three years practice since qualification and must have had experience in the correction of errors of refraction. A Diploma in Public Health is an essential qualification.

The successful applicant will be required to undergo a medical examination and to contribute to the Corporation's Superannuation Scheme.

Application forms and lists of duties may be obtained (on receipt of a stamped addressed foolscap envelope) from the Education Officer The Guildhall, Cambridge, to whom applications with copies of not more than three recent testimonials, must be sent not later than MONDAY JUNE 7th C. H. KEMP
Town Clerk.

COUNTY BOROUGH OF STOCKPORT

STEPPING HILL HOSPITAL (453 Beds)

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners for the post of Resident Assistant Medical Officer (male) at the above Hospital.

Salary £200 per annum, with board residence and laundry. The person appointed will be required to devote the whole of his time to the duties of the office.

The appointment is for six months, but will at any time be determinable by one month's notice on either side.

Experience in Anaesthetics will be a special recommendation.

Applications, stating age, qualifications and references together with copies of three testimonials are to be sent to the undersigned and forwarded to the Medical Officer.

Public Assistance Officer H BARLOW
Shaw Heath Stockport, Clerk to the Public Assistance Committee.
May 14th 1937

COUNTY OF SOUTHAMPTON AND COUNTY BOROUGH OF BOURNEMOUTH AND SOUTHAMPTON

PRINCIPAL MEDICAL ADVISER TO THE JOINT COMMITTEE KNOWLE MENTAL HOSPITAL.

MEDICAL SUPERINTENDENT

The Hampshire Joint Mental Health Institutions Committee invite applications for the appointment of Principal Medical Adviser to the Joint Committee and Medical Superintendent at Knowle Mental Hospital near Fareham Hants. For the combined appointment there will be an annual salary of £1,400 rising by £50 a year to £1,800 and subject to review after certain intervals of time and in addition a house and other emoluments valued for purposes of superannuation at £250 a year and the salary will be subject to a deduction of that amount.

Applications for appointment must be made upon a form which with the particulars and conditions of appointment, may be obtained from the undersigned and must be delivered at the Castle of Winchester on or before the 15th day of June 1937.

Canvassing either directly or indirectly is prohibited and will disqualify.

The Castle F V BARBER
Winchester Clerk of the Committee
May 14th 1937

KENT COUNTY COUNCIL

PUBLIC ASSISTANCE DEPARTMENT

COUNTY HOSPITAL FARNBOROUGH

The Kent County Council invites applications for the following additional appointments at the County Hospital Farnborough.

DEPUTY MEDICAL SUPERINTENDENT (Resident) Salary £600 a year rising by annual increments of £50 to £800 a year.

The duties will be mainly surgical and candidates must possess the diploma F.R.C.S. (Eng).

Married quarters are not available.

ASSISTANT MEDICAL OFFICER (Resident) Salary £350 a year rising by £25 a year to £450.

Candidates must have had post-graduate hospital experience in obstetrics and surgery.

The Local Government and Other Officers Superannuation Act 1922 will be applicable to the appointments and the successful candidates will be required to pass a medical examination.

Application to be made on forms obtainable from the PUBLIC ASSISTANCE OFFICER, TON BRIDGE ROAD MAIDSTONE to be returned to him by not later than May 31st 1937.

Sessions House W L PLATTS
Maidstone Clerk of the County Council
May 14th 1937

COUNTY BOROUGH OF WOLVERHAMPTON

NEW CROSS HOSPITAL (350 Beds)

ASSISTANT MEDICAL OFFICER (RESIDENT)

Applications are invited from single gentlemen duly qualified for appointment as Assistant Medical Officer at the above Hospital which contains Medical Surgical, Maternity, Children's and Isolation Departments and is moderately equipped. Experience in anaesthetics, a knowledge of Clinical Pathology and previous Hospital experience will be deemed additional assets.

Salary will be at the rate of £200 per annum with apartments board attendance &c. The appointment will be limited to a term not exceeding one year. Further information as to the duties &c. may be obtained from the Medical Officer of the Hospital.

Applications stating age, qualifications and nationality together with copies of recent testimonials should be addressed to A. O. ALDRIDGE Public Assistance Officer, Stafford Street, Wolverhampton.

BOROUGH OF ILFORD

RESIDENT MEDICAL OFFICER AT MATERNITY HOME.

Applications are invited for the above whole-time appointment from registered women medical practitioners at a commencing salary of £400 per annum rising by annual increments of £25 to £500 per annum with board, lodging and laundry.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to formal agreement and the selected applicant will be required to pass a medical examination to the satisfaction of the Medical Officer of Health. The appointment will also be subject to three months' notice on either side.

Applications on the prescribed form obtainable from my office must be received by me at the Town Hall Ilford not later than Wednesday May 26th 1937.

Canvassing directly or indirectly will be a disqualification.

Town Hall CHARLES N. ROBERTS
Ilford Town Clerk
May 10th 1937

MINISTRY OF HEALTH

The Minister of Health invites applications from registered medical practitioners (men and women) for vacant appointments as MEDICAL OFFICERS on the STAFF OF THE MINISTRY.

The salary commences at £847 per annum and rises by annual increments of £30 to a maximum of £1,161 per annum.

The appointments will be subject to the usual Civil Service conditions as to pension holidays, etc.

Candidates must be registered medical practitioners of not less than five years standing and have experience in Public Health or Hospital services.

Generally preference will be given to candidates possessing a University degree in Medicine and a Diploma of Public Health but for one of the appointments special surgical experience of the treatment of Cancer by modern methods would be taken into consideration.

Medical Officers are required to devote their whole time to the Public Service and must be prepared to work in any part of England or Wales if required to do so.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application with further particulars of the appointments may be obtained from —

THE DIRECTOR OF ESTABLISHMENTS
Ministry of Health, Whitehall SW 1

No application can be considered unless received on the prescribed form not later than June 8th 1937.

SURREY COUNTY COUNCIL

PUBLIC HEALTH DEPARTMENT

KINSTON AND DISTRICT HOSPITAL (600 Beds)

APPOINTMENT OF RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the above appointment. The Hospital is approved by the General Nursing Council and the Ministry of Health as a complete training school for nurses, and by the Central Midwives Board for the training of midwives. The work undertaken includes surgery, medicine and midwifery.

The Medical Officer appointed will work mainly in acute Medical Wards, and candidates must have held a previous appointment as House Physician.

The appointment is for a period of six months renewable for a further period of six months and the gross salary is at the rate of £375 per annum less a deduction of £1.5 in respect of board lodging and laundry.

Applications stating age, qualifications and experience and enclosing copies of not more than three recent testimonials should be endorsed Resident Assistant Medical Officer and sent to the Medical Superintendent, Kington and District Hospital, 26 Wolverley Avenue, Kington-on-Thames so as to be received not later than June 2nd 1937.

County Hall DUDLEY AUKLAND
Kington-on-Thames, Clerk of the Council
May 15th 1937

BOROUGH OF TAUNTON

APPOINTMENT OF PART-TIME ASSISTANT TO THE MEDICAL OFFICER OF HEALTH

Applications are invited for the above-mentioned appointment. The duties are mainly in connection with the routine Medical Inspection in the Borough Elementary Schools and attendance at some Clinics for School or Infant Welfare. The person appointed will be under the direction and control of the Medical Officer of Health and School Medical Officer. Salary at the rate of 1½ guineas per session for approximately 95 sessions per year. The successful applicant must be a member of one of the recognized Medical Protection Societies.

Forms of application are obtainable from the Medical Officer of Health, St. Paul's House, Corporation Street, Taunton. The completed forms accompanied by copies of three recent testimonials must be sent so as to reach the undersigned not later than the 29th instant.

W H BAILEY
Taunton Town Clerk and Clerk to the Taunton Borough Education Committee
Municipal Buildings
Taunton
May 15th 1937

LONDON COUNTY COUNCIL

PART-TIME MEDICAL OFFICER (woman) required at CUMBERKING SCHOOL for SENIOR GIRLS committed under Children and Young Persons Act (Accommodation 40) 1. Last year Read South Norwood S.E.25. Candidates must reside within easy reach of school and must be registered medical practitioners. Salary £40 a year. Form of application with details of appointment obtainable at stamped addressed foolscap envelopes, necessary from Education Officer (S.E.4) County Hall S.E.1 must be returned by May 26th. Canvassing disqualifies.

TIPTON URBAN DISTRICT COUNCIL.

MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

The Council invite applications for the appointment of a Medical Officer of Health and School Medical Officer for the Urban District of Tipton at a salary of £800 per annum.

Applicants must be duly qualified Medical Practitioners and must hold a Diploma in Sanitary Science Public Health or State Medicine.

The person appointed will be required to devote the whole of his time to the duties of the office and will not be allowed to engage in private practice. He will be responsible for carrying out all the duties imposed on a Medical Officer of Health and School Medical Officer by the various Acts, Orders and Regulations relating to public health, maternity and child welfare, education, housing and infectious diseases and such other duties as may from time to time be prescribed by the Council.

The appointment will be subject to the approval of the Minister of Health and the Board of Education and to the person appointed agreeing to give three months' notice in writing before resigning the office.

Applications (on forms to be obtained from the undersigned) accompanied by copies of not more than three recent testimonials must reach the undersigned on or later than May 31st 1937.

Canvassing will disqualify
KENNETH W. MADIN
Municipal Buildings, Clerk of the Council
Sedgley Road West, Tipton
May 7th 1937

CITY OF COVENTRY

ASSISTANT MEDICAL OFFICER (woman)

Applications are invited from duly qualified and registered women medical practitioners under 40 years of age, for the post of Assistant Medical Officer in the City of Coventry Public Health Department. The duties will be mainly to connection with the maternity and child welfare scheme. Preference will be given to candidates possessing a Diploma in Public Health.

The salary will be £500 per annum rising by annual increments of £25 to a maximum of £700. The officer appointed will be required to devote her whole time to the duties of the post.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass the necessary medical examination as to fitness and to contribute to the Superannuation Fund.

Applications, together with copies of three recent testimonials must be made on the prescribed form (which may be obtained on request) and must reach the undersigned on or before June 2nd 1937. The Council House
Coventry
A. MASSEY, Medical Officer of Health
May 15th 1937

DEVON COUNTY COUNCIL

(Medical Department.)

HAWKMOOR SANATORIUM NEAR BOVEY TRACEY

RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from registered Male Medical Practitioners for the above appointment. Candidates must be unmarried and preference will be given to applicants who have held resident hospital appointments and who have had experience in the treatment of tuberculosis. Salary will be at the rate of £50 per annum with board residence and laundry.

The appointment will be made in the first instance for a period of six months and renewable for a further six months.

Forms of application may be obtained from the undersigned and must be returned accompanied with copies of not more than three recent testimonials not later than the first post on Saturday June 4th 1937.

L. MEREDITH DAVIES
County Medical Officer

4 Barnfield Crescent,
Exeter Devon.

HOUNSLOW HOSPITAL, STAINES ROAD MIDDLESEX

The Board of Management of Hounslow Hospital invite applications for the posts of ANAESTHETISTS to the Hospital at an honorarium of £150 per session.

Applications with copies of testimonials should reach the undersigned by June 1st.

HORACE W. CARPENTER
Secretary

HOUNSLOW HOSPITAL, STAINES ROAD MIDDLESEX

SENIOR RESIDENT MEDICAL OFFICER
The salary £100 per annum with additional fees etc. The appointment is for six months and may be renewed with copies of recent testimonials should be sent to the Secretary at once.

STAFFORDSHIRE COUNTY COUNCIL.

WORDSLEY PUBLIC ASSISTANCE INSTITUTION

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered medical practitioners (male) for the post of Assistant Medical Officer (Resident) at Wordsley Public Assistance Institution near Stourbridge. Salary £300 per annum with board residence and laundry.

Candidates should be unmarried. The appointment will be in the first instance for a period of six months but the successful candidate will be eligible for reappointment for a further period of six months.

The Institution is in process of conversion into a Hospital and facilities will be available for gaining experience in medicine, surgery, midwifery and diseases of children.

Further details may be obtained on application to the County Medical Officer of Health, County Buildings, Stafford.

Applications, stating age, qualifications and experience with copies of testimonials should be sent to the undersigned not later than Thursday May 27th 1937.

County Buildings, H. L. UNDERWOOD
Stafford, Clerk of the County Council
May 8th 1937

SURREY COUNTY COUNCIL

DENTAL SURGEON

Applications are invited from qualified registered dental surgeons preferably under 35 years of age for whole time dental work in the County.

The officer appointed will be required to act under the supervision and control of the County Medical Officer and to live at some centre to be approved by the Council.

The appointment will be subject to the staffing regulations of the Council and to the provisions of the Council's Superannuation Scheme. The commencing salary will be at the rate of £300 per annum rising subject to approved service by annual increments of £20 to a maximum of £600 per annum.

A form of application together with further particulars may be obtained from the County Medical Officer, County Hall, Kingston-upon-Thames and must be returned duly completed not later than May 25th 1937, endorsed "Dental Surgeon". Canvassing either directly or indirectly will disqualify.

County Hall, DUDLEY AUKLAND
Kingston-upon-Thames, Clerk to the Council.
May 5th 1937

BOROUGH OF ROYAL LEAMINGTON SPA

APPOINTMENT OF MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from qualified men holding a Degree in or Diploma of Public Health for the appointment of MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER at a commencing salary of £800 per annum.

Candidates must have had a wide practical experience in Public Health Administration, including Maternity and Child Welfare and Schools Medical Services. The person appointed will be required to devote the whole of his time to the duties of the office, and will not be allowed to engage in private practice.

The appointment will be subject to the approval of the Ministry of Health and the Board of Education and will be terminable by three months' notice on either side. It will also be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination to the satisfaction of the Council's Medical Referee.

Full particulars of the appointment and forms of application may be obtained from the undersigned, to whom applications together with copies of three recent testimonials enclosed in an envelope and endorsed "Medical Officer of Health" must be delivered not later than noon on Saturday June 19th 1937.

Canvassing directly or indirectly will disqualify.
Town Hall, LEO RAWLINSON
Leamington Spa, Town Clerk.
May 1st 1937

ROYAL DEVON AND EXETER HOSPITAL EXETER.

HOUSE SURGEON (male) to the Ear, Nose and Throat Department.

Applications are invited for this post which is now vacant. The appointment is for six months but candidates are eligible for re-election.

Salary at the rate of £150 per annum with board lodging and washing.

Applications giving particulars as to age and qualifications together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

May 15th 1937 S. S. COLE,
Secretary and Manager

BOROUGH OF LUTON

RESIDENT MEDICAL OFFICER TO THE NEW MATERNITY HOSPITAL AND ASSISTANT MEDICAL OFFICER OF HEALTH

Applications from single women are invited for the appointment of RESIDENT MEDICAL OFFICER to the new Maternity Hospital and ASSISTANT MEDICAL OFFICER OF HEALTH at a commencing salary of £350 per annum rising by annual increments of £25 to a maximum of £500 per annum together with emoluments (board residence, laundry etc.) valued at £150 per annum.

The duties will consist of Maternity and Child Welfare work and the successful applicant will be required to live in the new Borough Maternity Hospital. Applicants must have had considerable resident post-graduate experience in obstetrics. The post will offer facilities for experience in general public health work.

The appointment will be subject to the Local Government and Other Officers Superannuation Act 1922 and the successful applicant will be required to pass a medical examination.

Copies of the application form and terms of appointment may be obtained from the undersigned at the Town Hall, Luton, to whom applications, accompanied by copies of three recent testimonials, must be delivered not later than Saturday June 5th 1937.

Town Hall, W. H. ROBINSON
Luton, Town Clerk
May 22nd 1937

BIRKENHEAD EDUCATION COMMITTEE.

ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the position of ASSISTANT SCHOOL MEDICAL OFFICER at a salary of £500 per annum rising by annual increments of £25 to a maximum of £700. The post is designated under the Local Government and Other Officers Superannuation Act 1922.

The duties will mainly consist of the inspection and treatment of children attending the Schools in the Borough.

Applicants must be duly qualified Medical Practitioners with experience and must hold the Diploma of Public Health.

The post will carry with it the designation of Assistant School Medical Officer and Assistant Medical Officer of Health.

The person appointed will be required to reside within the Borough.

Canvassing either directly or indirectly will be regarded as a disqualification.

Particulars of the appointment and form of application may be obtained from Dr D. MORLEY MATHIESON, Medical Officer, 9 Hamilton Square, Birkenhead, and applications must be delivered not later than May 29th 1937 to G. B. DEMPSEY, Director of Education, Education Offices, Hamilton Square, Birkenhead.

COUNTY COUNCIL OF LINCOLN—PARTS OF LINSEY

Applications are invited for the post of RESIDENT MEDICAL OFFICER at the BRANSTON HALL SANATORIUM near Lincoln.

Candidates must have held resident hospital appointments and have had experience in the diagnosis and treatment of tuberculosis.

Salary £350 rising by annual increments of £25 to £450 per annum together with the usual residential allowances valued at £100 per annum. The post is designated under the Local Government and Other Officers Superannuation Act 1922.

Application forms with particulars of the appointment, may be obtained from the undersigned to whom they must be returned with copies of three recent testimonials not later than June 4th 1937.

W. S. H. CAMPBELL,
County Medical Officer of Health
Public Health Department
County Offices, Lincoln.
May 18th 1937

COUNTY BOROUGH OF OLDHAM

MUNICIPAL HOSPITAL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer. Salary £200 per annum with board residence and laundry. Candidates should be unmarried.

The appointment will in the first instance be for a period of six months. The successful applicant, however, will be eligible for reappointment for a further period of six months. The Hospital comprises 375 beds with facilities for gaining experience in medicine, surgery, midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health, Town Hall, Oldham, and should be returned endorsed "Resident Assistant Medical Officer" as soon as possible, but not later than Tuesday, June 1st 1937.

Town Hall, JOSEPH J. WILLIAMS LL.D.
Oldham, Town Clerk
May 17th 1937

HULL ROYAL INFIRMARY

Applications are invited from registered medical practitioners for the following posts (male unmarried) —

(1) **SECOND HOUSE PHYSICIAN** vacant now. The post is recognized by the University of London for the M.D. Branch I (Medicine) Examination.

(2) **HOUSE SURGEON** to the Ophthalmic and Ear, Nose and Throat Departments vacant now. The post is recognized for the clinical work required in the regulations for the D.O.M.S. and D.L.O.

(3) **SECOND CASUALTY OFFICER**, vacant now. In addition to carrying out duties in the Casualty Department the Officer appointed will act as House Surgeon to one of the Honorary Assistant Surgeons and will thus obtain ward and theatre experience. He will be eligible for promotion to a more senior post when a vacancy occurs.

Salary for each of the above posts £150 per annum plus residence board and laundry. The appointments will be for a period of six months, but will be determinable at any time by one month's notice on either side.

Applications giving age, particulars of experience, and nationality together with copies of recent testimonials, should be addressed to the undersigned.

May 10th 1937

R. J. CARLESS,
House Governor**NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKES-ON-TRENT (190 Beds.)****HOUSE SURGEON FOR AURAL AND OPHTHALMIC DEPT.**

The committee invite applications for the above post.

Salary at the rate of £150 per annum with board residence and laundry.

The appointment will be made for 6 months renewable.

Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately.

BY ORDER

W. STEVENSON
Secretary and House Governor

May 3rd 1937

NUNEATON GENERAL HOSPITAL (100 Beds.)**RESIDENT SURGICAL OFFICER**

The Medical Board will meet shortly to appoint a Resident Surgical Officer who shall commence duty on July 8th 1937. The post will be held for 12 months in the first instance and the holder will be eligible for re-election for two further periods of 12 months. Salary at the rate of £275 p.a. for the first period together with board residence and laundry. The vacancy is open to candidates of either sex and is particularly suitable to one desiring to specialize in surgery or gynaecology. Preference will be given to Fellows of a Royal College of Surgeons.

Applications, giving details of experience and enclosing copies of three recent testimonials to be received before May 28th by the Secretary of the Medical Board General Hospital Nuneaton.

NUNEATON GENERAL HOSPITAL (100 Beds.)

Applications are invited from practitioners of either sex for the post of **HOUSE SURGEON** vacant July 8th 1937. Salary £125 p.a. together with board residence and laundry.

Candidates must enclose with their applications two copies of recent testimonials, and these must be received before May 28th by the Secretary of the Medical Board General Hospital Nuneaton.

THE ROYAL INFIRMARY BRADFORD

The Board of Management invites applications for the post of **HONORARY ASSISTANT PHYSICIAN** with charge of 17 beds.

Candidates must hold the degree of Doctor of Medicine and/or be a member of one of the Royal Colleges of Physicians. The successful candidate will be required to practice as a Consulting Physician.

Applications together with certificate of Registration and copies of three recent testimonials, should be lodged with the undersigned not later than June 4th.

May 14th 1937

J. J. BARRON
Secretary-Superintendent.**PLYMOUTH ROYAL EYE INFIRMARY**

A vacancy in the office of **HONORARY PHYSICIAN** has occurred in this Institution, and the Committee will fill the vacancy at its next meeting on Thursday June 3rd.

Candidates must be legally qualified Practitioners, and are required to forward their applications (stating age and qualifications) with testimonials to the Honorary Secretary at 24 Lockey Street, Plymouth on or before May 10th 1937.

May 6th, 1937

JOHN ELIOTT
Hon. Secretary**ROYAL SALOP INFIRMARY SHREWSBURY (190 Beds.)****APPOINTMENT OF RESIDENT HOUSE PHYSICIAN**

Applications are invited from fully qualified unmarried gentlemen for the appointment of Resident House Physician vacant immediately.

Salary £160 per annum with board residence etc. The appointment is for six months subject to reappointment. Resident Staff comprises Resident Surgical Officer, Resident House Physician and two Resident House Surgeons.

The Resident House Physician is Resident Officer to the Medical Wards in the Hospital under the direction of three Honorary Physicians and is also Resident Officer to the Maternity Department for difficult cases under the direction of the Honorary Obstetrician.

Applications stating age, qualifications, experience, nationality and accompanied by copies of three recent testimonials to be sent to the Under signed immediately.

Board Room

May 13th 1937

J. W. NOBLE,
Sec-Superintendent.**PRINCESS ALICE MEMORIAL HOSPITAL, EASTBOURNE.****Honorary Medical Staff.****APPOINTMENTS OF SURGEON AND ASSISTANT PHYSICIAN**

Applications are invited for the above appointments which become vacant on July 1st next.

One of the Assistant Surgeons is a candidate for the post of Surgeon and in the event of his election there will be a vacancy for an Assistant Surgeon for which applications are also invited.

Full particulars and conditions of the appointments may be obtained from the undersigned.

Applications accompanied by copies of three recent testimonials should be delivered to the undersigned by first post on Saturday May 29th 1937.

May 11th 1937

W. RUSSELL RUDALL,
Secretary**THE ROYAL INFIRMARY SHEFFIELD (500 Beds.)**

The Board of management invite applications for the undermentioned post —

**OPHTHALMIC HOUSE SURGEON
AURAL HOUSE SURGEON
HOUSE SURGEON**

The appointments will be tenable for the residue of the period of six months terminating on October 30th next. Salary £80 per annum with board and residence after six months service £100 per annum.

There are 69 Ophthalmic and 31 Aural Beds, with Out Patient Clinics.

Applications, with copies of testimonials, to be sent to the undersigned forthwith.

H. KINGSDLEY PEARCE,

General Superintendent and Secretary

May 11th 1937

ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER.

(167 Beds.)

RESIDENT SURGICAL OFFICER

Applications are invited from fully qualified men for the above post to take up duties on July 1st next.

Six months appointment. Salary £200 per annum with board residence and laundry.

Candidates who must be of British nationality to make application as soon as possible to the undersigned, enclosing copies of three testimonials.

HERBERT MASLEN

May 10th 1937

Secretary

ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER.

(167 Beds.)

HOUSE PHYSICIAN

Applications are invited from fully qualified men for the above post to take up duties on July 1st next.

Six months appointment. Salary £125 per annum with board residence and laundry.

Candidates who must be of British nationality to make application to the undersigned enclosing copies of three testimonials.

HERBERT MASLEN

May 10th 1937

Secretary

EDINBURGH HOSPITAL FOR WOMEN AND CHILDREN

(Whitehouse Loan, Edinburgh)

(64 Beds.)

Applications are invited from fully qualified medical women for the following post —

SECOND HOUSE SURGEON

(Gynaecology and General Surgery)

The appointment is for six months from July 1st 1937. Honorarium at the rate of £50 per annum with board residence and laundry.

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent, Edinburgh on or before June 1st, 1937.

May 15th 1937

HUDDERSFIELD ROYAL INFIRMARY (321 Beds.)

Male **CASUALTY OFFICER** required to commence duty on June 7th 1937.

Salary £200 per annum with board residence and laundry. Appointment for six months. Prospects according to qualifications experience and satisfactory service.

The Hospital is officially recognized for the surgical practice required of non-members before admission to the Final Fellowship Examination of the Royal College of Surgeons of England. The post of Casualty Officer is next in seniority to that of Resident Surgical Officer.

Applications, with copies of three recent testimonials to be addressed to the undersigned immediately.

H. J. JOHNSON
Gen. Sup. and Secretary**ROYAL BERKSHIRE HOSPITAL, READING (138 Beds.)**

Applications are invited for the following resident appointments —

ONE **CASUALTY OFFICER** (male)
ONE **HOUSE SURGEON** TO THE SPECIAL DEPARTMENTS (Eye, Ear, Nose and Throat) (male)

Appointments are for six months, and candidates must be fully qualified and registered.

Remuneration at the rate of £150 per annum with board residence and laundry.

Applications, stating age and experience with copies of testimonials, to be sent to the undersigned as soon as possible.

H. E. RYAN
Secretary and House Governor**DEWSBURY AND DISTRICT GENERAL INFIRMARY DEWSBURY**

The Senior post is recognized by the Royal College of Surgeons (England).

Applications are invited for the post of **SENIOR HOUSE SURGEON** (male). Salary £700 per annum with board residence and laundry.

Also for the post of **SECOND HOUSE SURGEON** (male). Salary £150 per annum with similar emoluments.

The Infirmary is a new Voluntary Hospital of 100 beds and has the usual Special Departments with Visiting Consulting Specialists in attendance.

Applications, stating for which post age and hospital experience together with copies of recent testimonials to be sent as immediately as possible to my office.

FRED SMITH
Secretary-Superintendent**ELSIE INGLIS MEMORIAL MATERNITY HOSPITAL**Spring Gardens, Edinburgh 8
(65 Beds.)

Applications are invited from fully qualified medical women for the following post —

DISTRICT MEDICAL OFFICER to the **SENIOR HOUSE SURGEON** after three months.

The appointment is for six months from July 1st 1937. Honorarium at the rate of £30 per annum for the first three months, £63 per annum for the second three months with board residence and laundry.

Applications with copies of testimonials to be sent to the Secretary 1 Bruntsfield Crescent, Edinburgh on or before June 1st, 1937.

May 15th 1937

EAR AND THROAT HOSPITAL, DIRM INOHAM

SECOND HOUSE SURGEON (England) (Resident). Must be fully qualified and with clinical experience. Salary at the rate of £150 per annum with full board and residence. Duties to commence as soon as possible.

Appointment to September 30th 1937.

Facilities for training for D.L.O.

Applications and testimonials to be forwarded to the undersigned immediately.

W. H. LOMAS Secretary

THE WINOFIELD-MORRIS ORTHOPAEDIC HOSPITAL HEADINGTON OXFORD**THE LORD NUFFIELD SCHOLARSHIP IN ORTHOPAEDIC SURGERY**

MALE RESIDENT £200 per annum for two years followed by three months' travel (£100). Residence to commence July 1st. Some orthopaedic experience essential.

Information can be obtained from and application before June 1st should be made to Professor G. R. Girdlestone.

WORKING AND DISTRICT VICTORIA HOSPITAL (9 Beds.)

REQUIRED — Male or female Resident Medical Officer (unmarried) for July 1st 1937. D.L.O. with Salary £170 per annum with board residence and laundry. Appointment for minimum period of six months. Applications to reach H.H. Sec. by Jan 4th.

WEST LONDON HOSPITAL, HAMMER-SMITH ROAD W 6 (241 Beds)

Required one **HOUSE PHYSICIAN** and two **HOUSE SURGEONS (MALES)**. These appointments are tenable for 6 months from July 1st next subject to one month's notice on either side. The duties of the House Physician include some work in the Neurological and Dermatological Departments. The duties of one House Surgeon include some work in the Gynaecological Department and of the other some work in the Deen & Ray Therapy Department. Salary at the rate of £100 a year with board, lodgings and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday June 10th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a Medical Council Meeting at 4.30 p.m. on Friday June 18th and the House Committee Meeting at 5 p.m. the same day when the appointments will be made.

H. A. MADGE,
Secretary

WEST LONDON HOSPITAL, HAMMER-SMITH ROAD W 6

Required one **JUNIOR ASSISTANT MEDICAL OFFICER (male)** for work in the **VENEREAL DISEASES DEPARTMENT**. Salary at the rate of £350 a year. The appointment is subject to three months' notice on either side. Candidates must be registered Medical Practitioners of British nationality and have had special experience in the diagnosis and modern treatment of venereal diseases.

Applications accompanied by copies of testimonials must reach me not later than first post on Thursday June 10th. Candidates must send copies of their application and testimonials to each member of the Medical Council. Selected candidates will be required to attend a meeting of the Medical Council on Friday June 25th at 4.30 p.m. and prior to that date to call upon such members as directed. The appointment will be made by the House Committee at 5.15 p.m. the same day. Further details with regard to the duties can be obtained from the undersigned.

H. A. MADGE,
Secretary

**LONDON HOMOEOPATHIC HOSPITAL (Incorporated by Royal Charter)
Great Ormond Street, Bloomsbury W C 1
(A General Hospital 200 Beds)****APPOINTMENT OF GYNAECOLOGICAL HOUSE SURGEON**

Applications are invited for the appointment of Gynaecological House Surgeon vacant July 1st.

The appointment is one of three Resident Medical posts which occur periodically during the year and is for a period of six months with salary at the rate of £100 per annum and board, apartments and laundry.

Candidates must be legally qualified and registered.

Selected candidates will be required to attend a meeting of the Medical Committee for interview on June 9th.

Applications stating age with copies of testimonials to be sent to the undersigned.

L. J. KNOWLES, Secretary

ELIZABETH GARRETT ANDERSON HOSPITAL, EUSTON ROAD N W 1

The Managing Committee invite applications from qualified medical women for the following temporary appointments—

**HONORARY ASSISTANT SURGEON
HONORARY ASSISTANT OBSTETRIC SURGEON**

Applicants for the former must be Fellows of the Royal College of Surgeons of England and for the latter Fellows of any College of Surgeons. Duties to commence on appointment early in June. Candidates are requested to apply to the undersigned for particulars of the posts and to forward (before Thursday June 3rd 1937) 38 copies of application with copies of three recent testimonials.

JEAN R. MURRAY,
Secretary

**THE HOSPITAL FOR SICK CHILDREN
Great Ormond Street London W C 1**

A **RESIDENT HOUSE PHYSICIAN (male)** and a **RESIDENT HOUSE SURGEON (male)** are required. Duties to commence on July 1st 1937. The appointments are tenable for six months. Salaries at the rate of £100 per annum.

Candidates must be unmarried, possess a legal qualification to practice and have held a responsible recent appointment at a General Hospital.

Applications may be received by noon on Monday May 24th 1937 and candidates must be present to attend for interview by the Joint Committee at 4.45 p.m. on Wednesday June 10th 1937. Particulars and forms of application are obtainable from the undersigned.

HERBERT I. RUTHERFORD,
April 1937 Secretary

**QUEEN CHARLOTTE'S MATERNITY HOSPITAL,
Marylebone Road, N W 1**

There is a vacancy for an **OBSTETRIC SURGEON** to **INPATIENTS** at Queen Charlotte's Hospital. The Senior Obstetric Surgeon to Out Patients is a candidate for the post. In the event of his election there will be a vacancy for **OBSTETRIC SURGEON** to **OUTPATIENTS**. The Committee of Management invite applications for the post of Obstetric Surgeon to Out Patients. Candidates must not be over forty years of age, and must be Graduates in Medicine of a University of the United Kingdom and Fellows or Members of the British College of Obstetricians and Gynaecologists and Fellows of the Royal College of Surgeons of England.

The successful candidate will be expected to reside in quarters provided by the Hospital adjacent to the new building at Ravenscourt Park and act as the Resident Obstetric Surgeon when the new building is opened. Particulars of duties etc. can be obtained from the Secretary-Superintendent.

Applications should be sent to the undersigned with ten copies of three testimonials not later than June 12th.

H. B. STOKES,
Secretary-Superintendent.

**QUEEN CHARLOTTE'S MATERNITY HOSPITAL
Marylebone Road N W 1**

The Committee of Management invite applications for the appointment of **HONORARY GENERAL SURGEON (non-obstetric)**. Candidates must be graduates in medicine of a University of the United Kingdom and Fellows of the Royal College of Surgeons of England. There are no routine duties. The Honorary Surgeon is expected to attend when requested to see and treat such general surgical cases as may arise in the practice of the Hospital.

Applications to be sent to the undersigned at the Hospital not later than June 12th accompanied by ten copies of three testimonials.

H. B. STOKES,
Secretary-Superintendent.

**CONNAUGHT HOSPITAL,
Walthamstow E 17
(118 Beds with four Resident Medical Officers.)**

HOUSE PHYSICIAN (male) required. Salary £110 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials should be received on or before Monday May 31st.

KENELM S. ELLISON, Gen. Sec.

**CONNAUGHT HOSPITAL,
Walthamstow E 17
(118 Beds with four Resident Medical Officers.)**

CASUALTY OFFICER (male) required. Salary £110 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st.

KENELM S. ELLISON, Gen. Sec.

**CONNAUGHT HOSPITAL,
Walthamstow E 17
(118 Beds with four Resident Medical Officers.)**

HOUSE SURGEON (male) required. Salary £110 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st.

KENELM S. ELLISON, Gen. Sec.

**CONNAUGHT HOSPITAL,
Walthamstow E 17
(118 Beds with four Resident Medical Officers.)**

SENIOR RESIDENT MEDICAL OFFICER (male) required. Salary £175 per annum with residence board and laundry. Appointment for six months from June 8th 1937. Applications stating age, nationality, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be received on or before Monday May 31st.

KENELM S. ELLISON, Gen. Sec.

**CHELSEA HOSPITAL FOR WOMEN,
Arthur Street, S W 3**

There will be a vacancy for a **JUNIOR HOUSE SURGEON (male)** on July 1st 1937. Appointment for 6 months. Salary £100 p.a. He will be expected to proceed to the Senior Post 16 months. Salary £120 p.a. at the end of his term of office. Candidates must be duly registered and preferably unmarried.

Applications accompanied by copies of three testimonials, should be received not later than first post Thursday May 27th by the Secretary.

F. J. CARR

**QUEEN MARY'S HOSPITAL FOR THE EAST
END STRATFORD E 15**

Applications are invited from fully qualified and registered medical men (only) for the following posts—

1 RESIDENT MEDICAL OFFICER	£150 p.a.
2 HOUSE SURGEONS	£1.0 p.a.
1 HOUSE PHYSICIAN	£1.0 p.a.
1 OBSTETRIC HOUSE SURGEON	£1.0 p.a.
1 RESIDENT ANAESTHETIST AND HOUSE PHYSICIAN	£1.0 p.a.
2 CASUALTY AND OUTPATIENT OFFICERS	£150 p.a.

In addition to his salary the Resident Medical Officer receives certain sums paid by the National Health Insurance.

The Hospital contains 219 beds including 50 for Maternity patients.

Candidates who must be single and who should previously have held hospital appointments, should send applications accompanied by testimonials to the undersigned not later than Thursday May 27th 1937.

The appointments will date from July 1st, 1937 and will be for six months.

RAPHAEL JACKSON, Major Secretary

**THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN
Shadwell London E 1**

(Formerly East London Hospital for Children) (135 Beds)

A **HOUSE PHYSICIAN** is required on July 1st 1937 by the above Hospital. Candidates are invited to send in their applications, addressed to the Secretary by noon on Thursday June 3rd at the latest accompanied by copies of not more than three recent testimonials and particulars of previous appointments if any. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry. Candidates must be properly registered in this country.

Forms of application and copies of the rules can be obtained from the Secretary.

**THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN
SHADWELL, LONDON E 1**

(Formerly East London Hospital for Children) (135 Beds)

A **CASUALTY OFFICER** is required on July 1st, 1937 by the above Hospital. Candidates are invited to send in their applications, addressed to the Secretary by noon on Thursday June 3rd at the latest accompanied by copies of not more than three recent testimonials, and evidence of having held a responsible Hospital appointment. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry. Candidates must be properly registered in this country.

Forms of application and copies of the rules can be obtained from the Secretary.

**THE PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN
SHADWELL, LONDON E 1**

(Formerly East London Hospital for Children) (135 Beds)

A **HOUSE SURGEON** is required on July 1st 1937 by the above Hospital. Candidates are invited to send in their applications, addressed to the Secretary by noon on Thursday June 3rd at the latest accompanied by copies of not more than three recent testimonials and evidence of having held a responsible Hospital appointment. The appointment is for six months. Salary at the rate of £125 per annum with board residence and laundry. Candidates must be properly registered in this country.

Forms of application and copies of the rules can be obtained from the Secretary.

ROYAL FREE HOSPITAL, GRAY'S INN ROAD W C 1

Applications are invited from duly qualified and registered medical men for the following post—

RESIDENT CASUALTY OFFICER

Duties to commence July 1st 1937 for six months.

Salary £150 per annum.

Application forms may be obtained from the undersigned on or before June 5th.

RICHARD T. BARTLEY,
Secretary

ROYAL FREE HOSPITAL, GRAY'S INN ROAD W C 1

Applications are invited from duly qualified and registered medical men for the following post—

FIRST HOUSE PHYSICIAN

Duties to commence August 1st 1937 for six months. Application forms may be obtained from the undersigned and should be duly filled in and returned on or before June 5th.

RICHARD T. BARTLEY,
Secretary

THE WILLESDEN GENERAL HOSPITAL, Hartedee Road N.W.10

OUT PATIENT DEPARTMENT CLINICAL ASSISTANTS (HONORARY)

Applications are invited for appointment to the following sections:

MEDICAL (Tuesday afternoons)

MEDICAL (Friday mornings)

EAR NOSE AND THROAT (Wednesday afternoons)

SKIN (Saturday mornings)

SURGICAL (Friday afternoons)

Applications should be forwarded to the Secretary from whom further details of the appointments may be obtained and should be received not later than first post on Monday June 7th May 10th 1937

THE LONDON LOCK HOSPITAL.

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the MALE DEPARTMENTS (Out Patients, Dean Street In-Patients, Harrow Road). Candidates must be doubly qualified and duly registered.

The appointment is for 6 months, commencing June 9th. Salary at the rate of £175 p.a., with furnished rooms at the Harrow Road Hospital (full board and laundry). Applications, enclosing copies (only) of 3 recent testimonials, must be in the hands of the undersigned by Thursday May 27th, and from whom a copy of the Bye-laws relating to the appointment or any further particulars can be obtained.

283 Harrow Road W.9 J. F. MORTON
May 6th 1937 Secretary

HOSPITAL OF ST JOHN & ST ELIZABETH 60 Grove End Road N.W.8

Applications are invited for the post of OPHTHALMIC SURGEON to the above Hospital. Candidates must be Fellows of a Royal College of Surgeons or Masters of Surgery in a recognised University and must be engaged exclusively in the practice of ophthalmic surgery. The duties include the charge of beds. Applications will be expected to call on members of the Medical Committee.

Applications, with copies of three testimonials, should reach the undersigned from whom further particulars may be obtained on or before June 7th 1937.

F. DUDLEY HOBBS B.A.
Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN Hackney Road London E.2.

HOUSE PHYSICIAN required July 1st, 1937. CASUALTY OFFICER required July 1st, 1937.

Some Dermatological work additional. Six months appointments. Salary at the rate of £100 per year with board lodging and laundry in each case.

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials, on or before June 3rd, 1937.

May 13th 1937 CHARLES H. BESSELL,
Secretary

ST THOMAS'S HOSPITAL VACANCY

The appointment of a PHYSICIAN and in the event of a Physician to Out-patients being promoted to the Wards, the appointment of a Physician with charge of Out-patients. Candidates must be Fellows or Members of the Royal College of Physicians.

Applications with full details of academic career and copies of testimonials, to be sent not later than June 9th to Clerk to the Governors, who will be pleased to give further information.

THE HOSPITAL FOR WOMEN Soho Square, W.1

Applications are invited for the post of RESIDENT MEDICAL OFFICER for a period of six months commencing July 1st, 1937. The salary is at the rate of £100 per annum with board residence and laundry.

Applications, and testimonials, must reach the undersigned by Tuesday June 8th, 1937.

J. P. HENNING Secretary

ST JOHN'S HOSPITAL, LEWISHAM, S.E.13

The Court of Governors has resolved to appoint an ORTHOPAEDIC REGISTRAR to attend on one half-day a week which at present is Wednesday morning. Applications, with copies of testimonials, should be received as soon as possible by the undersigned who will be pleased to give any further information required.

J. C. GILBERT
Secretary-Superintendent.

UNIVERSITY COLLEGE HOSPITAL, GOWER STREET W.C.1

Applications are invited for the honorary post of ASSISTANT PHYSICIAN on the Staff of University College Hospital and should reach the Secretary by first post on Friday June 11th 1937.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION-GLOUCESTER (225 Beds, Five Residents.)

Applications are invited for the post of HOUSE SURGEON (male). Salary at the rate of £150 per annum with board residence and laundry. The appointment is for six months which may be extended for similar periods by re-election from time to time.

Applications stating age, qualifications, experience and nationality, with copies of not less than three recent testimonials, should be sent to the undersigned not later than Thursday June 3rd.

The elected candidate will be required to enter upon his duties on June 11th.

F. J. SYMONS

May 13th 1937

Secretary

THE GUEST HOSPITAL, DUDLEY

(General Hospital—107 Beds—shortly to be increased to 160 Beds.)

The Resident Staff consists of a Resident Surgical Officer and two House Surgeons.

SECOND HOUSE SURGEON (male) required to commence duty immediately. Salary at the rate of £120 per annum, with furnished apartments, board and laundry. Duties are of a general nature, more especially Surgical and Ophthalmic work and administration of Anaesthetics.

Applications, stating age, qualifications and experience accompanied by copies of testimonials to be sent to the undersigned.

H. RAYMOND HURST

May 11th 1937

House Governor and Secretary

COVENTRY AND WARWICKSHIRE HOSPITAL, COVENTRY

Main Hospital 307 Beds.
Convalescent Hospital 40 Beds.

Applications are invited for the posts of RESIDENT HOUSE SURGEON CASUALTY OFFICER and RESIDENT HOUSE SURGEON for the AURAL and OPHTHALMIC DEPARTMENTS at Salaries of £150 per annum with Board Residence and Attendance.

Candidates must be duly qualified and registered. Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately.

(MISS) R. HOOPER

Secretary

SUSSEX EYE HOSPITAL, Eastern Road Brighton (43 Beds)

HOUSE SURGEON (male) required. Salary at the rate of £150 per annum with board residence and laundry. Good Ophthalmic experience. The appointment to be for a period of six months. Duties to commence about the middle of June. The Hospital is recognised for the D.O.M.S. Diploma.

Application in writing accompanied by copies of testimonials should be sent to P. F. Spooner Assistant Secretary Sussex Eye Hospital Eastern Road Brighton May 14th 1937.

WEST SUFFOLK GENERAL HOSPITAL (112 Beds)

Applications are invited for the post of HOUSE PHYSICIAN. Post vacant now. Duties include charge of the Medical Beds, Maternity Block Casualty and the administration of Anaesthetics. Salary £150 per annum, with board residence and laundry. One other resident Medical Officer.

Applicants must be registered Medical Practitioners. Applications, stating age, experience and nationality with copies of three recent testimonials, to be sent to the Secretary.

E. E. HARDWICKE

May 11th 1937

Secretary

DERBYSHIRE HOSPITAL FOR SICK CHILDREN (80 Beds)

Wanted June 29th, 1937 a RESIDENT HOUSE SURGEON (lady). Salary £130 p.a. The appointment is for six months, but may be extended by mutual arrangement. Applicants must be fully qualified.

Applicants, with three testimonials to be sent to the undersigned on or before June 7th 25 St. Mary's Gate ARTHUR N. WHISTON
Derby Secretary

THE ROYAL GWENT HOSPITAL, NEWPORT MON. (110 Beds)

HOUSE SURGEON'S MALE (?) Salary at the rate of £135 per annum, together with board quarters, and laundry. Both appointments terminating on October 31st, 1937.

Applications, together with copies of any testimonials, should be addressed to the undersigned immediately.

S. CECIL HILL
Secretary-Superintendent.

GENERAL HOSPITAL, NOTTINGHAM (186 Beds.)

TWO RESIDENT CASUALTY OFFICERS (Male) are required at the above Institution. The appointments are for six months with salary in each case at the rate of £150 a year with board residence and laundry. Candidates are desired to send applications stating age, qualifications and experience, together with copies of testimonials to the undersigned. Duties to commence in one instance as soon as possible and in the other on July 1st. Will candidates please state for which post they wish to apply?

Applications for appointments as House Physician or House Surgeon will be favourably considered after six months service to the Casualty Department.

PETER M. MACCOLL,
House Governor and Secretary

GENERAL HOSPITAL, NOTTINGHAM (186 Beds.)

A HOUSE SURGEON is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out-Patient Department. The appointment is for six months, with salary at the rate of £150 a year with board residence and laundry.

Candidates are desired to send applications stating age, qualifications and experience together with copies of testimonials, to the undersigned without delay. Duties to commence early in May.

PETER M. MACCOLL,
House Governor and Secretary

THE RADCLIFFE INFIRMARY, OXFORD

Applications are invited from qualified women for the post of RESIDENT MEDICAL OFFICER to that section of the Infirmary consisting of 52 beds and dealing with the diagnosis and treatment of pulmonary tuberculosis, known as the Oliver Pavilion Headquarter Oxford as from August 1st 1937. Previous experience in a tuberculosis situation is not essential, but experience as a Resident in a General Hospital is desirable.

Appointment will be for six months in the first instance. Salary at the rate of £170 per annum.

Applications, with copies of testimonials, must be forwarded to the undersigned at the Radcliffe Infirmary not later than June 12th 1937.

A. O. E. SANCTUARY

May 15th 1937

Administrator

NOTTINGHAM GENERAL DISPENSARY

Hyson Green Branch Nottingham.

Wanted RESIDENT SURGEON (male or female) unmarried. Must have medical and surgical qualifications. Salary £300 with 25% increase per year up to £375. House with attendants, lights, and fuel (not board).

Ultra-violet Ray Clinic. This Institution is a non-provident one. No beds. No midwifery. Applications, stating age and accompanied by copies of recent testimonials to be sent by May 27th 1937 to

5 Thurland Street R. H. WILLATT
Nottingham Secretary

CHELTHAM GENERAL & EYE HOSPITAL

The Board of Management invite applications for the post of HOUSE SURGEON (male) at the General Hospital.

Candidates must be unmarried and have a registered qualification in Medicine and Surgery. Salary £150 p.a. with board lodging and laundry. The Hospital is recognised for the F.R.C.S. D.L.O. and D.O.M.S. Examinations.

Applications, with copies of testimonials to be sent in sealed envelopes marked "House Surgeon" to the undersigned not later than May 29th.

J. CUMMING SMITH F.R.C.S.
The General Hospital, Cheltenham
May 15th 1937 Secretary

ROYAL INFIRMARY, BLACKBURN (244 Beds, Five Residents)

RESIDENT HOUSE SURGEON (male) required at a salary of £175 per annum with board and laundry etc. To commence duties as soon as possible.

Applications with testimonials stating age, nationality, experience etc. to be sent to the undersigned as early as possible.

Royal Infirmary T. DEWHURST
Blackburn General Surgeon and Secretary
This Institution is recognised for the Surgical practice required for the F.R.C.S. examination.

ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN, BRIGHTON (100 Beds)

HOUSE SURGEON (male) required. Salary at the rate of £100 per annum with board and laundry. Good experience. No convalescent.

Application in writing accompanied by testimonials should be sent to Dr. P. F. Spooner Secretary, Dyke Road Brighton May 14th 1937.

APPOINTMENTS—Important Notice.

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumheugh Gardens, Edinburgh)

(a) British Islands

Town or District	Town or District.	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE (contd.)	CONTRACT PRACTICE (contd.)
ABERTYSSWO MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA, CLYDACH VALE, PENYGRAIG, GLAMORGAN (Workmen's Medical Scheme)	OGVIORE VALLEY, GLAMORGAN (Mrdham Colliers' Medical Aid Society) (Workmen's Medical Scheme)
BLACKPOOL AND FYLDE FRIENDLY SOCIETIES COUNCIL (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
GILFACH GOCH, GLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	CARMARTHENSHIRE COUNTY COUNCIL (Assistant County Medical Officer of Health)
	OAKDALE MON (Medical Officer for Medical Aid Association)	FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1

Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch	Town or District.	Hon. Sec. of Division or Branch
NEW SOUTH WALES (All Friendly Societies Appointments)	The Medical Secretary New South Wales Branch 135 Mac quarie St Sydney N.S.W.	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St. East Melbourne Victoria.	WESTERN AUSTRALIA (Contract and Lodge Practises)	Hon. Sec. Western Australian Branch British Medical Association Shell House 205 St George's Ter race Perth Western Australia
QUEENSLAND (All Lane Associate Friendly Societies Institute)	The Hon. Sec. Queens- land Branch British Medical Association B.M.A. Building 35 Adelaide St. Brisbane				

May 19, 1937

By Order of the Council

G. C. ANDERSON, Medical Secretary

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital) 191 beds now in course of extension to 245 beds

RESIDENT MEDICAL OFFICER (male)

The appointment is for one year including a three months probationary period with the option of extension.

Candidates must have held at least one appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist either separately or in conjunction with the former.

He must reside in the Infirmary and devote his whole time to the service of the Infirmary.

Salary £10 per annum with board-residence.

Applications with copies of testimonials to be sent to the House Governor and Secretary by May 14th 1937.

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital) 191 beds now in course of extension to 245 beds

HOUSE PHYSICIAN (male) required to commence duty as soon as possible.

The appointment is for six months, with the right of applying for reappointment for a further period of 6 months. Candidates must be unmarried, fully qualified and registered.

Salary £11 per annum with board residence.

Applications with copies of testimonials to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained.

SALFORD ROYAL HOSPITAL

(Vol. Hosp.) 100 Beds

A vacancy exists for a PSYCHIATRIST for one week as from 11th November £15 per annum.

Further particulars may be obtained from the undersigned to whom applications should be addressed before 11th June 4th.

By Order of the Board
H. B. SHELLSWELL
General Superintendent and Secretary
May 19th 1937

SOUTHEAST-ON-SEA GENERAL HOSPITAL

(135 Beds, 6 Residents)
(Hon. Specialist Staff of 19 members)

Applications are invited for the post of SURGICAL REGISTRAR

duties to commence on or about July 1st. The appointment will be for one year with eligibility for annual re-election for a further maximum period of two years and will be resident with board etc. provided. Commencing salary £75 per annum.

Applicants should possess the qualification of F.R.C.S. (Eng.) and must have held resident appointment as House Surgeon of a General Hospital.

Application forms with copies of the Regulations and duties of the post may be obtained from the undersigned and must be returned with copies of three recent testimonials not later than May 31st.

P. H. CONSTABLE,
Secretary

VICTORIA HOSPITAL WORKSHOP

(92 Beds)

A SENIOR RESIDENT and a JUNIOR RESIDENT are required to take up duty on July 1st. Salary at the rate of £150 and £10 per annum respectively with board, residence and laundry.

Applications, stating age, qualifications, nationality with copies of three recent testimonials to be sent to the undersigned. The appointments are for six months renewable.

JAMES BOOTHROLD
Secretary Superintendent.

CARMARTHENSHIRE AND ANGLESEY INFIRMARY BANGOR

(A General Hospital) (135 Beds)

Wanted a SENIOR HOUSE SURGEON (male) with some experience of Laboratory work. Salary £10 per annum with residence, board and laundry. Duties to commence at once.

Applications, stating age, qualifications and nationality together with two testimonials to reach the Secretary by May 25th.

BURY INFIRMARY (LANCS)

(127 Beds)

APPOINTMENT OF CASUALTY OFFICER (MALE)

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of an R.S.O. a House Surgeon a House Physician and a Casualty Officer.

In addition to his duties in the Casualty Department the Casualty Officer is also responsible for the Inpatient and Outpatient work in connection with the Eye and Ear, Nose and Throat Departments.

The appointment is for six months at a salary at the rate of £150 per annum with board, residence and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age, qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible endorsed "Casualty Officer".

Further particulars may be had on application.
H. WILKINSON, Supt.

ANCOATS HOSPITAL, MANCHESTER 4

RESIDENT SURGICAL OFFICER

Applications are invited for the above post, which will become vacant on July 1st next.

The appointment is for twelve months. Salary £200 per annum with board, apartments, laundry etc.

Candidates holding the F.R.C.S. degree will be preferred.

Applications stating age, qualifications and experience with copies of three recent testimonials to be forwarded to the undersigned on or before June 3rd next.

By Order of the Board
HERBERT J. DAFORNE,
Gen. Supt. and Secretary

(Appointments continued on p. 10)

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APPOINTMENTS—Contd

**ROYAL SOUTH HAMPSHIRE AND
SOUTHAMPTON HOSPITAL.**
(280 Beds)

Applications are invited for the following
appointments

One HOUSE PHYSICIAN
One CASUALTY OFFICER
One RESIDENT ANAESTHETIST and HOUSE
SURGEON to the Ear Nose and Throat
Department

for the six months commencing July 1st 1937 at a
salary of £150 per annum with board lodging and
laundry. Candidates must be male and un-
married.

Applications accompanied by not more than
three testimonials, should be sent to the under-
signed at once.

H. S. TRUSSON

House Governor and Secretary

**THE PRINCESS BEATRICE HOSPITAL,
EARLS COURT LONDON S.W.5**
(General Hospital 81 Beds)

Applications are invited for the post of
MEDICAL REGISTRAR to the above Hospital.
Candidates must have held a post as House
Physician and should possess higher qualifications
in Medicine and must not be engaged in general
practice.

An honorarium of Fifty Guineas is attached to
the post and the appointment is for one year
only with eligibility for re-election at the end of
that year.

Applications with copies of not more than three
testimonials should reach the Secretary Manager
not later than Tuesday May 25th 1937 from
whom further particulars may be obtained.

**KING GEORGE HOSPITAL ILFORD (NEAR
LONDON) (207 Beds)**

Applications are invited for the following resident
appointments (male) which become vacant on
July 1st

RESIDENT SURGICAL OFFICER (who must
possess a Surgical Fellowship) £140 p.a.
MEDICAL REGISTRAR £150 p.a.

These appointments are for one year with
eligibility for reappointment.

TWO HOUSE SURGEONS £100 p.a.
These appointments are for six months.
Forms of application may be obtained from the
undersigned to whom they should be returned duly
completed not later than June 1st.

(Signed) G. AUSTIN HEMPORTH

Secretary and Superintendent

**THE ROYAL WATERLOO HOSPITAL FOR
CHILDREN AND WOMEN**
Waterloo Road S.E.1

RESIDENT CASUALTY OFFICER

Applications are invited from qualified male
practitioners for the post of Resident Casualty
Officer vacant on June 1st 1937 to work in the
Out Patient Department at £150 per annum.
Candidates for this post should have held a pre-
vious appointment. The appointment is in the
first instance for a period of six months.

Applications with copies of testimonials should
be forwarded not later than May 27th to the
Secretary at the Hospital from whom further
particulars can be obtained.

**ROYAL WATERLOO HOSPITAL FOR
CHILDREN AND WOMEN**
Waterloo Road S.E.1

There will be a vacancy on June 1st 1937 for a
HOUSE SURGEON (male) at the above Hos-
pital. The appointment is in the first instance for
a period of six months. Salary at the rate of
£100 per annum with board and residence.

Applications with copies of testimonials should
be forwarded not later than Thursday morning
May 27th to the Secretary at the above Hos-
pital from whom further particulars can be obtained.

**BIDGWATER GENERAL HOSPITAL—
Somerset**

HOUSE SURGEON required as soon as pos-
sible. Salary £150 with board and residence. Ap-
plicants must have qualifications. Medical, legal,
and national to be sent to the Secretary
immediately.

MANCHESTER ROYAL INFIRMARY**MEDICAL CHIEF ASSISTANT**
(Non-resident)

The Board of Management of the Manchester Royal Infirmary invite applications for the above appointment.

Applicants must be registered medical practitioners. He will be attached to a medical unit and will be required to attend seven half-days per week. Duties will include work in the In-patient and Out-patient services and participation in teaching. There will be facilities for research work.

Salary at the rate of £300 per annum. The appointment will be for 12 months, renewable for a further period subject to the provisions of the By-Laws as to notice etc.

Applications giving particulars of age, experience etc. together with copies of recent testimonials should be addressed to the undersigned to reach him not later than Wednesday May 26th 1937.

By Order
W R TINDALE,
General Superintendent and Secretary
May 10th 1937

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited from unmarried gentlemen duly qualified and registered for the post of HOUSE SURGEON with duties under Consulting Surgeon in Male Female and Children's Surgical Wards vacant July 1st 1937.

Salary at the rate of £150 per annum with board residence and laundry. Final Resident Staff seven. Applications stating age and qualifications and experience together with copies of recent testimonials to be forwarded to the undersigned as soon as possible.

JOHN CIBSON
Superintendent and Secretary
May 14th 1937

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited for the post of RESIDENT HOUSE SURGEON in the MATERNITY HOSPITAL (41 Beds) vacant July 1st 1937. Duties under Consulting Obstetrician include ante-natal and post-natal clinics. Salary at the rate of £100 per annum with board residence and laundry.

Applications stating age and qualifications and experience together with copies of recent testimonials to be forwarded to the undersigned as soon as possible.

JOHN CIBSON
Superintendent and Secretary
May 14th 1937

ROYAL SUSSEX COUNTY HOSPITAL, BRIGHTON (Beds 72.)

HOUSE PHYSICIAN (male) required July 1st next. Charge of beds. Salary £150 per annum with board residence and laundry. Candidates must have a Medical and Surgical qualification of the British Empire and be duly registered under the Medical Act.

They must be unmarried and when elected under thirty years of age.

Applications with copies of testimonials should be sent to the undersigned.

L L W LANCASTER-GAYE
Secretary Superintendent

STROUD GENERAL HOSPITAL, Stroud, Glos.

RESIDENT MEDICAL OFFICER required. Candidates must be fully qualified and registered. Commence appointment from June 1st. Salary £110 per annum, with board and laundry.

Applicants stating age, nationality and qualifications together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

C. FORD SPENCER
Secretary

THE DUCHES OF YORK HOSPITAL FOR BLIND, MANCHESTER (110 Beds)

Applicants are invited for the post of HONORARY ASSISTANT ANAESTHETIST. The appointment to commence 1 June. Salary £100 per annum with board and laundry. Applicants with testimonials to be sent to the undersigned from whom details can be obtained.

LOUISE BAILEY
Secretary

ST. JAMES HOSPITAL, HERFORD

RESIDENT MEDICAL OFFICER required. Salary £100 per annum with board and laundry.

Applicants stating age, nationality and qualifications together with copies of three recent testimonials to be sent to the undersigned from whom further particulars may be obtained.

JOHN W. WALKER
General Superintendent and Secretary
May 14th 1937

THE PRINCE OF WALES'S HOSPITAL, GREENBANK ROAD, PLYMOUTH
(Formerly South Devon and East Cornwall Hospital) (264 Beds.)

Applications are invited for the post of HOUSE PHYSICIAN. Salary £100 per annum with board residence and laundry. Appointment is tenable for six months and is subject to renewal. Duties to commence June 16th. The Hospital is officially recognised for the surgical practice required before admission to the Final Fellowship Examinations of the Royal College of Physicians of England.

Applicants must be registered under the Medical Act.

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned by June 5th.

ARTHUR R. CASH
Gen Supt and Secretary

THE PRINCE OF WALES'S HOSPITAL, DEVONPORT, PLYMOUTH
(Formerly Royal Albert Hospital, Devonport) (64 Beds.)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £120 per annum with board residence and laundry. Duties to commence immediately. Appointment is tenable for six months and is subject to renewal or promotion to the senior position when this post becomes vacant. Applicants must be registered under the Medical Act.

Applications stating age and qualifications with copies of three recent testimonials, to reach the undersigned forthwith.

FRANK ROWE
Secretary
May 11th 1937

YORK COUNTY HOSPITAL (204 Beds)

Applications are invited for the post of HOUSE SURGEON to the EYE, EAR, NOSE and THROAT DEPARTMENT. Duties include part-time Casualty and General Hospital work. Salary £140 per annum with board residence and laundry.

Applications stating age and previous experience together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Wednesday May 26th 1937.

J. R. MACKRILL
Secretary

BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL, Tunstall, Stoke-on-Trent.

Applications are invited for the post of RESIDENT HOUSE SURGEON. Salary £175 per annum with board residence and laundry. The appointment is for six months in the first instance, reappointment may be applied for.

Applications stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

C. E. LOWNOES
Secretary

KETERING AND DISTRICT GENERAL HOSPITAL.

Applications are invited for the following posts: RESIDENT MEDICAL OFFICER and SECOND RESIDENT MEDICAL OFFICER (male).

Salaries £160 and £140 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months. Applications stating age, nationality and qualifications together with copies of three testimonials to be sent to the undersigned as soon as possible.

G. W. JACKSON
Secretary Supt.

ROYAL NATIONAL SANATORIUM, Bournemouth

Applications are invited from duly registered male unmarried Medical Practitioners for the post of ASSISTANT RESIDENT MEDICAL OFFICER. Duties to commence as soon as possible.

Salary £700 per annum with board residence and laundry.

The appointment will be for one year (renewable).

Applications with full particulars and copies of recent testimonials should be sent to the Secretary.

A. G. A. MAJOR
Secretary

OLDHAM ROYAL INFIRMARY

HOUSE SURGEON required for a period of six months. Salary at the rate of £125 per annum with board residence and laundry.

Applicants stating age, experience and qualifications together with copies of three recent testimonials to be forwarded to the undersigned not later than May 1st 1937.

H. J. CLOUT
General Superintendent

MANFIELD ORTHOPAEDIC HOSPITAL, NORTHAMPTON (149 Beds)

Applications are invited for the post of JUNIOR RESIDENT MEDICAL OFFICER (male). Salary £200 p.a. with board-residence etc. Preference will be given to candidates who have previously held Medical and Surgical appointments in a General Hospital.

Applications, stating age, qualifications etc. and copies of testimonials, should be sent not later than June 1st to

H. G. LEWIS
Secretary Superintendent

LANCASHIRE COUNTY COUNCIL**TEMPORARY ASSISTANT TUBERCULOSIS OFFICER**

A Temporary Assistant Tuberculosis Officer required until the end of August. Duties comprise dispensary sessions, home visitation of patients, and visits to County sanatoria. Car essential. Mileage fee payable plus personal allowance. Live out. Salary Fifteen Guineas weekly.

Applications stating tuberculosis experience in Central Tuberculosis Officer County Offices Preston Lancs.

ROYAL SURREY COUNTY HOSPITAL, GUILDFORD (116 Beds)**WANTED JULY 1st 1937 HOUSE SURGEON (Male)**

Six months' appointment recognised for F.R.C.S. Duties: General Surgery, Orthopaedics and Casualties. Salary £150 per annum with board residence and laundry.

Applications stating age and essential particulars with copies of not more than three testimonials to reach the Secretary Superintendent not later than June 8th.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E.

Applications are invited for the post of HOUSE PHYSICIAN (male) for six months from June 1st (the first two months in the Casualty and Out-patient Department). Salary at the rate of £100 per annum with full board and residence.

Applications, with copies of three recent testimonials should be sent to the undersigned from whom particulars can be obtained not later than first post on Monday May 24th.

W. H. SIDNELL,
House Governor

ALTRINCHAM GENERAL HOSPITAL (100 Beds) 2 Residents.

Applications are invited for the posts of SENIOR and JUNIOR HOUSE SURGEONS. Salaries £140 and £100 respectively with board washing etc. to commence duty on June 1st 1937.

Six months' appointment. The Junior resident is eligible for the senior post at the end of that period. Applications stating age, nationality and experience etc. to be addressed to the undersigned not later than May 31st 1937.

E. A. BIDEN
Secretary

WORCESTER ROYAL INFIRMARY (165 Beds)

Applications are invited for the post of HOUSE SURGEON to the Gynaecological Department with special experience in Anaesthetics and with some casualty work. Salary at the rate of £140 per annum with board residence and laundry.

Applications to be sent to the undersigned immediately.

A. R. WISE,
Superintendent Secretary

ROTHERHAM HOSPITAL

Wanted—CASUALTY HOUSE SURGEON (male) qualified. Salary £100 per annum with board residence and laundry. To have charge of Out-Patients (130 beds).

Applications with copies of recent testimonials to be made to the Secretary G. W. ROBERTS, 8 Moorgate Street Rotherham.

GOPDON HOSPITAL FOR PECTAL DISEASES

Wanted—HOUSE SURGEON. Salary at the rate of £100 per annum with board and laundry.

Applicants with particulars of age, qualifications and experience and copies of three recent testimonials to reach the undersigned not later than May 31st.

P. S. RECAN,
Secretary

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4. BRISTOL—Good mixed PRACTICE doing £1,360 p.a. panel 1,360. Premium £3,000. House to rent.

5. MIDDLESEX—PRACTICE in good part within easy reach of London. Panel 1,600. Receipts £1,800 p.a. 2½ years purchase. House sale or rent.

6. LONDON E.—Mixed PRACTICE for sale. Panel 750. Average £800 p.a. 2 years purchase or near offer. House rent.

7. SE. ENGLAND—PARTNERSHIP in country town. Receipts £2,538 p.a. Panel 1,790. Third share at 2 years purchase. House rent.

8. LONDON W.—Old-established PRACTICE doing over £700 p.a. Panel 400. Premium £1,150. Good corner house

9. KENT—PRACTICE in favourite coast resort. Receipts £1,443 p.a. Selected panel over 500. Premium £900. House rent.

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MAXIMUM FEE £50 if exclusively entrusted to us.

ACCOUNTS INVESTIGATED AND INCOME TAX RETURNS PREPARED
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WANTED TO PURCHASE

1. BIRMINGHAM (or within 50 miles thereof)—Good mixed PRACTICE with a panel of 1,000 upwards and receipts of from £1,500—£3,000. URGENTLY REQUIRED CAPITAL AVAILABLE.

2. MANCHESTER—In Residential Suburb. Panel and Private PRACTICE with scope for middle and better-class work. Receipts from £1,500—£3,000. Good premium paid. REQUIRED IMMEDIATELY. CASH AVAILABLE.

3. REQUIRED—Good English Scotch and Irish LOCUMS also ASSISTANTS. Good Posts to offer both Indoor and Outdoor.

FOR DISPOSAL

1. MIDLANDS—HALF SHARE (New Large Estate). No other Doctor allowed to build or open Surgery. Excellent opportunity for young married man should be British and well qualified. Good modern house.

2. SOUTH COAST—Good mixed PRACTICE. Receipts well over £1,200 p.a. Gaudin's figures. Panel 1,300. Good scope. Excellent house all services.

3. LANCs—Two PRACTICES. Receipts at £1,900 p.a. and £1,800 p.a. Panels 1,800 and 840 respectively. May be sold separately or together. Good Houses all services.

4. BIRMINGHAM—Old-established Panel and Private PRACTICE. Receipts at £1,244 p.a. Panel Fees, £610. Good House.

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FINANCIAL ASSISTANCE afforded to approved applicants for the purchase of Practices or Partnerships on very reasonable terms. Full particulars on application.

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The maximum Commission charged on the sale of any practice or share placed exclusively in our hands is £50. No Commission is charged on the sale of anything else except house property. Scale of charges sent on application.

FOR DISPOSAL

S. DEVON—NEAR COAST—£1,000 p.a. rapidly increasing. Small room. Premium 2 years purchase. 8/9 roomed house rent—1

KENT SUBURB—ABOUT £1,000 p.a. developing area. Middle and better class. S. panel. Premium 1½ years purchase. Nice house. HERTS—PROMISING NUCLEI

about £400 p.a. Panel 525. Premium £500. G. house garden and garage. Freehold £1,500—HANTS—COAST TOWN—OL

estab. Vendor retiring. Nearly £1,200. 1 scope. Panel 1,190. Nice house garden etc. sale or rent. Premium 1½ years purchase—4

LONDON W.—AVERAGE £1,000 p.a. and scope. Panel about 1,900. Good-class 1 feet and panel. Small apt. Large house. bed for sale or rent. Premium £3,500—

EAST YORKS—CLEAN TOWN SHARE worth about £1,700 after preliminary Assistance. Middle and working-class and panel 2,600. Premium 2 years purchase. Choice houses—6

LONDON W.—SEMI-CONSULTANT and Electro-therapeutic PRACTICE. £700/E. p.a. Old-established. No panel. 2 apps. Fees 11 up. Good house. 6/7 bed etc. and garage. 1 floor could be easily sublet. Premium £2

House to rent, or would sell—7

S. WALES—£1,400 P.A. INCRFA ing 98 per cent. panel and contract. Very 11 midwifery. Good house 5 bed 2 recep. sure etc. Rent only £40 p.a. Premium £2,000. Ink ing drugs fittings etc.—8

SOUTH EAST COAST—POPULAR Resort. Over £1,450 p.a. Panel 400 or mo Visits 3/6 to 2/1. Premium 2 years purchase 2 recep 3 bed consulting room etc. to rent—

ESSEX SUBURB—ABOUT £880 P. Panel 750. Visits 3/6 surgery 2/6 up. 110x 4 bed., garage and garden. Rent only £5 p. Premium £1,700 including lease fixtures etc.—

SURREY—1 SHARE OF £2,100 P. In steadily increasing PRACTICE. Visits 2, Midly 4. Large panel. Premium £1,350. One of houses to rent or buy—11

LONDON S.E.—SUBURBAN GOOD. Less non-panel non-dispensing Over £800 p. Fees 8/ up. Impending corner family house rent at £95 p.a. Premium £1,500—15

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URGENT SALE—KENT COAST—Favourite Resort. Very old-established Vendor retiring through ill-health. Average over £600 p. Better class, non-panel non-dispensing. Visits 2/1. Surgery 10/6. Good house 6 bed. Sell or 10 Premium £1,000 or offer—14

SPA PRACTICE—ABOUT £1,400 P.A. Old-established. Fees 1/1 upwards. Premium 2 years purchase. Excellent detached house 3 reception rooms 8 bed etc. Close to chief hotels and Pump Room. £3,000. Freehold—15

MIDLANDS—PARTNERSHIP SHARE producing about £1,250 p.a. In late Practice increase later surgical scope. Premium 2 years purchase. Choice of house—16

S. MIDLANDS—ABOUT 60 MILES from Town. £1,000—£1,100 p.a. Increasing panel and apps. worth over £600. Very old-established country PRACTICE. Good sporting district. Premium £600 to include fixtures etc.—17

DEVON—COUNTRY UNOPPOSED About £1,000 p.a. Panel over 400. Fees 7/6 to 10/6. Premium £1,000. Charming house. recep 6 bed surgery etc. 1 acre. Price £1,300—18

KENT—OVER £600 P.A. PANEL worth £200 average. Fees 3/6 to 10/6. Surgery 11 inc 3 recep., 4 bed etc. Garden. Rent £70 p.a.—19

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FOR DISPOSAL

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WIRRAL COAST—Well-established PRACTICE capable of great increase owing to building developments. Average cash receipts £530 p.a. Panel over 100. Good house 2 reception 4 bedrooms garden. Rent £75 p.a. Premium, best offer. Vendor retiring owing to ill-health—No. 969

MONMOUTHSHIRE—Old-established Panel Contract and Private PRACTICE in prosperous district. Cash receipts last year £1,400. Panel 1,200 plus Contract work yields £1,250 p.a. Good house, 2 reception, 5 bedrooms, 11 professional rooms (separate entrance) and garage. Rent £40 p.a. Expenses 1/6. Premium—£2,000—No. 970

YORKSHIRE (W.R.)—Sound old-established middle and working-class PRACTICE in important city. If desired a two-fifths share would be sold now and remain share in 12 months. Cash receipts last year £4,355 and increasing. Panel 7,600. Great scope. Excellent corner house with modern conveniences 2 reception 6 bedrooms 3 professional rooms, garage for 3 cars. Premium—1/2 share—11 years purchase. Vendor retiring owing to ill health—No. 971

NEAR MANCHESTER—Sound middle and working-class PRACTICE. Average cash receipts £1,600 p.a. Panel over 2,500. Scope. Detached corner house 2 reception 4 bedrooms 3 professional rooms, garage and garden. Premium—1 years purchase—No. 952

NEAR NOTTINGHAM—PARTNERSHIP in practically unopposed mixed-class PRACTICE. Average cash receipts £1,500 p.a. Panel over 1,600. Appointments £170 p.a. Attractive house 2 reception 5 bedrooms garage and pleasant garden. Premium—1 1/3rd share—2 years purchase. No. 953

YORKSHIRE (W.R.)—Mixed Panel and Private PRACTICE in large city in present hands 3 years. Cash receipts last year £1,479. Panel 1,000. Good house with modern conveniences, reception 5 bedrooms 3 professional rooms (separate entrance) garage and small garden. Price £1,400. Freehold. Premium—Practice—11 years purchase. Vendor retiring—No. 967

LANCS TOWN—Mixed panel and private PRACTICE in present hands 3 years. Cash receipts last year £1,500 p.a. Panel 1,500. Great scope. Good house reception 4 bedrooms, garage and small garden. Rent £50 p.a. Premium—best offer—No. 94

DURHAM—Old-established PRACTICE in pleasant district near large town. Cash receipts last year £1,000. Panel 350. Two professional rooms, garage for 2 cars and large garden. Premium—Best offer for quick sale—No. 97

NORTH WEST COAST—Old-established middle-class PRACTICE in seaside town. Cash receipts last year £1,100. Panel 150. Nice detached house 2 reception 4 bedrooms, garage and large garden. For sale. Premium—11 years purchase—No. 961

EAST YORKSHIRE—Old-established unopposed PRACTICE in nice city. Cash receipts last year £1,000 p.a. Panel 700. Excellent detached house 2 reception 4 bedrooms 3 professional rooms (separate entrance) garage and small garden. Price £2,000 or would sell for £1,500. Freehold. Premium—Practice—11 years purchase—No. 969

NORTH WALES—Old-established middle-class PRACTICE in beautiful district. Cash receipts last year £1,417 p.a. Panel 415. Good detached house 2 reception 4 bedrooms, garage for 2 cars. Premium—11 years purchase—No. 962

MANCHESTER—Mixed Panel and Private PRACTICE in present hands 3 years. Cash receipts last year £1,100 p.a. Panel 1,100. Good detached house 2 reception 4 bedrooms, garage and small garden. Price £2,000 or would sell for £1,500. Freehold. Premium—Practice—11 years purchase—No. 968

WILMOUTH—Old-established middle-class PRACTICE in beautiful district. Cash receipts last year £1,417 p.a. Panel 415. Good detached house 2 reception 4 bedrooms, garage for 2 cars. Premium—11 years purchase—No. 962

CHESHIRE TOWN—Very old-established mixed-class PRACTICE. Cash receipts £1,500 p.a. Panel 1,700. Good house 3 reception, 4 bedrooms and dressing rooms, 3 professional rooms, garage and garden. Premium—2 years purchase—No. 957

NORTH STAFFS—PARTNERSHIP in old-established mixed Panel and Private Practice. Cash receipts last year £5,321. Panel 7,500. Incoming partner may choose own residence—Premium—2/9th share (about £1,200)—2 years purchase. Further share later—No. 941

EASTERN COUNTYS—Partnership in old-established Country PRACTICE with income of about £2,400 p.a. Panel 2,000. Excellent house 3 reception, 5 bedrooms, garage and good garden. Rent £60 p.a. Premium—half share—£2,200—No. 933

LANCS TOWN—PARTNERSHIP in Panel and Private Practice about 7 miles from Manchester. Average cash receipts £4,325 p.a. Panel 3,610. Scope. Detached house 2 reception 5 bedrooms, garage and half acre garden. Premium—2 1/4 share (about £1,750 p.a.)—2 years 5 purchase—No. 962

MANCHESTER—Well-established middle and better working-class PRACTICE in residential district. Cash receipts last year £1,122. Panel 740. Nice detached corner house 3 reception 5 bedrooms, billiard room, garage and garden with tennis court. Premium—best offer—No. 963

LANCS TOWN—Old-established mixed-class PRACTICE, about 22 miles from Manchester. Cash receipts last year £1,034. Panel 1,050. Scope. Good house, 2 reception, 5 bedrooms 3 reception rooms professional rooms, garage and garden. Premium—11 years purchase—No. 951

MANCHESTER—Old-established middle and better working-class PRACTICE, in present hands 14 years. Average cash receipts £1,052 p.a. Panel 470. Scope. Good energetic man. Good house 2 reception 5 bedrooms, garage and good garden. Premium—best offer. Vendor retiring—No. 875

SHIFFIELD—Old-established mixed-class PRACTICE, about 22 miles from Manchester. Cash receipts last year £1,112. Appointment (transferable) £100 p.a. plus bonus. Panel 400. Scope. Detached house 2 reception, 3 bedrooms small garden. Rent £52 p.a. Premium—11 years purchase—No. 940

DEATH VACANCY—CUMBERLAND—Old-established unopposed Country PRACTICE. Cash receipts last year £1,031. Panel 350. and transferable appointments £65 p.a. Excellent detached house beautifully situated 8 rooms. 3 professional rooms, garage for 2 cars and large garden. Premium—Best offer for quick sale—No. 97

WIRRAL COAST—PARTNERSHIP in old-established mixed-class PRACTICE. Cash receipts last year £2,830. Panel 2,815. Scope. Excellent detached house 2 reception 4 bedrooms, garage. Premium—half share—2 years purchase—No. 946

NEAR LIVERPOOL—Well-established middle-class PRACTICE in pleasant district. Ample scope and district development. Cash receipts £600 p.a. Panel 650. Nice house 2 reception 5 bedrooms and garden. Premium—1 years purchase. Vendor retiring—No. 92

SHIFFIELD—LIFE INSURANCE, MEDICAL REFERENCE connection, etc. Income £20 p.a. Suit doctor living in one of the suburbs with or without a Practice. Premium—£600—No. 963

LANCS TOWN—Well-established Panel and Private PRACTICE. Earnings last year £4,434. Panel 1,900. Good house available. Premium—11 years purchase. Partnership if desired—No. 920

ASSISTANTS WANTED—OUTDOOR—LANCS TOWN—£400 p.a. at £50 Co. allowance. CO. DURHAM—£400 p.a. Car provided. R.C. preferred. NEAR MANCHESTER—£300 p.a. with board and house. Car provided. INDOOR—BLACKPOOL, LIVERPOOL, MANCHESTER, YORKSHIRE TOWNS, NORTH STAFFS—£100-350 p.a. all found. Many other agencies. Please enquire.

LOCAL ENGAGEMENTS AND ASSISTANTSHIPS—Medical Men and Women are invited to receive or refer to the following engagements:

SPECIAL NOTICE

The Commission payable on Sale of any Practice or Partnership where the Bureau is Sole Agent is limited to FIFTY POUNDS exclusive of house property

REVISED TERMS ON APPLICATION

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(THE SCHOLASTIC, CLERICAL & MEDICAL ASSOCIATION LTD)
(FOUNDED 1880)

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In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill book debts furniture drugs fittings and other effects (excluding sales of any freehold or leasehold property, or of practices effects etc., outside Great Britain) is limited to a maximum fee of Fifty Pounds

FULL TERMS ON APPLICATION

Practices and Partnerships for Disposal

Full particulars sent free

1 N WALES WATERING PLACE—PARTNER-SHIP in middle and upper-class Practice averaging nearly £3 800 p.a. including selected panel 245 Fees 5/- to 10/6, without medicine—some £1 1s. Detached house (4 bedrooms etc.), with good garage and small garden to rent on lease Scope. Premium one-half share £3 900, to include surgery fittings, drugs, and book debts Hospital

2 S OF ENGLAND—Old-established middle class non-dispensing PRACTICE doing about £900 in important seaport town No panel but plenty of scope, if desired Fees range from 3/6 to £1 1s All work done from consulting rooms in centre of town Good introduction Premium £1,500

3 ESSEX—Old-established PRACTICE in outlying Suburban District Receipts average £2,125 p.a. including appointments worth about £260 p.a. and a panel of 1 784 Well situated corner house (about 6 bedrooms) and surgery accommodation, with separate entrance Garage and fair size garden Rent £120 on lease Premium two and a quarter years purchase Purchaser must be English Scottish or Irish

4 NE COAST—PARTNERSHIP (after preliminary Assistantship) in mixed Practice about £3,300 p.a., in seaport town Panel 2 600 A suitable house could be obtained One third share at first to suitable man at two years purchase (or near offer) with option to increase to two fifths in three years and to four ninths later

5 S OF ENGLAND—Old established PRACTICE in agricultural district about two miles from the sea Cash receipts 1936-1937 including panel of 450 Fees 2/6 to £1 1s Medicine extra Good house (5 bedrooms 2 box rooms, etc.) in half acre of ground with garage Central heating Electric light Price freehold £2,200 Scope for increase Premium £1 730

6 S DEVON—Increasing PRACTICE of £1 000 in delightful country district Panel 260 Fees 7/6 to £2 2s House with 5 bedrooms garage and garden, etc. to rent at £50 p.a. Scope Premium £2 000 or near offer

7 LONDON SW—Well-established PRACTICE (held by Medical Woman) in outlying suburban district Cash receipts average £960 p.a. No panel, but scope if desired Purchaser could have use of surgery premises and living accommodation with services by arrangement Premium one and three-quarter years purchase

8 S COAST—PARTNERSHIP in very old-established good middle-class Practice £4 690 p.a., in rapidly growing watering place Panel 4 000 Visits range from 3/6 to £1 1s Suitable house obtainable Scope One fourth share would be sold at first at two years purchase

9 NE COAST—Old-established and easily worked middle and better working-class PRACTICE, averaging over £1 150 p.a., in seaport town No panel—a few contracting out patients Visits 5/- to 15/- Rent of consulting rooms £26 p.a. A suitable residence could be obtained Good scope much building going on Premium £1,500 (Contents of consulting rooms—including X Ray plant and electrical apparatus—about £150)

10 N DEVON—PARTNERSHIP in old-established Practice averaging £2,050 p.a. in delightful country district Panel 1,350 Visits 3/6 to £1 1s House (6-7 bedrooms)

garage and good garden Rent £60 p.a. Good hospital and scope for surgery One third share would be sold for £1 300 and up to one-half later

11 W WALES—PARTNERSHIP in first-class country Practice near sea coast Good house available to rent Facilities for country sport and for golf tennis and bathing Premium for share of £1,200 to £1,500 one and a half years purchase Knowledge of Welsh desirable

12 ESSEX—PARTNERSHIP in old-established Practice in populous suburban district Panel about 3 000 Practically no Midwifery Semi-detached corner house (6 bed and dressing rooms) with garage and small garden to rent Plenty of scope for increase Premium for share worth about £800 p.a., £1 400 (by instalments if desired) Further share after about 18 months

13 LONDON, NW—Old-established and increasing good-class non-dispensing PRACTICE in one of the best residential districts Cash receipts last year £1 400 Select panel 300—could be greatly increased if desired Fees 7/6 to 10/6 Semi-detached house in first rate quarter, containing 7 bedrooms etc Rent £240 p.a. on lease Scope Premium £2,500

14 N WALES—Old-established PRACTICE in growing district with beautiful surrounding country Receipts average £1,550 p.a., including over £800 from panel Visits 5/- to 15/- Nice private residence which can be bought or rented on lease Professional accommodation rented at £45 p.a. on lease Premium two years purchase or near offer Knowledge of Welsh an advantage though not essential

15 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London Panel 400 increasing Semi-detached house (2 bed and dressing rooms) with garage and garden Rent £125 p.a. inclusive Rent of Branch Surgery £50 p.a. inclusive Scope for increase Premium £500

16 SW OF ENGLAND—FAVOURITE WATERING PLACE—THIRD PARTNER required in old-established and increasing middle-class non-dispensing Practice about £3 000 p.a. Panel over 1 800 Detached house (7 bed rooms, etc.) with garage and good garden to rent on lease Considerable scope especially in Midwifery One third share at two years purchase with prospect of further share in two years

17 YORKSHIRE (NR)—Very old-established and steadily increasing country PRACTICE between £1,400/£1,500 a year including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden for sale Good schools and sport Scope Premium one and a half years purchase

18 LONDON SW—Well-established PRACTICE averaging £1 735 p.a. including about £130 from eye work Panel 1 940 Private residence with ample accommodation and garage for sale or rent Net rent of surgery premises about £10 p.a. Scope for increase Premium £3 400

19 WESTERN AUSTRALIA—Old-established PRACTICE averaging £1,235 p.a. in small town in centre of one of the best and most prosperous pastoral areas Brick built house (4 bedrooms) electricity and water Rented on lease Premium £630 sterling Two Hospitals in town

British Medical Bureau

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1645

Practices and Partnerships for Disposal (continued)

20 LONDON SE—Increasing PRACTICE in populous outlying suburban district. Receipts last year £1,200. Panel nearly 1,200. Large house for sale or rent. Two Branch Surgeries. Scope for increase. Premium £2,000.

21 CANARY ISLANDS—Small compact PRACTICE in one of the healthiest and pleasantest parts. Cash receipts 1936 over £500. Fees 10/6 and £1 1s. Excellent scope. Premium 300 guineas.

22 OPHTHALMIC PRACTICE in S. Rhodesia—Locum Tenens required immediately with view to purchase. 6 months' receipts 11 months ended March 31st 1937 £1,536. Possibilities of expansion for man with D.O.M.S. or D.O. and operative experience. Good well-equipped Hospital.

23 DEATH VACANCY—BOURNEMOUTH DISTRICT—Old-established PRACTICE doing about £250 p.a. but offering good scope. Panel recently started with 20 patients. Excellent non-basement house (6 bedrooms etc.) with garage and small garden. Price freehold £3,150.

24 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village. Cash Receipts last 12 months £1,240. Panel over 400. Small expenses. Detached house (5 bedrooms) with electric light, main water etc. garage and garden for sale. Premium £2,100.

25 EAST ANGLIA—PARTNERSHIP in old-established country practice about £1,700 p.a. Easy distance of the coast. Panel over 2,000. House (6 bedrooms) electric light and main drainage, garage and about 3 acres of land for the freehold. Premium two fifths share two years purchase. Partner must be married aged 35-40. Preliminary Assistantship.

26 LONDON N.W.—Increasing PRACTICE of £725 p.a. in growing district 10 minutes from Piccadilly. Receipts last year £700. Are easily obtained appointment value £40 p.a. not included. Panel 1,500. No midwifery. Semi-detached double fronted freehold corner residence (4 bedrooms) garage and garden for sale. Scope. Premium £1,450.

27 SCOTLAND—PRACTICE averaging over £1,300 p.a. in Edinburgh. Panel over 900. Good house for sale.

28 LANCES—Rapidly increasing mixed-class PRACTICE of £1,500 p.a. in manufacturing town. Panel about 2,000. Two houses to be purchased or rented at first. After relatively a few years would be sold at two years purchase.

29 S. COAST—Good middle-class non-dispensing PRACTICE about £1,100 £1,200 in popular watering place. Panel about 200. Fees 3/6 to 10/6. Very attractive detached house (3 bedrooms etc.) with garage and garden. Price £3,000 freehold. Scope. Premium £2,250.

30 EASTERN COUNTY—PARTNERSHIP (after 6 months' Assistantship) in very old-established Practice in market town in hands of Medical Woman. Receipts £2,000. House available. Applicant must be Medical Man aged 30-35 and graduate of Cambridge or London preferred.

31 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £1,000 p.a. Panel 1,500. House with 4 bedrooms and separate sitting accommodation, garage and garden to rent at £45 p.a. Scope. Premium one third share two years purchase.

32 S. OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £1,200 p.a. in Market town about 100 miles from London. Large detached house (5 bedrooms etc.) available for sale. Premium one third share two years purchase.

33 S. OF ENGLAND—Well-established Practice about £1,100 p.a. in a seaside resort. Panel over 2,000. House with 4 bedrooms and separate sitting accommodation, garage and garden to rent at £45 p.a. Scope. Premium one third share two years purchase.

34 LONDON W.2—Practice averaging over £800 p.a. including panel 165. Consultations 5/ upwards. Private residence to rent at £120 p.a. and surgery premises at £60 p.a. Scope for increase. Premium two years purchase.

35 LONDON, W.—Practice of about £700 p.a. in residential district. Panel 400. Large corner house (7 bedrooms) with separate surgery entrance and good garden. Price of lease £1,350. Scope. Premium £1,250.

36 MIDLANDS—Partnership in old established increasing Practice in pleasant situated Country Town. Good appointments and panel. Visits 3/6 to £1 11s. 6d. medicine extra. Suitable house obtainable. Incoming partner must be good Surgeon—English or Scottish—aged 30-35. Small well-equipped Hospital. Share worth £1,250 p.a. at first at two years purchase.

37 MIDLANDS—Old-established Practice in clean prosperous Manufacturing Town. Receipts average £750 p.a. including P.M.S. worth £125 p.a. and panel about 750. Pleasantly situated house (5 bedrooms attics etc.) on main road. Price (freehold) £3,200. Ample scope. Premium one and three-quarter years purchase.

38 E. ANGLIA—Partnership in old-established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town. Panel 1,850. Good society and sport. Scope. One third share at first. Premium two years purchase.

39 N. DEVON—Old established Practice averaging over £1,050 p.a. in small Watering Place. Panel about 400. Well built semi-detached house (5 bedrooms etc.) garden for sale. Beautiful surrounding country. All kinds of sport. Scope. Premium two years purchase.

40 TASMANIA—Practice doing £1,500 a year including good appointments. Fees range from 10/6 to £1 1s. House with 2 bedrooms etc. and garden for sale. Purchaser should be able to do major surgery. Premium £900.

41 LONDON N.—Well established Practice averaging £450 p.a. in pleasant growing District. Panel about 600. Well situated house on main road to rent at about £65 p.a. Good scope—building going on. Premium £600 or offer to include surgery fittings and drugs.

42 SURREY—Increasing middle and working class PRACTICE in thickly populated Suburban District. Receipts 1936 £1,700. Panel 600. Small house. Rent £78 p.a. (branch £55 p.a.) Ample scope. Premium £2,600.

43 SOUTH SUFFOLK—Partnership in sound old-established Practice over £6,000 p.a. in most desirable Country Town. Good appointments and panel over 3,000. Not much midwifery. Choice of suitable houses. One sixth share at first at two years purchase.

44 LONDON N.—Medical Woman's Practice in populous district. Receipts average £550 p.a. including panel 470. House (4 bedrooms) to rent at £100 p.a. Premium £850.

45 EASTERN COUNTIES—Partnership (after six months' Assistantship) in very old-established middle-class Practice averaging £1,300 p.a. in Market Town. No panel. Fees 4/ to £1 1s. Suitable house obtainable. Premium one half share two years purchase.

46 CO. DURHAM—Well-established Practice about £1,100 p.a. in Residential Colliery District within easy distance of Newcastle. Appointments worth £85 p.a. and panel 80. Desirable freehold house (3 bedrooms and 2 attic rooms) with garage for sale or rent. Premium one and a half years purchase.

47 N. WALES WATERING PLACE—Good-class non-panel PRACTICE about £500 p.a. Exceedingly nice house (4 bedrooms) in best part with garage and nice garden. Scope for panel work if desired. Premium one year's purchase.

Particulars of each are available for Practices with incomes of £1,250 to £2,000 p.a. and for a more detailed report for the purchase of approved practices or shares. Particulars will be forwarded on application.

A number of Assistantships can be offered to suitable applicants.

All communications to be addressed to The Manager.

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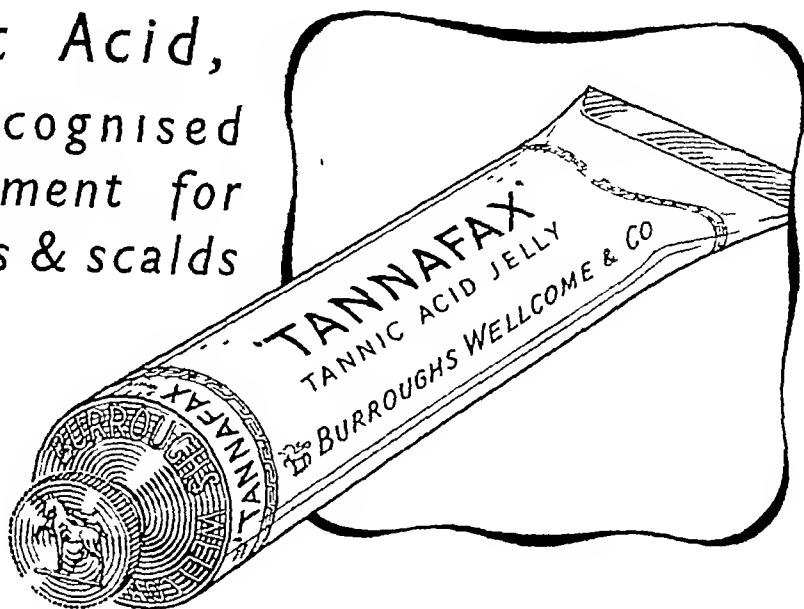


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SATURDAY MAY 29 1937

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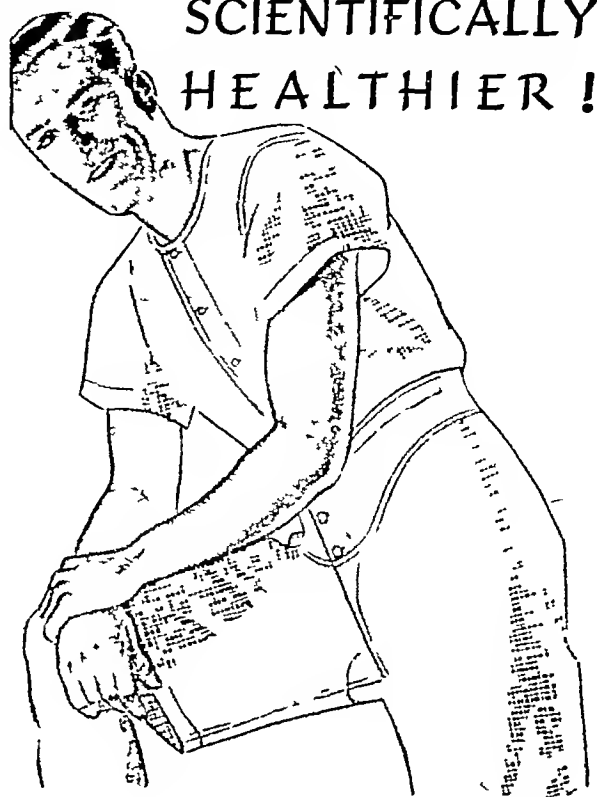
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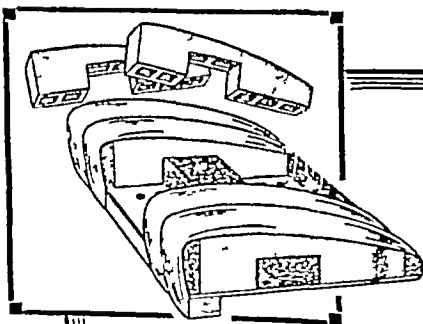
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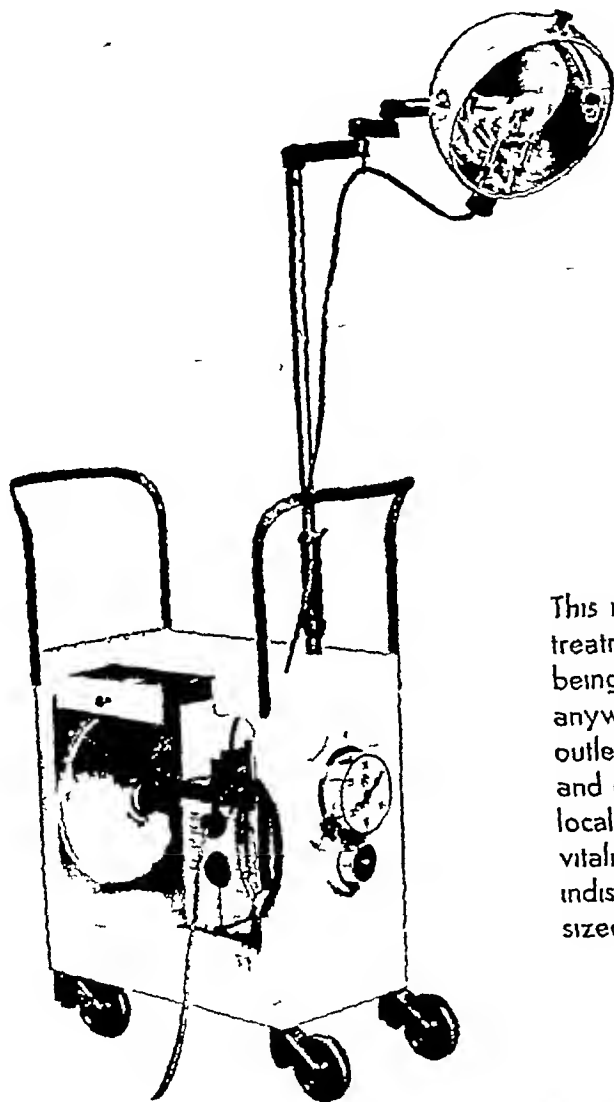
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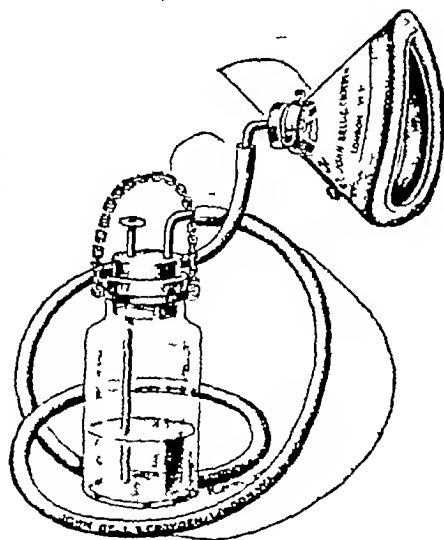
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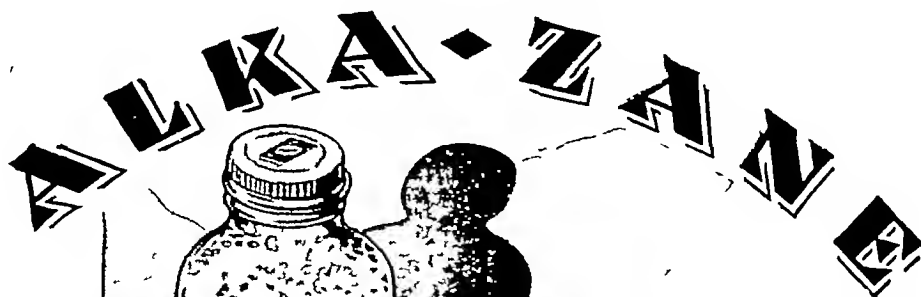
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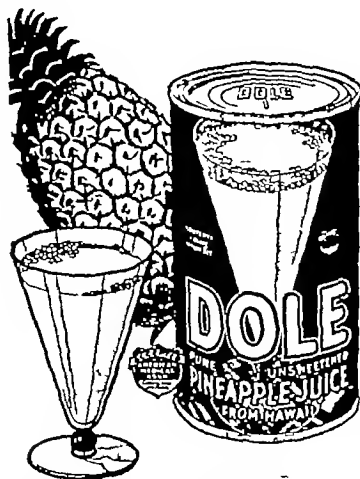
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(Ministry of Health First Report of Advisory
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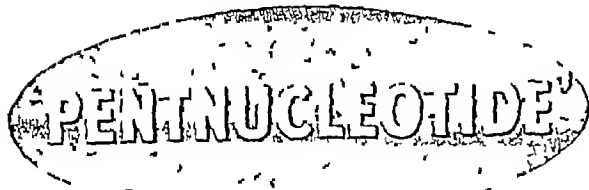
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(J.A.M.A., 106 1088 (March 28), 1936)



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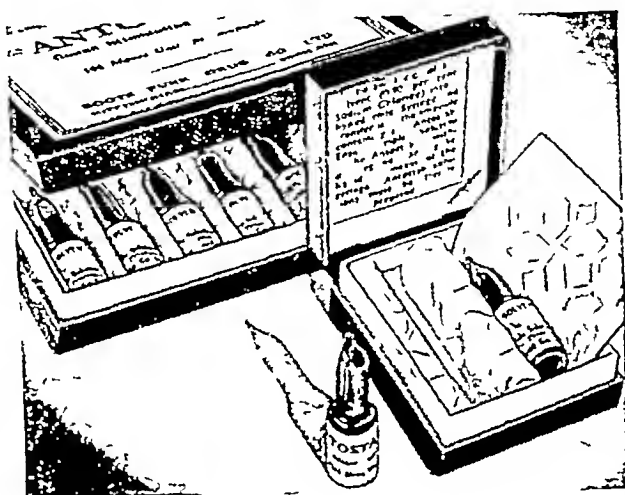
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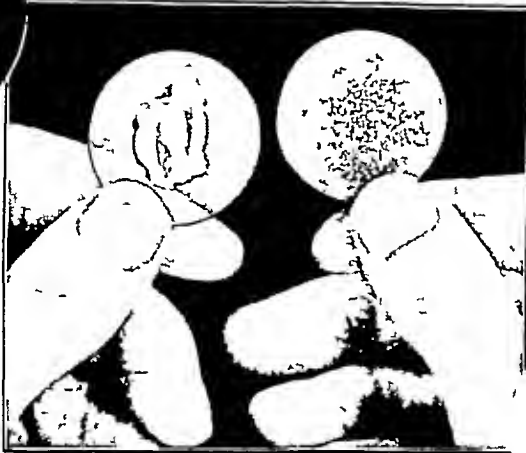
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Left —The indigestible casein clot formed by cow's milk with an equal bulk of plain water

Right —The finely divided precipitate formed when cow's milk is modified by Robinson's 'Patent' Barley

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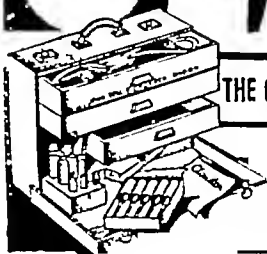
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At such anxious times it is of the utmost importance to have ready at hand a reliable styptic agent



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For symptomatic relief two preparations which may be applied to the nasal mucosa are ANESTHONE CREAM and ADREPHINE INHALANT.

ANESTHONE CREAM contains benzocaine, Adrenalin Chloride and ephedrine hydrochloride in a base compound of lanolin and petrolatum, a small quantity may be applied to the nasal mucosa and the conjunctiva every two or three hours if necessary.

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ANAHÆMIN B.D.H.

In Pernicious Anæmia

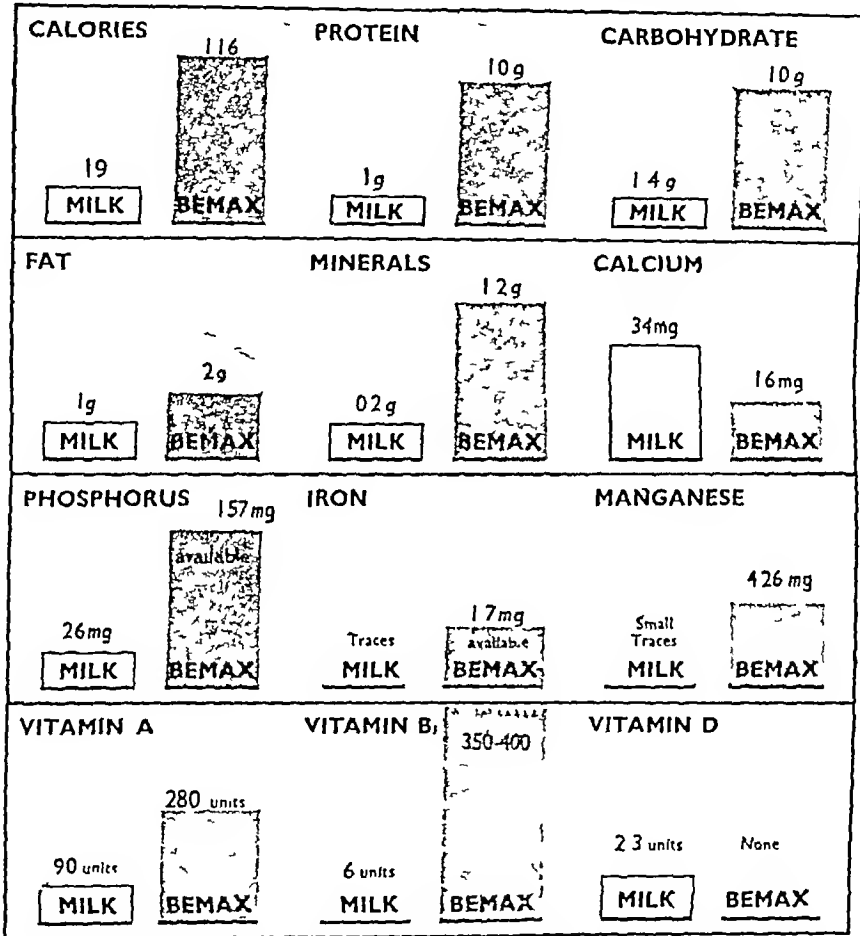
Anahæmin B D H presents in a high degree of purity the active hæmatopoietic principle of liver which has been separated from the reaction-producing protein substances. Although the constitution of anahæmin is not yet elucidated, its characteristics are sufficiently well-known and standardised to ensure the issue of a product which is unvarying in chemical composition as well as in anti-anæmic potency.

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First cure the constipation . . .

The dangers of constipation are doubtless occasionally overstressed, but they are far more often under-estimated. Opinions based on centuries of experience are rarely without foundation, even though the rationalised explanations offered turn out to be fallacious. It was almost habitual with doctors, during what we may call the empiric ages of medicine, when, dealing with almost every form of illness, to ensure, first of all, that the bowels were acting regularly and adequately.

"First cure the constipation" is among the classic medical aphorisms that live. It is common experience that a very large proportion of so-called minor illness is associated with some degree of eliminatory sluggishness. When this is remedied, we are often surprised at the speedy disappearance of unpleasant symptoms seemingly remote.

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PATHOGENESIS OF ECLAMPSIA

81

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The subject of eclampsia has become so overgrown with fact and theory that at times one as a clinician feels in danger of losing sight of the wood in consideration of the trees. I therefore offer no apology for the following attempt to reduce eclampsia to the form of a diagram.

Acute Glomerulonephritis and Eclampsia

The resemblance between acute glomerulonephritis and eclampsia in symptoms and morphological change is so close that one might reasonably expect some similarity in pathogenesis in spite of their aetiological difference. In both we find albuminuria, oliguria with a high specific gravity and absence of retention in the blood of urinary constituents. The morphological change in the kidneys in the two diseases differs in degree rather than in kind. Both are hypertensive conditions and hypertensive encephalopathy, the characteristic symptom of eclampsia, is also apt to occur in acute nephritis. Both show oedema and though in one there is a typical liver lesion absent in the other this discrepancy one would suggest may depend on a difference in aetiology rather than pathogenesis. Although in acute glomerulonephritis pre-eclampsia and eclampsia the renal lesion is only one manifestation of a generalized reaction the kidney is so widely employed both clinically and in experimental work as an indicator that one or two generally accepted facts having a special

serum with all its soluble contents, except serum globulin and serum albumin, which have too large a molecule to pass through uninjured endothelium is transferred to the cavity of Bowman's capsule and thence into the tubule.

That the tubule has an active function is shown by the high oxygen consumption of the kidney. Its function is one of selective reabsorption from or concentration of the filtrate, thus sugar is completely reabsorbed, water according to the need of the body and salt sufficient to maintain the pH of the blood. The non-threshold substances such as urea pass with the excess water into the collecting tubules and so out as urine. For our present purpose then the term renal function refers solely to the action of the tubule.

The Kidney in Acute Glomerulonephritis

Let us take as our starting point the morphological change found in the kidney in acute glomerulonephritis. This is almost entirely confined to the glomerular capillaries and the afferent vas. Apart from an occasional slight cloudy swelling at the proximal end of the tube the tubules show no change as one would expect in view of the high specific gravity of the urine (1030) and the absence of retention of urinary constituents in the blood. Where such a retention might be expected from a fall in the excretion of urea with a drop in filtration to below an amount sufficient to deal with the total urea production of the body, the fact that an abnormally high blood urea is not as a rule found is explained by the power of the anasarca fluid to store urea in about the same concentration as that in which it occurs in the blood. This may account for the high death rate in cases of eclampsia without oedema in which in effect a uraemic element however slight is superimposed.

The essential kidney lesion is dilatation of the afferent vas and glomerular capillaries with well marked ischaemia of the tuft. Bell in 1932 demonstrated a hyaline change in the basement membrane to explain the patency of the almost empty capillaries. (Shaw Dunn in 1934 demonstrated by means of Mallory's connective tissue stain a slight thickening of the basement membrane in the kidney of eclampsia and pre-eclampsia.) The endothelium is thickened and shows a slight tendency to proliferation. The epithelial layer reveals a similar change. A few leucocytes are present. The whole tuft is swollen and completely fills Bowman's capsule at times showing a tendency to herniate into the tubule. The glomerular capsule is universal not focal. The intertubular capillaries are dilated and engorged.

Pathogenesis of Acute Glomerulonephritis

There are two main theories as to the pathogenesis of acute glomerulonephritis. The first (which is ascribed by Fishberg to Conheim and Lichtheim, 1877) is based on the fact that the disease occurs in the course of acute infections, especially scarlet fever and tonsillitis. It describes the condition as one of generalized toxic injury to the capillaries, of which the kidney lesion is only one manifestation. This concept of the condition as generalized is supported by the fact that oedema sets in early, simultaneously with or even before the appearance of albuminuria, and by the high protein content of the anasarca fluid. The severity of the capillary change in the glomerulus, through which toxin is eliminated, as compared with that in the intertubular capillaries and those of other organs, was held to indicate its toxic origin.

Against this however, we find that injection into experimental animals of the toxin or endotoxin of the *Streptococcus scarlatinae* though it produces an inflammatory reaction, fails to produce the ischaemia of the tuft characteristic of acute glomerulonephritis. Further, 'post-scarlatinal glomerulonephritis becomes chronic in only an exceedingly small proportion of cases' (Fishberg). Many cases of chronic nephritis give no history of a previous acute attack, though a history of scarlet fever or of some less acute infection is frequently obtained. As was shown by Trask and Blake in 1924, moreover, the toxin of scarlatina can be demonstrated in the urine, and we know that albuminuria is a frequent symptom in acute infective fevers. It would seem probable that a slight inflammatory change occurs in a proportion of these cases some of which may later develop chronic nephritis. It does not therefore seem wholly unreasonable to ascribe the inflammatory part of the glomerular lesion in acute glomerulonephritis to the action of the toxin of the scarlet fever, etc. and regard it as in existence before the onset of the nephritis. The essential kidney lesion of acute glomerulonephritis as found post mortem one would suggest, is therefore confined to a universal dilatation of the vasa afferentia and capillaries of the tuft with ischaemia.

Volhard's Theory

In 1923 Volhard put forward another theory of the pathogenesis of acute glomerulonephritis. He suggested that it was the result of a generalized angiospasm producing capillary ischaemia. The endothelium of capillaries accustomed to a pressure of 120 mm Hg might reasonably be supposed to be highly susceptible to anoxaemia. It probably undergoes an albuminoid degeneration with the formation of a smaller protein molecule consequent swelling and increased permeability. The oliguria may result from decreased flow of blood through the tuft or from a fall in intracapillary pressure. Shaw Dunn has suggested that as the glomerular change is diffuse it is possible that instead of only one in three of the nephrons functioning at one time as occurs normally all three are working simultaneously. Each glomerulus in this way filters only a third of the blood it otherwise would. The length of the tubule remaining constant the filtrate in this circumstance may be regarded as passing over three times the usual length of concentrating epithelium.

Opponents of Volhard's theory ascribe the oliguria to impermeability of the tuft owing to inflammatory swelling. We find however that the lumina of the capillaries show a fixed patency and contain a few red blood corpuscles. We also find engorgement of the intertubular capillaries,

and though the presence of some obstruction due to endothelial thickening cannot be denied, Volhard has shown that the kidney can be transfused after death has relieved the arteriole spasm.

The Renal Lesion

Baird and Shaw Dunn (1933) assessed the position of the renal lesion in eclampsia and pre-eclampsia as lying midway between the normal and that of acute glomerulonephritis. They agree with Bell (1932) that 'a distinction can usually easily be made between the two conditions the distinction being the absence of leucocytes or tendency to cell proliferation in the glomerulus of eclampsia. As this part of the nephritic lesion, one has suggested, is due to the elimination through the tuft of the scarlatinal or other toxin, and as this excretion has as a rule ceased before the onset of the nephritis, we may I think, for our present purpose justly regard the kidney lesions in the two diseases as identical in kind.

Common Pathogenic Factors

The main object of this paper is to show that in angiospasm we have a common pathogenic factor underlying and uniting all the varying expressions of eclampsia. Believing as one does that acute glomerulonephritis is an angiospastic condition, and having indicated an essential morphological similarity between the kidney lesions in the two diseases let us consider whether the analogy can be carried further to include all the manifestations of both conditions.

The first common symptom is oedema. In both diseases it is of rapid onset. There is a difference in the severity and distribution of the swelling but in both the high protein content of the anasarca fluid shows it to be due to endothelial injury. There is, however, no clear indication as to the cause of this damage except on an analogy with the other symptoms of the diseases. On the other hand, the pallor of the skin typical of acute nephritis is almost certainly due to angiospasm, and Hinselmann (1924) observed in cases of eclampsia, by means of the capillary microscope, constantly recurring spasmodic contractions of the capillaries at the base of the finger-nail at times producing complete cessation of flow. Capillary circulation is controlled by the Rouget cells, a layer of unstriated muscle encircling the vessel wall reticulated to allow of transudation of fluid. To these sympathetic fibres can be traced. We know that these cells are absent in the lung and kidney, while in the liver lobule not only are they absent but even the endothelium is incomplete. Further Williams (1936) has shown that the intracranial capillaries have no sympathetic supply. Accordingly in these organs we must look further back than the capillary for the site of our angiospasm.

In the retina of both diseases a spastic condition of the arterioles can be observed producing indentation of the venules at arterio-venous crossings. In extreme cases oedema can occur of such severity as to cause separation of the retina.

The rise in blood pressure cannot be regarded as a reaction to obstruction to the renal circulation alone as in acute glomerulonephritis the pressure seldom exceeds 180 mm Hg whereas in eclampsia with a much less severe kidney change it at times reaches great heights. It is more reasonable to suppose this to be due to a generalized arteriole spasm. In eclampsia with a higher pressure reaction we get a correspondingly wider distribution of lesion referable to angiospasm.

Hypertensive Encephalopathy

In this consideration of the manifestations of acute glomerulonephritis and eclampsia as due to angiospasm there is one last common symptom to be taken into account—namely hypertensive encephalopathy. This term was introduced by Oppenheimer and Fishberg in 1928 to describe the condition which Volhard in 1918 designated pseudo uraemia to distinguish it from uraemia with which it had previously been confused. Uraemia as its name implies is dependent on the presence in the blood of an abnormally high non protein nitrogen. The condition is insidious in onset and is preceded by muscular weakness and wasting. Anorexia and diarrhoea occur and the skin is pale and dry and shows a yellowish brown discoloration. The urine is as a rule greatly diminished but of low specific gravity (1010) and the urea concentration in the blood is high indicating failure of renal function. Babinski's sign is absent.

In hypertensive encephalopathy on the other hand the onset is dramatic in its suddenness. Vaquez and Nobé court pointed out in 1897 that the essential feature in eclampsia was arterial hypertension showing a rapid rise just before or coincident with the onset of the seizures. The attacks start with a generalized tonic spasm which gives way to a clonic convulsion followed by coma. The pupils are dilated and react sluggishly. Babinski's sign can generally be elicited. The pressure of the cerebrospinal fluid is raised and often greatly increased. No indication of failure of renal function is found on examination of the urine and of the blood.

Hypertensive encephalopathy occurs in three conditions—eclampsia, lead poisoning and acute glomerulonephritis. All three are hypertensive and in all the seizures are epileptiform in character. In regard to lead poisoning Vaquez (1904) showed that the colic occurred with hypertension and was due to constriction of the mesenteric vessels. Similarly the arteriosclerosis of chronic lead poisoning is held to result from spasm of the media. The spastic nature of the condition is further indicated by the pallor of the skin even in cases where the anaemia is slight and by the cramps which are a typical feature of the condition.

ample histological evidence the existence of an extensive sympathetic supply to the cerebral vessels with the exception of the capillaries. His final conclusion is as follows.

The sympathetic innervation of the intracranial circulation does not differ materially from that of the systemic circulation. It does not seem reasonable to suppose vessels with a full and normal sympathetic innervation incapable of contraction. If then we accept the possibility of intracranial angiospasm this would seem to be the simplest explanation of the cerebral ischaemia, with or without oedema which we find post mortem in all three types of hypertensive encephalopathy, more especially as in all three angiospasm can be demonstrated as occurring elsewhere at the same time. Lastly the presence of Babinski's sign absent in the irritative seizures of uraemia, indicates a cutting off of cortical control by ischaemia which it would be difficult to explain by any other mechanism in such a condition as eclampsia.

The Liver Lesion

Though the liver lesion of eclampsia does not occur in acute glomerulonephritis there would seem to be as much reason to consider it as due to an arteriole spasm with capillary ischaemia as is the glomerular lesion of both diseases. The essential liver lesion in eclampsia is a periportal haemorrhagic necrosis with a similar though naturally less marked change in the intracapsular tissue. The hepatic artery supplies the connective tissue in Glisson's capsule and the sinusoids of the area of lobule surrounding the capsule. It contributes one-quarter of the blood supply to the lobule and 40 per cent of the oxygen the main central portion being oxygenated by the portal veins (Starling).

The liver lesion has all the characters of a severe multiple infarction. It is confined to those areas of the lobule supplied by the hepatic arteries—that is, the only areas where angiospasm could produce ischaemia. Barcroft has pointed out the special liability of liver cells to injury from deprivation of oxygen which explains the severity of the lesion here as compared with the results of angiospastic ischaemia in other organs. In toxic conditions such as acute yellow atrophy the necrosis starts centrally and does not resemble an infarct. Were the eclamptic lesion due to cell injury by some toxic substance circulating in the blood it would be difficult in view of the open nature of the sinusoids into which the capillaries open to understand the strict localization of the lesion in uncomplicated cases to the periportal areas at the periphery of the lobule. I would then suggest that there is good reason to regard the hepatic lesion in eclampsia as a multiple infarction due to angiospasm of the hepatic arteries or their arterioles.

Other Manifestations of Eclampsia

There are many manifestations of eclampsia which have not been mentioned—for instance oedema of the lungs. This I had in mind when the absence of Rouget cells in his situation was mentioned. Ischaemic injury to the alveolar capillaries from intermittent spasm of the pulmonary arteries would be expected to result in oedema and congestion. This is also accentuated by cardiac failure the termination of many fatal cases. It has been said that each fit brings the patient nearer her end. I think that the number of fits is of great prognostic value. I would have been probable that the fits of them

selves could lead to a fatal termination it is rather that the seizure is the outward and visible sign of a sudden access of angiospasm, which must affect the myocardium just as it affects practically all the tissues of the body

Lastly there is one other symptom of grave prognostic value which deserves mention—namely, a rise in temperature. This may in part be due to decreased loss of heat during the exertion of the seizures by spasm of the superficial capillaries. This alone would however, be a completely inadequate explanation. Pyrexia, one would suggest, is the expression of an exceptionally severe angiospasm. In anaesthesia the first things to go are consciousness and the power of voluntary movement. As the anaesthesia advances it spreads downwards and gradually affects the lower centres in the pons and medulla, ultimately causing death. So with ischaemia a moderate degree will knock out the higher, cerebral, portion of the brain while the lower centres remain comparatively unaffected. Only a very severe angiospasm will suffice to affect the heat-regulating centre in the corpus striatum. *It is not surprising that the prognosis in such a case is grave*

Commentary

It would be impossible in the space of a short paper to cover the infinite variations of such a disease as eclampsia. All one can hope to do is to include what are considered to be essential features alone. I have merely attempted to draw a diagram. Such a diagram I conceive as having at its centre angiospasm. This spreads out into various tissues and organs producing effects which in themselves appear to be completely unrelated. In the brain it results in hypertensive encephalopathy, in the kidney, albuminuria and oliguria with a high specific gravity, in the liver, a periportal necrosis, in the subcutaneous tissues, anasarca and in the skin, though it is frequently masked by deficient oxygenation of the blood, pallor. I would suggest that these variations are the result not of a varying cause but of the variety of tissues in which it acts, and that there is one single pathogenic factor underlying and uniting all the manifestations of eclampsia—namely, angiospasm.

The fourth annual report of the Research Institute and the Endemic Diseases Hospital, published by the Ministry of Public Health, Egypt, deals with the year 1934. During this period an investigation of the chemical composition of the spleen in Egyptian splenomegaly was initiated and the results of analysis will be given in a subsequent report. The urine of 116 adult females attending child welfare centres in Cairo was examined for bilharzial infection which was discovered in forty-four cases. Nine of these women had never left Cairo. Further inquiry showed that eight of the nine lived in suburban districts where filtered water was not available. *Buhinus* snails were discovered in the streams from which these women drew their water supply although no cercariae were to be found. Schistosoma infection was very high in those parts of the country where systems of continuous irrigation have been introduced the percentage reaching 75 in some districts. In the clinical section of the report it is stated that founadin is used for the routine treatment of schistosomiasis. Examination of the urine of 11,635 outpatients demonstrated the presence of ova of *Schistosoma haematobium* in 45.7 per cent, and stools contained the ova of *Ankylostoma duodenale*, *Ascaris lumbricoides* and *Trichostrongylus* in 28.2, 16.8 and 12.8 per cent of cases respectively. Ankylostomiasis is treated by carbon tetrachloride with satisfactory results.

INTERMITTENT VENOUS OCCLUSION IN THE TREATMENT OF OBLITERATIVE VASCULAR DISEASE

BY

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Obliterative vascular disease with its inevitable sequelae of intolerable pain and progressive gangrene, provides one of the most baffling and melancholy problems in both medical and surgical practice. It is especially tragic in the young or middle aged patient with thromboangitis obliterans in whom amputation of one or more limbs is a common event. It is clear therefore that any method of treatment which holds out a prospect of improvement in the peripheral circulation merits attention. Division of the sympathetic nerve supply in such cases can only increase the blood supply in so far as the obstruction is due to associated vasospasm. In those cases in which obliterative organic disease is the dominant factor in the obstruction it is obvious that some other line of therapy must be employed.

Lewis and Grant (1925) in a study of reactive hyperaemia in man found that when the arterial supply to a limb was occluded there resulted a state of vasodilatation lasting from half to three quarters of the period of circulatory arrest. This dilatation involved both the superficial and deep vessels of the limb and was independent of the central nervous system and local reflexes. An exactly comparable reaction followed increase of venous pressure in a limb. It was apparent at as low a cuff pressure as 40 mm. Hg, and became more pronounced up to the point of occlusion of arterial flow. They concluded that the vasodilatation affected the capillaries and smaller arterioles only and was caused by the accumulation in the extravascular tissue fluids of slowly diffusible substances produced during the period of circulatory disturbance. Very recently Barsoum and Smirk (1936) have studied venous blood from limbs in a state of reactive hyperaemia. They found an increase in the concentration of a substance which resembled histamine in its biological properties.

The Apparatus

From a consideration of Lewis and Grant's work Collens and Wilensky (1936a) devised an apparatus which raised the pressure in a cuff encircling the limb to any desired pressure in cycles of two minutes pressure followed by two minutes release, and in a more recent paper (1936b) have reported the result of the treatment of a small series of cases of obliterative vascular disease by this method. The results were strikingly successful, pain being almost immediately relieved, ulcers healed and gangrene averted. We have had an apparatus constructed for this purpose and it has now been in use since the beginning of February. We had intended to observe the results of this treatment in a large series of cases before publication but the editorial appeal in the March 6 issue of the *British Medical Journal* for the production of a simple apparatus for this form of therapy indicated that a description of our apparatus might be of interest. It is simpler in construction than that devised by Collens and Wilensky.

The apparatus was designed and manufactured in three forms for us by Mr T W Forbes of the Chalmers Edison Company of Engineers, Leith. The original apparatus which is illustrated consists of a reciprocating air pump driven by a constant speed electric motor. The motor is fitted with a reducing gear driving a cam revolving once in four minutes. The cam actuates the valves connecting the pump and the cuff so as to provide two minutes pressure and two minutes rest. A mercury manometer indicates the air pressure which is regulated by an adjustable valve. As the apparatus has to be in operation for long periods a series of coloured lamps have been incorporated. These indicate (a) when the machine is in operation (b) when there is no pressure in the cuff and (c) the elevation of the pressure to more than 10 mm Hg above the predetermined pressure.

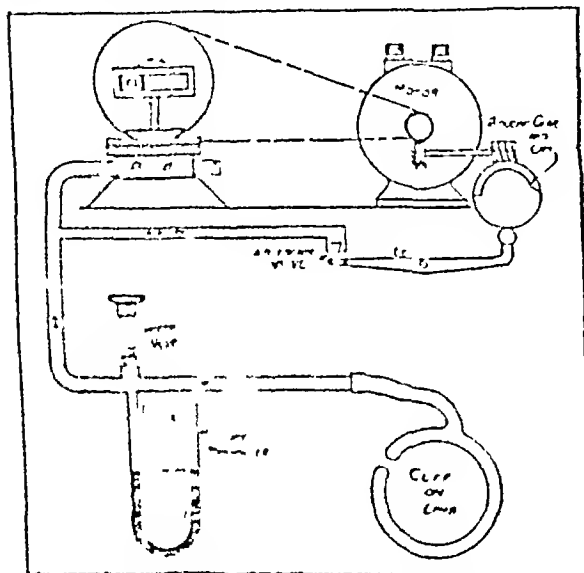


Fig. 1. Diagram of the original apparatus. For the sake of clarity the wiring and the signal lights have been omitted.

The apparatus in its second form is such that it can

intensely painful. Arterial pulsation was absent below the knee on palpation. Oscillometry in the middle third of the leg gave a maximum reading of 2.5 on the left side and 6.5 on the right side. No readings could be obtained at the level of the ankle on the left side whereas on the right side the reading was 2.8 at this level.

Treatment by intermittent venous occlusion was instituted and resulted in a dramatic relief of pain. An average cuff pressure of 50 mm Hg was employed. The duration of application was approximately ten hours a day. After a total of ninety hours' treatment the patient was able to walk a distance of one mile without pain. The duration of treatment was gradually reduced until now one hour's treatment daily is sufficient to allow him to lead a normal life. A chilblain which had been present for months and had been acutely painful became painless and healed rapidly. The only un-

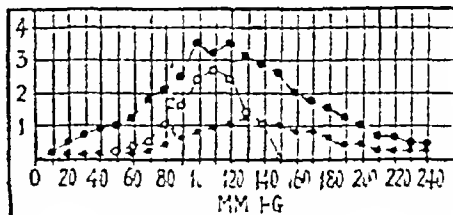


Chart 1 showing oscillometric readings before and after treatment. (1) Reading at junction of upper and middle thirds of leg after treatment. (2) Reading at same level before treatment. (3) Reading at level of ankle after treatment. No reading could be obtained at this level before treatment.

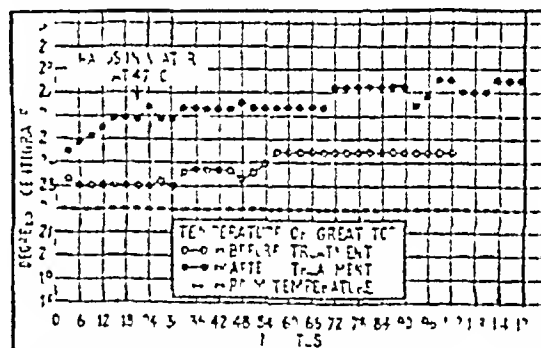


Chart 2 showing the temperature of the foot on rectal warmth before and after treatment.

areas and increased oscillometric and surface temperature readings

We are indebted to Professors Sir John Fraser and D M Dunlop for the facilities of their respective departments and for their continued advice and interest, and our thanks are due to Mr T W Forbes for the design and construction of the apparatus. We are also indebted to the Earl of Moray Endowment for a grant towards the expenses.

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INCIDENCE OF SYPHILIS AMONG SCHOOL CHILDREN OF KINGSTON, JAMAICA*

BY

DAHLIA WHITBOURNE, M B, B S Lond

AND

GEORGE M SAUNDERS, B.A, M D Harvard

The impression is given in a report (Neville Rolfe, 1936) recently submitted to the Government of Jamaica that syphilis is particularly prevalent in the general population among both adults and children. The report, however, was based upon observations made largely in hospitals and almshouses among the sick and more unfortunate classes, in which a high incidence of syphilis does not necessarily indicate a similar condition for the entire population. Other studies based upon observations of unselected samples of the population have not been recorded. It was felt, therefore, that a serological survey would be highly desirable as a means of estimating the true incidence of syphilis.

Source of Material and Technical Methods

Pending investigations among adults a serological survey of school children was undertaken. Children were selected at random from those in attendance on an ordinary school day at seventeen schools which serve the majority of the lower middle and lower classes of Kingston, practically all of whom are black or coloured. The method of selection was to have the teachers choose indiscriminately volunteers to submit to a blood test the nature of which was unknown to the children. It is felt that this system gave a random sample which possibly erred on the side of selecting the less healthy individuals. Each child was examined by one of us and blood specimens were taken. Nearly every child whose blood gave positive serological tests was brought to a hospital clinic, where more careful examinations were conducted than was possible at the time of the first visit. Also repeated tests were made on fresh samples of all blood sera which gave positive or questionable results.

Note was taken of any signs of congenital syphilis or yaws, and particular inquiry was made for a history of yaws or injection treatments. It is well known that yaws, which gives positive results with routine serological tests as consistently as syphilis, is prevalent among the children of rural Jamaica many of whom come into Kingston and enter school. For this reason great care was taken to secure accurate information about a previous yaws infection and any history of this disease was carefully checked.

* The studies upon which this report is based were conducted with the support and under the auspices of the International Health Division of the Rockefeller Foundation and the Government of Jamaica.

with parents or guardians. No case was classed as yaws unless there was a definite clear cut story of infection for which injection treatments had been given, and if a child had not lived at some time in an area where yaws was known to be endemic a positive history was discredited unless characteristic scarring or active lesions were present. It has been shown (Turner and Saunders 1935) that a history of yaws infection as given by children or parents is highly accurate, but that a negative history is more subject to error.

There were 1,103 children examined of whom 504 were males and 599 were females. The ages varied from 5 to 16 years, but the great majority were between 10 and 14 years old (Table I). Racially they were practically all black or coloured, there being very few Chinese, East Indians, and whites (Table II).

TABLE I—Age and Sex of Children Examined

Age in Years	Males	Females	Total
5—9	138	103	241
10—14	364	485	849
15—16	2	11	13
	504	599	1 103

TABLE II—Race and Sex of Children Examined

Race	Males	Females	Total
Black	275	272	547
Coloured	214	304	518
East Indians	5	2	7
Chinese	6	16	22
White	4	5	9
	504	599	1 103

All sera were examined in the laboratory of the Jamaica Yaws Commission, where the Wassermann and Eagle tests were performed on each. The Wassermann complement fixation reaction was a standard modification in which the antigen consisted of a cholesterolized alcoholic extract of beef heart, and the preliminary incubation was carried out in the refrigerator (5 C) followed by half an hour of incubation in the water bath at 37 C. The standard Eagle flocculation test was used, except that the serum antigen mixture was allowed to stand at room temperature (26 to 28 C) for twenty-four hours before adding saline and reading the results. Five years of experience with the methods used had proved them to be highly sensitive and specific. In addition 600 bloods were subjected to the Kahn test at the Government laboratory through the kindness of the pathologist, Dr K Leigh Evans. The results of the Kahn test were practically identical with those of the Eagle test.

Results of Study

Serological Tests—In forty three children, or 3.9 per cent, the serological tests were positive. Both Wassermann and Eagle tests were positive in forty, Wassermann partly positive Eagle positive in two, and in only one instance was the Wassermann negative and Eagle positive to repeated tests. But there were thirteen children among the positive group who gave a clear-cut history of yaws and whose positive tests were almost surely the result of the yaws infection. The remaining thirty children, or 2.7 per cent of the series had positive tests presumably because of congenital syphilis, the percentage being slightly higher among females than among males (Table III).

Clinical Findings—Signs of congenital syphilis were infrequent and none of the children with negative serological tests presented any definite findings although a few of them had slight enlargement of frontal bones or bowing of tibiae. Among the group with positive blood tests probably due to syphilis were ten with characteristic

lower classes of society, were examined clinically and serologically to determine the incidence of syphilis

2 There were forty three children or 3.9 per cent., giving positive serological reactions. Among these were thirteen whose positive reactions were almost surely due to yaws, leaving thirty, or 2.7 per cent, with probable congenital syphilis

3 It is estimated that congenital syphilis is present in about 3 per cent of all black and coloured children of Kingston

4 Syphilis doubtless reaches a much higher incidence among the entire population. The exact figure cannot be stated, but on the basis of evidence gathered elsewhere concerning the ratio of the incidence of syphilis in children to that for the entire population it may be said to be approximately 12 per cent

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EPIDEMIOLOGY OF EPIDEMIC DROPSY*

BY

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Epidemic dropsy belongs to the group of obscure diseases, like tularaemia, which are little known outside their endemic homes. None the less this disease is of much interest to students of tropical medicine, and particularly to those of us who work in this part of the world. It is by no means a minor problem in the provinces of Assam, Bengal, Bihar, and Orissa. One would, perhaps, not be far wrong in saying that a practitioner in Calcutta comes across epidemic dropsy as frequently as malaria, if not more frequently. The city according to Mazumdar (1933), recorded deaths from epidemic dropsy every year between 1905 and 1931. Widespread epidemics involving thousands of citizens and causing heavy mortality occasionally occur. The epidemics in 1909, 1926 and 1927 were particularly disastrous when 433, 939, and 636 persons respectively are said to have died. Ten times this number must have been the victims of more or less permanent damage to the heart. The disease is not confined to the towns. Outbreaks occur even in the smallest villages and at times large tracts of country in the eastern provinces of Assam, Bengal, Orissa and Bihar become involved. Outside these provinces localized outbreaks have been reported from the eastern districts of United Provinces and parts of Madras Presidency. A few epidemics have occurred in

Burma, Fiji, Mauritius and certain other parts of the world but the disease has been practically confined to emigrants from those provinces.

Earlier Studies

The history of the disease carries us as far back as reliable records are available. Chambers (1880) believed that the disease had been prevalent since the famine of 1866. Good descriptions of epidemics occurring in the last quarter of the nineteenth century and since then are given by O'Brien (1879), Caley (1878), Payne (1879), McConnell (1879), Cronbie (1879), Deakin (1880), Kastagir (1880), McLeod (1893), Rogers (1902), Munro (1903), Cambell (1908), Greig (1911) and many others. How these epidemics arise, what factors favour their continuance and decline, how and why the disease prevalence is maintained at a low endemic level in certain localities, why certain communities suffer more than others, what determines the sex, age and occupational distributions, what preventive measures can be taken are some of the problems which have so far defied solution. In epidemic dropsy, as in many other diseases, bad weather, personal diathesis, water, inadequate or unsuitable food, unknown toxic substances, various types of organisms and even insects have received their share of blame at the hands of various workers. Yet the lack of exact knowledge cannot be said to be due to want of interest on the part of the profession. Among others epidemic dropsy has engaged the serious attention of eminent workers like Rogers (1902), Lukis (1908), Greig (1912), Megaw (1927), Acton and Chopra (1925) and many important contributions have been made. However, in the absence of exact knowledge every practitioner has perhaps either formulated his own theory or has adopted one advanced by others. We cannot do better than sum up the present position in the words of the editor of the *Indian Medical Gazette* (1935) when he says: 'Many theories regarding the cause of the disease have been formulated, have lived their day and become history, and have been revived again'. However, from amongst a multitude of theories three have received considerable support. These are (1) rice theory, (2) contagion theory, and (3) mustard oil theory. We propose to revive one of these theories and present fresh evidence in support of it, in the hope that it will stand critical examination and will not be cast away again into limbo.

Observations in the Field

These three theories formed our working hypotheses and it was mainly on these premises that we proceeded to collect exact information in the field. Investigations were made in seven different localities where epidemic dropsy was raging. These included rural, semi-rural and industrial areas in Bihar, Bengal, Assam and Orissa thus representing different living conditions. House-to-house visits were made and important data were collected on printed schedules specially designed for mechanical tabulation. In three localities data were collected for every individual and for each family, whether stricken or not. In other places investigations were confined to the affected families and to such unaffected families as were of special interest. Reasonable precautions were taken to ensure the veracity of the information recorded. Detailed information was obtained from 964 patients and 2,581 healthy persons comprising 310 affected families and 290 unaffected families. In addition certain relevant data were collected from 1,727 unaffected families having 9,676 members. The main points that emerged after critical analysis were:

* A more detailed description of these studies will appear in a series of five papers in the July 1937 issue of the *Indian Journal of Medical Research*.

which totals about 100 000, is very cosmopolitan Jamshedpur had been free from epidemic dropsy for some years when, in October, 1936, the first case occurred. Within five weeks 222 cases were reported, involving sixty-six families. Of these fifty-two were Bengalee families living on the usual Bengalee diet. The non-Bengalee victims were also found to have taken to Bengalee diet, at any rate rice and mustard oil were used by them in considerable quantities. The most remarkable feature of this epidemic was that the affected families had a common source of mustard oil supply. Eighteen of them obtained one particular brand of oil direct from the mill, of whom fourteen received it in original sealed containers and four loose, and thirty five obtained it from the grocers. In ten instances the grocers stored this brand, but the customers had not specially asked for it. In the case of three families the evidence was not so clear. There were no cases among the large clientele of the other three mills which supplied mustard oil to the town. Another important point is that the cases only appeared amongst people who had purchased the oil during October and the first week of November. The suspected brand of oil had been quite popular for some time, and nothing untoward had happened previously. Thus the suggestion is that a particular consignment of oil of this brand was associated with the epidemic. It may be mentioned here that the manufacturers claimed that the oil was unadulterated and of good quality. The genuineness of the oil was confirmed by chemical analysis, kindly carried out for us by the Professor of Public Health Laboratory Practice on a sample collected from one of the affected families.

Thus we see that the field studies, laboratory investigations, and observations under controlled conditions so far described threw doubt on the validity of the "rice" and the 'contagion' theories. They gave, however, a definite lead in favour of the mustard oil hypothesis stated above. Since we were able to procure samples of oil in original containers from the affected families it was now possible to test this hypothesis by feeding human volunteers on the suspected oil under strictly controlled conditions.

Feeding Experiments on Human Volunteers

The results of these experiments are very striking. It is not proposed, to go into the details of the experiments, but a few interesting facts are stated below.

Three experiments were performed, in each of which twelve healthy young subjects who were willing to take the risk and who were ready to give an undertaking that they would continue on the special diet for the required period were selected. In the first two experiments the subjects were divided into four groups of three each, and the experiments were arranged as below.

- Group A diseased rice and suspected mustard oil
- Group B "diseased" rice and *jail* produced mustard oil
- Group C clear rice and suspected mustard oil
- Group D clear rice and *jail* produced mustard oil

The main difference in the two experiments was the source from which the suspected oil was obtained. The oil used in Experiment I was collected from an affected family in Assam, while that used in Experiment II was obtained from an affected family at Jamshedpur. No untoward symptoms developed in any volunteer in the first experiment except in one of those taking suspected oil. He complained of loss of appetite and constipation. Later he developed a cold with slight rise of temperature but was restored to normal condition after a few days of rest and milk diet. In the second experiment, on the

fifth day after the commencement of the special diet, two persons in Group A and one in Group C missed their morning meal and all members of Groups A and C complained of pain in the joints and of symptoms of gastrointestinal disturbance. Later some of them developed fever and three developed oedema of legs with flush and pitting on pressure, which are characteristic of epidemic dropsy. Two of the oedema cases belonged to Group A and one to Group C. The last mentioned patient was taken out of consideration, because on closer examination he showed evidence of chronic filariasis. All the controls remained perfectly healthy and cheerful. That was the first occasion on which it had been possible to reproduce signs and symptoms of epidemic dropsy in human subjects. The value of these results is further enhanced on account of the history behind the suspected oil which was employed in this experiment.

However, it remained undecided whether oil alone could produce the condition or if it was necessary to combine "diseased" rice with it. A third experiment was therefore carried out in which "diseased" rice was excluded. The source of suspected mustard oil was the same as in the last experiment. The results of this experiment were very striking. After the same premonitory symptoms which were observed in Groups A and C of Experiment II well marked oedema of the legs developed in all the subjects taking the suspected oil. In three cases there was dilatation of the heart. In one patient foetal type of rhythm and in another systolic bruit were heard, there were no symptoms referable to the nervous system. In short, in the judgement of competent physicians the signs and symptoms in these cases were identical with those found in mild cases of epidemic dropsy. The controls remained perfectly healthy.

Discussion

In the absence of exact knowledge of the causal agent epidemic dropsy can only be defined as a clinical entity. Descriptions of different observers vary to a certain extent. It is therefore possible that this condition, like so many other diseases, such as croup and the enteric fevers, may in course of time be split up into two or more distinct diseases on the basis of their aetiology which may possibly be entirely different for these really distinct but allied clinical entities. The clinical feature on which we have mainly relied for distinguishing the condition which we have called epidemic dropsy from what has been described as 'wet beri beri' is the entire absence of signs of involvement of the nervous system. In this respect and in general symptomatology the cases met with in the course of field investigations and those developed under experimental conditions were exactly alike. At any rate the present position may, we think be stated in the following words.

The clinical condition known as epidemic dropsy (or beri beri by lay people), as commonly met with in endemic or epidemic form in Assam and Bengal and in parts of Bihar and Orissa and occasionally outside these boundaries mostly among emigrants from these provinces is caused by some unknown substance or substances which enter the system through the ingestion of food cooked in certain consignments of mustard oil. The oil may be genuine and unadulterated. The nature of the poisonous substance is not known. There is some evidence in favour of the view that the deleterious substance is not a normal constituent of mustard oil and that it is more likely to be a chemical poison rather than something in the nature of a living virus. However inquiries are in progress to clarify this point and to develop if possible

a test by which bad oil may be distinguished from the harmless one

While the problem of the aetiology of epidemic dropsy cannot be said to have been completely solved a definite advance has been made and a stage has been reached when preventive measures, based on scientifically proved facts, can be recommended though their application is limited to a certain extent by the absence of knowledge about the nature and origin of the deleterious substance in the mustard oil. It should now be the duty of the health administrator to trace the oil which has caused the disease to its source as soon as he comes across cases of epidemic dropsy, and to prevent its further distribution. He should also prohibit its use for cooking purposes. The discarded oil may be used for oil baths, as it is probably harmless when applied externally. Besides, there are many other uses to which this oil can be put. The length of the incubation period or the lag phase—five days for premonitory symptoms and nine to twenty three days for development of oedema, as noticed in our human experiments—should be of assistance in tracing the bad oil. By adopting the measures recommended above it should be possible to prevent the spread of the disease among those who have not yet partaken of the oil and to reduce the severity of the disease in those who have taken it in just sufficient quantities to cause premonitory symptoms.

Summary

1 A brief statement is given of the results of epidemiological studies in connexion with outbreaks of epidemic dropsy in seven localities in Bihar, Bengal, Assam and Orissa, representing rural, semi rural, urban, and industrial conditions.

2 An epidemiological experiment designed to test the contagiousness of the disease in a semi isolated community is briefly described.

3 Three principal theories of the aetiology of the disease are discussed, and it is shown that the observed facts fail to support the "diseased rice" theory and the "contagion" theory. A very satisfactory explanation of these facts is provided by the hypothesis that epidemic dropsy, as commonly seen in these provinces, is caused by a deleterious substance contained in certain consignments of mustard oil.

4 Experiments on human subjects, living under strictly controlled conditions, are described. They show that signs and symptoms of epidemic dropsy are produced in healthy young men by giving them food cooked in a brand of mustard oil which is strongly suspected, on epidemiological grounds, of being responsible for an epidemic—the "diseased" rice having been altogether excluded from the experimental food.

5 Practical application of these findings is discussed.

ACKNOWLEDGEMENTS

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AN INEXPENSIVE FLOW METER AND HUMIDIFIER FOR ADMINISTERING OXYGEN

BY

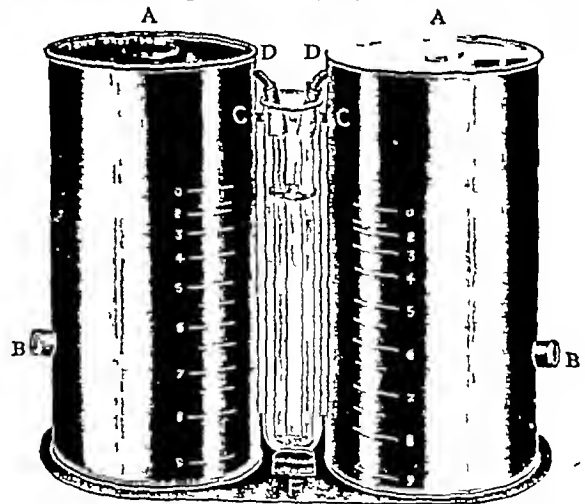
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For the efficient administration of oxygen the rate of flow must be known and this is particularly important now that its relation to the percentage of oxygen in the alveolar air has been established for many different methods of administration. The dial flow meter which is often added to the reducing valve of the oxygen cylinder, because it is really a pressure gauge, may give inaccurate results, and the apparatus recently described by Marriott and Robson is expensive since most of the parts have to be specially made and each apparatus must be calibrated by experiment.

The Apparatus

The present flow meter consists of two tins with lids (A) 7 inches high and $3\frac{1}{4}$ inches in diameter, soldered on to a piece of tin plate (see Figure). These tins are connected



by a German silver (nickel) tube (C-C) $3\frac{1}{4}$ inches long with a diameter between 107 and 108 thousandths of an inch, the tube projects for some distance into each tin. The oxygen passes in and out of the flow meter by the side tubes (B), the nickel tube provides a resistance so that the pressure in the proximal tin is higher than in the distal tin the flow being measured by the difference between these pressures. The pressure gauge consists of

two short pieces of small bore metal tubing (D) soldered into each tin near the top so that they bend downwards into the opening of a boiling-tube (F), 6 inches long 1 inch in diameter, which is held up against and so supported by the nickel tube two glass tubes attached by rubber connexions to the tubes D pass down to the bottom of F, which is filled with water, tinted with red ink to such a height that when in use the surface of the water in the distal tube is level with the zero of graduations marked on one or other of the tins. Then the level in the proximal tube gives the volume of the flow in litres per minute.

Before making up the apparatus the lumen of the nickel tube must be seen to be clear and the openings smooth, when finished the appliance is painted inside and out with several layers of cellulose paint to prevent rust, care being taken that the ends of the nickel tube are not painted over. The apparatus has also been made out of tinned copper. Any slight variation in the length of the nickel tube will not matter, but the diameter should be correct to within a thousandth of an inch. The calibration is as follows:

Pressure difference (mm)	6.5	9	17	27	40	48	57	67	76	85	95	115
Flow l per minute	1.5	2	3	4	5	5.5	6	6.5	7	7.5	8	9

In using the instrument the flow must always be increased up to the value required, too high a reading will be obtained if the flow is diminished from a higher to a lower value. To humidify the oxygen up to 60 or 70 per cent relative humidity an ounce of water is poured into each tin. The oxygen passes over and not through the water.

Advantages of the Apparatus

Flow meters arranged on this principle have been in use for many years, and the only advantages claimed for the present arrangement are that these flow meters can be made up in quantity in the works department of a hospital for a few shillings each, so that where oxygen is often used there should be no difficulty in supplying two or three to each ward, no experimental calibration is required and the flow meter is unbreakable apart from the glass parts, which are renewable from stock, the pressure gauge acts as a safety valve. The flow meter registers from $1\frac{1}{2}$ to 9 litres or more per minute, resistance to outflow—for example from a small nasal catheter—makes no difference to the accuracy, but peripheral resistance should be as low as possible.

Theoretically the apparatus consists essentially of one narrow tube connecting two wider tubes. I should like to thank Mr E M Poulton for pointing out at an early stage of the work that unless the two wide tubes were large in diameter in comparison with the nickel tube the flow would have an inverse relation to the diameter of these larger tubes, such was proved to be the case and consequently two relatively large tins were chosen.

The narrow orifice between convergent and divergent conical tubes was developed by Clemens Herschel in 1881 for commercial gas meters. He called it the venturi opening after E B Venturi the Italian who described it before A.D. 1800. The essential element is the divergent cone which guides the stream of air as it issues from the orifice and modifies by its dimensions the relation between pressure and velocity. The name is hardly appropriate to the present arrangement because the stream issues into a large open space and is not guided in any way. The flow of air or liquid along smooth round tubes has a stream

line flow at low velocities with the pressure difference proportional to the velocity of the flow, at higher velocities the stream becomes turbulent and the pressure difference is proportional to the square of the velocity. The velocity at which the flow becomes turbulent can be determined by the expression $\frac{VDW}{\mu}$ (Reynolds's criterion)

where V is the velocity, W is the density, μ is the coefficient of viscosity, and D is the diameter of the tube along which the gas is flowing.

In the present case calculations for which I am indebted to Messrs George Kent Ltd show that in the ordinary use of the apparatus the velocity of oxygen in the tube is in the "mixed" or "unstable" region between streamline and turbulent flows, and at 8 litres per minute the pressure required to force the oxygen through the tube was due five times as much to turbulence as to viscous resistance between the fluid and the wall of the tube. This indicates that the length of the tube is not of great consequence in determining the velocity, but the diameter and the square-cut, clean circular nature of the entry are all-important, because most of the pressure difference takes place at this point while there is little change of pressure at the point of exit. The essence of the venturi opening is that the loss of pressure energy which occurs in the convergent cone is mostly regained in the divergent cone so that no exceptional head of pressure is required to drive the gas through the opening and the meter is economical in working. This type of economy is of no importance in measuring oxygen, since there is always excess of pressure available. In calibrating this instrument it was found empirically that when $\log(p+1)$ was plotted on semi logarithmic paper against V the result was nearly a straight line (p = pressure, V = velocity).

The easiest way to determine the diameter of the tube is to measure the volume of a $3\frac{1}{2}$ -inch length. For this purpose a short piece of pressure tubing is fitted tightly round the tip of a 1 c.c. graduated pipette so that one end of the tubing is level with the tip. The nickel tube is held just out of the horizontal against the rubber, and ethyl or the cheaper isopropyl alcohol is run into the tube from the pipette. The volume found was 0.52 c.c., which means a diameter of 0.1076 inch.

The flow meter is made by Down Bros. Ltd. St Thomas's St SE1. The tins can be obtained from Wyatt and Co. Tanner Street SE1 and the nickel tube from Johnson Matthey and Co. Hadyn Park Works Askew Road Shepherd's Bush W12.

Part of the incidental expenses were defrayed by a research grant from the Medical Research Council. I should like to thank Mr T W Adams for kindly helping with the calibration.

The third international medical week organized by the *Journal Suisse de Médecine* will be held at Interlaken from August 29 to September 4. Among those who will deliver addresses are Professor Hugh Cairns who will deal with the results of treating intracranial tumours, Dr Clovis Vincent of Paris who will discuss the treatment of subacute and chronic abscesses of the brain, Dr H C Hagedorn of Denmark who will survey the progress made in insulin therapy, Dr R Rossle of Berlin who will consider the hereditary aspects of syphilis and tuberculosis, and Dr H von Meyenburg of Zurich who will lecture on the diseases of cartilages. One day will be spent in an excursion to Berne under the direction of the Faculty of Medicine in that city. The fee for membership is ten Swiss francs and a full programme may be obtained from the secretary, *Journal Suisse de Médecine*, Klosterberg 27, Basle.

TREATMENT OF TRICHOMONAS VAGINITIS BY SILVER PICRATE

BY

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It is evident that very little is known about the organism *Trichomonas vaginalis* beyond the fact that it occurs in the secretions of many cases of severe and recurrent vaginitis and that the condition definitely improves when the parasite is eradicated from the vaginal secretion.

The notorious feature about the infestation is the frequency with which the organisms reappear in the vaginal secretion either after the occurrence of the menstrual period or after the suspension of treatment. In the present state of our knowledge it is impossible to say whether this reappearance is due to a reinfection or to a relapse of the primary condition as the source of the parasite and the mode of the infection are unknown.

Diagnosis

The method of demonstrating the *Trichomonas vaginalis* in the vaginal secretion is as follows:

A bead of pus is removed from the posterior fornix by means of a sterile platinum loop and is suspended in normal saline on a microscopical slide. This suspension is covered by a cover slip and immediately examined by the dark ground illumination method and the characteristic movements of the actively motile organism observed.

Many lines of attack have been devised for the treatment of vaginitis due to the trichomonas, and the object of this paper is to bring forward a new therapeutic agent which although used extensively in the United States of America is comparatively unknown in this country. This agent is known as silver picrate, and is put up in two forms both of which are employed in the treatment of the condition: (a) a greenish yellow powder in phials each containing 5 grains; (b) suppositories each containing 2 grains. Shelanski (1936), during his laboratory investigations of the toxicity of silver picrate on the *Trichomonas vaginalis* found that if this compound contained 30 per cent. of silver it was superior to silver nitrate, picric acid, and various other combinations of silver and picric acid.

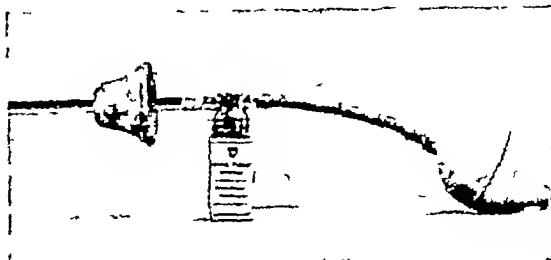
Line of Treatment

If a positive was recorded the patient was insufflated by means of a Shelanski insufflator (see figure) in the following manner:

The patient is placed on a table in the lithotomy position. A speculum is inserted and the vagina swabbed out with a cotton wool swab. The cervix is closely inspected and any mucus if present in the cervical canal is removed by means of a Playfair probe soaked in saturated sodium bicarbonate.

After removal of the label from the phial it is attached to the insufflator. Each phial contains the correct amount of powder for one treatment, and the screw thread on the phials is so made that each one fits that on the insufflator. The nozzle of the instrument is then gently inserted into the vagina until the rubber shield fills the vaginal introitus. By pumping the rubber bulb the powder is forced out into the vagina until the entire contents of the phial are exhausted.

The instrument may have to be slightly withdrawn at intervals to allow the pressure in the vagina to be eased. By this method the vagina is ballooned, so allowing the powder to penetrate into all the creases and folds. The



patient is then advised to attend daily, when the vagina is again swabbed out and a silver picrate pessary inserted.

The following points should be observed:

- 1 No pain should be caused during the insufflation.
- 2 The pessary treatment is repeated daily for six days and it is then followed by another insufflation.
- 3 After the pessary has been inserted a dry gauze plug thirty-six inches in length may be lightly packed into the vagina to avoid any leakage.
- 4 If the patient is unable to attend daily she is directed and instructed to insert the pessary herself each night on retiring.
- 5 No douching should be allowed during the course of treatment.
- 6 No treatment is given during the menstrual period.
- 7 In pregnant cases it is perhaps best to rely on the pessaries alone, but insufflation is not definitely contra-indicated.
- 8 The duration of the treatment depends on the disappearance of the organism and the signs and symptoms.

Clinical Trial

Patients suffering from vaginal infestation with the *Trichomonas vaginalis* attended daily, and before the treatment was given a suspension was examined and the presence or absence of the parasite was noted. Examinations were also made after the menstrual period as it is at this time that recurrence of the infestation is most likely to happen.

The full treatment consisted of insufflation followed by daily dry swabbing and insertion of a pessary. In the series of twenty-eight cases receiving the full treatment the following results were obtained:

Upon insufflation the *Trichomonas vaginalis* disappeared on the next day from the secretion in twenty-six cases (92.8 per cent.).

In the two cases in which the trichomonas was present on the second examination it was observed that the numbers had decreased and that the organisms were sluggish in movement. The parasites were absent on the third examination.

Of the twenty-eight cases fifteen (53.5 per cent.) remained persistently negative, but in thirteen (46.4 per cent.) a relapse or reinfection occurred.

Of the relapses or reinfections five (38.4 per cent.) occurred following a menstrual period and eight (61.5 per cent.) occurred at times other than after the menstrual period.

Total cases	28
Cases negative following insufflation	26 (92.8%)
No relapses	15 (53.5%)
Total relapses	13 (46.4%)

Of the relapses

(a) Occurring after the menstrual period	5 (38.4%)
(b) Occurring at other times	8 (61.5%)

One pregnant case not in the above series was treated by pessaries only, and the trichomonas disappeared after the first treatment it recurred however, on the next day, but afterwards the case remained persistently negative. In all cases the local condition showed marked clinical improvement, the discharge becoming markedly less in amount, local inflammatory signs settling down, and such symptoms as irritation and soreness abating, in spite of the fact that in eleven of the cases there was coexisting gonococcal infection.

My thanks are due to Colonel Burke for permitting me to publish these observations.

REFERENCE

Shelanski H A (1936) *J Lab clin Med* 21 790

Clinical Memoranda

The Emotional Factor in the Causation of Squint

In a recent article on the care of children's eyes, in a popular journal devoted to the service of childhood and youth, an ophthalmic surgeon wrote: "Several observers have lately remarked on the frequent association of squint with a nervous disposition. There are authentic instances of a squint having dated from some fright, or from some occasion for jealousy such as the birth of a baby sister or brother. Anxiety can be a factor in its development." I wrote about these matters many years ago (*An Inquiry into the Origin of Squint, Left handedness and Stammer, Lancet* August 2, 1924) and now once more suggest that an emotional cause of squint is far commoner than is suspected. Unfortunately the connexion is not recognized, because surgeons and parents have still to learn the lesson psychologists have been teaching for decades—that what a very young child sees and hears may sometimes induce not only emotional distress but even actual illness. The subtlety of the circumstances may be gauged from the following case.

A CASE IN POINT

A boy aged 2 years and 4 months began to squint in November 1936 six weeks before he was brought to me. The deformity was not constant, in contrast to nearly every squint that I have seen it was present not when the child was excited—the eyes were then usually straight—but when he became dreamy. A logical approach to the problem surely would be to find out what he was dreaming about for none of the usual explanations of convergent squint is adequate to account for convergent activity during apparent dreamy relaxation. As every one knows the eyes become straight and have a far-away look during a brown study.

Unfortunately it is not possible to get evidence by questioning so young a child and support for surmise must be sought indirectly. There is no more helpful beginning to an investigation of a child's troubles than to know how the mother was faring at the time the troubles developed.

To the question "What was wrong with you six weeks ago," the mother Mrs. X., replied, "I had influenza—the squint developed when I began to take the child out again."

"Has he had any other symptoms since the squint began?"

"No, but he has been cutting his last two teeth during that time."

"No bed wetting?"

"Well he has always wetted his bed with the cutting of every tooth and it has been especially troublesome in the last six weeks."

Truly a strange association of functions! How far it was dependent upon oral stresses at a still earlier phase is worthy of more detailed inquiry, since it is astonishing how often mothers comment upon the greater frequency of squint—another neurosis—during meal times. At this point I merely used it for a guess that the child had taken weaning unusually hardly. The mother agreed there had been much difficulty when it took place at the end of ten months.

Incidentally it is scarcely necessary to ask if the child sleeps in the parents' room, such a child as is before me *always* seems to do so! I then tell the mother that experience leads me to suspect that six weeks ago she was exceptionally interested in the birth of a baby, not necessarily her own, perhaps the interest was in childbirth generally rather than in an actual confinement. This she denies and I seem to have drawn a blank. But I still feel that the parent-child relationship may be responsible for the breakdown of binocular vision, and ask: "Hadn't you a bad monthly period six weeks ago?" I have found that even little children have an uncanny awareness of that function. The mother, after some hesitation, admits the truth: "Yes, as a matter of fact I had a miscarriage two months ago, and the bleeding continued for three weeks."

Thus the squint must have begun at a time when the child was seeing and hearing matters that four or five years later he would be carefully protected from seeing and hearing, imagination can now be invoked to visualize the situation in the bedroom shared by the child. Let it be remembered that the squint was not an instant and permanent reaction, it was delayed and inconstant. Indeed, at first it showed only when the child was *dreamy*. Have we here some indication of what he might be dreaming about? If we may take the daydreams of adults for comparison, it seems probable that the child's thoughts had no conscious definite shape, but that they were connected with a threat to the security of the love relationship with the mother seems likely. The sight of blood to a child—and the mother could not deny that her little boy had had many opportunities of seeing blood at that time—is full of significance of danger even at the age of 2. It is true that this view is only a surmise, even the mother could not divine what was in the mind of her little boy. But in spite of her early resistance to my suggestions she readily accepted them later when the situation was reconstructed for her—a sensitive observant child sleeping in the parents' room with the beloved mother ill and depressed, suffering from some mysterious ailment associated with bleeding from which she was making a slow recovery. She was further impressed when I asked for the history of left handedness and stammering in the family. She declared herself to be wholly right handed, though she had a left handed brother but she had stammered at the age of 3 when a baby brother was born. I have found that adults with such a history usually retain some significant if apparently trivial left handed sign of former contrariness, and after further thought she called to mind that she always mounted a bicycle from the "wrong" side.

But let us apply the same formula of mother-child relationship to Mrs. X. herself. In the eventful November her own father and mother had been discussing separation to Mrs. X.'s great distress, for the father had threatened to commit suicide if his wife left him. May we not assume that these tragic circumstances helped towards her miscarriage and the squint in the frightened baby observer?

W. S. JAMES, M.B. and
Senior Ophthalmic Surgeon, Portsmouth
and Southern Counties Eye and
Lar Hospital

Reviews

A SUMMARY OF MODERN MEDICINE

A Textbook of Medicine By Charles Phillips Emerson
M.D. (Pp 1296 36s net) London and Philadelphia
J B Lippincott Co 1937

A new textbook of medicine by Professor Emerson follows the teaching of the Johns Hopkins school and presents a good summary of modern medicine. The grouping of subjects is on the usual lines beginning with diseases of known aetiology infectious protozoal, toxic, and allergic and diseases of metabolism and deficiency, and there follows a discussion of system diseases according to the part of the body affected. The author has attempted and appears to have succeeded in portraying the clinical pictures of diseases as they are likely to be met by physicians and medical students. Each group of diseases is approached from the historical side, and the sections are enlivened with short accounts of the development of our knowledge with the names and contributions of the older workers. The systematic descriptions of aetiology, symptoms, complications, diagnosis, prognosis, and treatment are shortly and clearly written, give a good idea of up-to-date practice, and may be recommended as sound and sufficient.

Professor Emerson, whose book on the nervous patient is well known, has introduced a short chapter on psychoneurotic reactions in disease which directs attention to the need for study of the psychological background in the case of each individual patient. This is necessary for a proper understanding of the case, since treatment on stereotyped conventional lines, though quite correct, may fail to bring the patient back to a complete restoration of health or to prevent him relapsing when he meets the stresses of life again. In the section on nervous diseases the effect of environmental strains of modern life during childhood and adolescence and their repercussions in the time of the climacteric of man or woman is dwelt upon. Each disease syndrome is regarded as an expression of a protective biological reaction to a particular invading germ, or an attempted adjustment of function in spite of lesions in one organ or in others functionally related to them, treatment should aim not to suppress symptoms but to render them unnecessary, and when the attitude towards disease inculcated in this book is adopted the practitioner will become not only an erudite but a skilled and understanding physician.

The book is convenient to handle, has a good index, and few misprints. There are no illustrations. The author states that he has had the opportunity of preparing this work by his appointment as research professor of Indiana University and he has made good use of it.

MOVEMENTS OF INTERNAL ORGANS

Röntgenkymographische Bewegungslehre Inneren Organe
By Dr Pleikart Stumpf Dr H H Weber and Dr H Weltz. (Pp 516 447 figures M 42 geb M 44)
Leipzig G Thieme 1936

This Röntgen kymographic study of the movements of the internal organs by Dr Pleikart Stumpf and others, is a very full description of a method of investigation of the movement of the heart, and the movements of the stomach oesophagus lungs and ureters, rendered visible by radio-opaque contents. Briefly the principle depends on two methods. In one a moving plate is used and in the other the plate is fixed but a moving grid is passed

between it and the organ to be studied. The latter is more useful. The result is that the outline of the moving shadow of the organ on the plate takes on a wavy or zig zag appearance. The indentations are modified by the degree and nature of the movement and the plane in which it takes place when considered in relation to the plane of the plate. In many of the illustrations the movements can be reproduced again by passing over the photograph the celluloid grid provided. Probably the heart lends itself best to study by this means and then the stomach.

The question of the change in size of the heart on inspiration appears to be settled. The conclusion is that in quiet breathing the shadow decreases in size, but deep forced inspiration may cause an increase in size. It is claimed that the origin of extrasystoles can be distinguished, but there is little electrocardiographic confirmation, and the curves of extrasystoles are interpreted in a way many authorities now hold to be incorrect. The amplitude of the contractions of the heart seems to have some significance and the tracings give a good deal of information on this point. There is some evidence to show that alternation of the heart beat is associated with only partial contraction of the ventricle. The author gives a full study of the effect of valvular lesions on movements of the heart.

Examination of the stomach shows the changes in peristalsis due to the presence of ulcers and growths or to pyloric obstruction. Gastritis affects the folds of the mucosa and reduces their movements. Röntgen kymography of the urinary tract has been little exploited so far, technical difficulties are considerable, but the author hopes for good results.

The book opens up an interesting field. Much experience and study are needed to understand the many implications of this method. Interpretation of the finer changes in the shadow movements especially those of the heart, is clearly very difficult. That these differences exist is obvious on examining the photographs, but there must still be a good deal of doubt as to what they mean. The illustrations are excellent the print good, and the references full and clearly set out. It is a pity that an important work of this nature, covering such a wide field, is not provided with an index.

ORTHOPAEDIC CONDITIONS

Elements of Orthopaedic Surgery By N Ross Smith,
M.B. Ch.M. F.R.C.S. (Pp 246 99 figures 10s 6d net)
Bristol John Wright and Sons London Simpkin
Marshall 1937

A short book on a big subject is written either for those who wish to widen their field of interests without intending to make practical use of their newly acquired knowledge or, on the other hand, for those who require a limited acquaintance with the particular subject that will be of value in everyday work. Mr Ross Smith's book may satisfy the first but it is not likely to be of much value to the second. It is intended to be a "practical account of the elements of orthopaedic surgery for practitioners and students who do not require the full knowledge given by larger textbooks and for nurses and masseuses engaged in orthopaedic work. This should mean that diagnosis is given a pre eminent position. Pathology and the details of treatment, however interesting are of little practical value until the reader knows how to recognize the clinical conditions concerned. Orthopaedic surgery demands life long devotion from those who try to master its intricacies, and the treatment of cases of deformity should be concentrated in the hands of those specially qualified for this work. But successful treatment so often depends upon

early diagnosis that the part played by the general practitioner or the orthopaedic nurse is of the first importance. They see the patient when the lesion is only just declaring itself, and the early or late arrival of the patient at the orthopaedic clinic depends, very often, on their powers of observation and the correct appraisal of what they see. This book should tell the doctor or nurse what to look for. Having discharged this important duty it might, in addition, give the broad outlines of treatment. Unfortunately it presents nothing more than a rambling account of the conditions commonly called 'orthopaedic,' with but few references to many useful advances that have been made during recent years.

Let us take a few examples. All orthopaedic surgeons are anxious to see cases of rigid kyphosis of adolescence in the early stages of the disease, and it is probably a fairly common condition. The author dismisses it in one sentence with not even a hint that early diagnosis and treatment may save the patient from developing a severe fixed deformity. Ewing's tumour, by contrast, has a page all to itself. In the chapter on tuberculosis of bones and joints no guidance is given for the investigation of the intermittent limp, the odd joint pain, the slight puffiness that may herald the onset of disease in the hip or knee. How is tuberculous disease to be distinguished from the common non-specific arthritis of childhood? We are not told. 'An x-ray examination gives valuable information and is essential in all cases. Essential no doubt, but the information given is often distressingly vague. Nothing is said even about the radiographic signs that are of real value in the early case, such as the enlargement of the patellar nucleus in tuberculous disease of the knee or narrowing of the disk space in disease of the spine. Spinal fusion, however, is allowed two pages and a plate. Such examples could be multiplied.

Provided that the reader realizes early that this is not a practical book as usually understood he may not be disappointed. It is interesting, fairly accurate, pleasantly written, faultlessly produced, and not expensive.

SPIRITUAL HEALING

The Background of Spiritual Healing. Psychological and Religious. By A. Graham Ikin M.A. M.Sc. (Pp. 224. 6s. net.) London: G. Allen and Unwin, 1937.

There are few subjects on which it is more difficult to get one's mind clear than that of 'faith healing' or 'spiritual healing' to use expressions commonly used to indicate that which others prefer to speak of as the Church's ministry of healing. Recently there have been published several books which go some way towards such clarification of mind though none of them appears completely to accomplish it. That depends doubtless, not only on the nature of the subject but also on the facts that both author and reader have usually already adopted a fairly definite attitude either religious or psychological, ecclesiastical or scientific, that the axioms or postulates with which they start differ and sometimes that the language in which they express themselves is not identical. Nevertheless such books are often very helpful, and among the most helpful of these must be placed Miss A. G. Ikin's *The Background of Spiritual Healing*. Miss Ikin's position, qualifications, and experience have now become well known and she writes with authority as a research scholar and lecturer in psychology, and as the psychologist working under the Archbishop of York's committee of doctors and clergy. Her book is written from what may be regarded as a High Anglican point of view and it rather shirks than elucidates such

questions as the place and efficacy of prayer of unction and of the laying on of hands in relation to its main subject, but on that main subject it is an able, thoughtful, and helpful pronouncement.

The book is not markedly biased by its theological point of view or by its preference for some particular psychological school of thought, and one of its best characteristics is the clearness with which the author makes those distinctions, sometimes rather minute, which are so necessary as a foundation for any profitable consideration of this subject. Though the end of the priest and the psychotherapist may be the same—the effecting of a truly harmonized personality—their immediate lines of approach are not identical. The one desires directly the conscious reconciliation of a human personality with God whatever the conception of God may be, the other the cure of a disordered personality. Each, to be really effective, must use not only his own personality but also skilled methods for which training is essential. Cures effected by the reaction of a distinctive personality on the mere emotions of patients without intelligent method or understanding are rarely more than very temporary though they are often dramatic and startling at mass services. Again there is a distinction between spiritual healing and mental healing though these are often confused in popular speech: both religious healing by the priest and psychological healing by the physician may operate on the mental level or on the spiritual level, often on both.

On the basis of ideas in which such distinctions as these are constantly borne in mind, and with a thorough knowledge of psychological theory and a sufficient acquaintance with psychotherapeutic methods and practice, Miss Ikin makes an orderly survey of her 'background'. She proceeds from an evolutionary and historical sketch of the emergence of the spiritual factor in the treatment of disease by way of a consideration of instincts and ideals and a remarkably clear exposition of the organization of instincts and of sentiments, dispositions and complexes to chapters on 'Moral Disease and Sin', on 'Suggestion and Faith', and on 'Psychoanalysis and Confession', and to a final plea for a 'harmony between psychotherapy and the Church's Ministry of Healing' wherein each has its part to play both by way of mutual understanding and of co-operation.

MERCK'S "JAHRESBERICHT"

We welcome the appearance of the jubilee number of Messrs E. Merck's *Jahresbericht*. During the fifty years since its first publication this annual report has increased steadily in importance and usefulness. Indeed during that period the number of new drugs and the relevant literature have increased at such a remarkable speed that to-day it is difficult to keep pace with recent progress without the aid of annual reviews of literature such as are provided by Messrs Merck. Tributes to the value of these reports are paid in a series of jubilee congratulations sent from laboratories all over the world which appear on the opening pages. The greater part of the volume is composed of a general review of literature relating to the therapeutic use of drugs which appeared in 1936. The most impressive point about this review is the mass of the literature dealt with which amounts to nearly 2,000 references. The rate at which any important new discovery accumulates a literature of its own may be gathered from the fact that the *Jahresbericht* gives fifty references to work relating to prontosil and there are over 100 references to recent work on sex hormones. These figures indicate the importance of the report as a guide to a literature that

very mass of which makes it inaccessible to any but a specialist dealing with some selected and narrow field. In addition to this general survey the volume contains also a series of papers, many of which come from the Merck laboratories. Among these may be mentioned an interesting series on recent advances in vitamin chemistry.

Doctors and pharmacists may obtain copies of the jubilee number, printed in German or in French from Messrs E. Merck (Darmstadt), Publicity Department, 60, Welbeck Street, London, W.1, free of charge.

Notes on Books

The sumptuous volume entitled *Christian R. Holmes, Man and Physician* by Dr. MARTIN FISCHER, contains a glowing account of the life and work of the eminent physician of Cincinnati who died in 1920. Born at Vejle in Denmark in 1857, the son of a miller, Holmes first started life as a civil engineer but in 1876 migrated with his family to Cincinnati, where he studied medicine. In 1885 he became an intern to the Cincinnati Hospital, to which he became successively attached in the capacity of curator, physician, otologist and ophthalmologist. Many years of his life were spent in visiting hospitals in the United States and Europe in order to gain information likely to be useful for improvement of his hospital. In 1904 he was appointed professor of otology and dean of the University of Cincinnati. During the great war he was put in charge of the ear, nose, and throat department at Camp Sherman, Ohio. Holmes made numerous contributions to the literature of hospital construction and medical education, as well as to that of oto-rhino-laryngology. He was president of the American Academy of Ophthalmology and Otology in 1901-2, and of the Cincinnati Academy of Medicine, and vice-president of the American Medical Association in 1902-3. The text is interspersed with portraits of Holmes at various stages of his career and members of his family, as well as of the Cincinnati Hospital. The work is published by Charles C. Thomas, Springfield, Illinois, price 4 dollars, and in this country by Ballière, Tindall and Cox.

A Moth Hunter's Gossip is aptly, though modestly, described by the author, Mr. P. B. M. ALLAN as "merely little tattle about certain moths which happen to interest me." These are more especially the sphinges or hawk-moths, and the book contains much information on their habits, also reminiscences on collecting, although the author confesses to his credit that he is more interested in live than in dead insects. This is a book for the leisure hours of entomologists, and some knowledge of the subject, extending at least to a familiarity with the Latin names of the various species, is necessary for its proper appreciation. It is published by P. Allan and Co. at 7s. 6d.

In the work entitled *Syphilis sive morbus Humanus* (Lancaster, Pennsylvania: Science Press Printing Co.) Dr. CHARLES S. BUTLER, rear-admiral in the United States Navy, states that his object is first to give popular knowledge concerning venereal diseases, secondly to expose the fallacy of the American origin of syphilis, and thirdly to show the unity of so-called "yaws" and syphilis. As regards the first claim, Dr. Butler urges that popular education in sexual diseases should be carried out by newspapers, moving pictures, and other means of popular education, and that the victim of venereal disease should be treated just like any other sick person. Unlike Astruc in the eighteenth century and Wilhelm Ebstein, Iwan Bloch, Preuss and Jeanselme in modern times, whose work he ignores, Dr. Butler maintains that certain diseases mentioned in the Bible, especially those of David and Job, were syphilis and makes similar statements with regard to the lesions on the genitals described by Celsus, and

in the throat by Aretaeus, which were more probably soft chancre and diphtheria respectively. Dr. Butler's observations on this subject may impress the laity but will not be taken seriously by the medical historian.

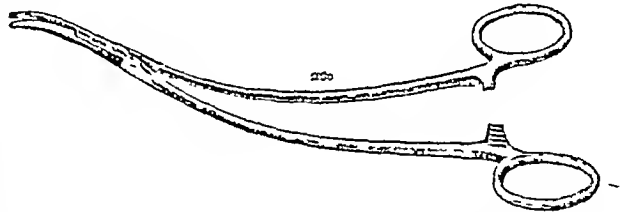
The useful little work entitled *Parents' Questions*, which consists as its subtitle states, of detailed answers to the most significant and frequently recurring questions put by parents, has been drawn up by six staff members of the Child Study Association of America. The questions have been arranged in the following categories: habits and habit training; discipline and authority; healthy attitudes towards health, heredity and training; the child's emotions; sex in childhood; character and spiritual growth; school and home; the child and the outside world; and parents as people. The book is published in this country by Gollancz at 8s. 6d.

Preparations and Appliances

NEW PATTERN NEEDLE HOLDER

Mr. G. L. PRESTON, F.R.C.S. Ed. (Plymouth) writes:

I primarily devised this needle holder for use in cleft palate operations in children, but it is equally useful in all operations and in any situation where space is limited and accurate suturing essential. The majority of needle holders were too

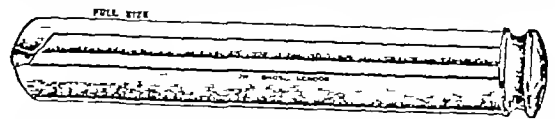


massive and cumbersome for the small needles employed. Apart from this, when working in such a confined space one's hand invariably tended to obscure the view of the operation field. Owing to the marked 'cast off' in the handles, the needle is always in view, and the slight curve in the jaws and the fineness of their points enable even the smallest sizes (that is, Lanes) to be held securely in various positions so that the sutures can be inserted from any angle, which is an impossibility with the ordinary types of needle holders. The needle holder has been made for me by Messrs. Down Brothers, London, S.E.

MODIFICATION OF SMITH PETERSEN NAIL

Mr. C. E. KINDERSLEY, F.R.C.S. (Bath), writes:

Messrs. Down Brothers have made for me a modification of the Smith-Petersen nail, which should prevent the danger of the nail carrying the direction wire or pin through into the pelvis. The nail is made after the Viennese pattern, 15 mm



in diameter and the terminal portion of the cannula (2.5 mm) is flared out in order to allow it to slide easily along the guide. This applies to any guide pin which has markings upon it or shoulder cuttings in it. This modification was suggested to me by a case in which the nail caught on a Kirschner wire and carried this an inch or more into the pelvis and fractured the nail itself, leaving the terminal quarter inch of the nail in the head of the femur.

AN EXPERIMENT IN SOCIAL HYGIENE THE CAMPAIGN AGAINST PROSTITUTION AND VENEREAL DISEASE IN THE U.S.S.R

BY

E. H. CLUVER, M.A., M.D., D.P.H.

Union Health Department, Pretoria

Everywhere in Russia one met with problems that were being "liquidated." Certainly that country is attaining the objects it sets itself in its "plans" with remarkable rapidity, which is the less surprising when one becomes aware of the tremendous enthusiasm with which the items of the plans are tackled by everyone concerned.

Prostitution a "Liquidated" Problem

In Moscow I was informed that the problem of prostitution had been almost completely liquidated. The startling optimism of such an assertion made one gasp. And yet on inquiring further into the matter one had to admit that the claim was to a very considerable extent justified by the facts. In Tsarist times Russian cities were notorious for the amount of prostitution rife in them. And of these cities Moscow had much the highest percentage. Yet when I visited Moscow last November only one prophylactorium for the treatment and rehabilitation of prostitutes still remained of the five large institutions established in 1926. In this one prophylactorium the number of inmates had fallen to 100, and in the whole of Moscow, which since the Revolution has, because of industrialization, nearly doubled its population, the authorities knew of only 240 prostitutes, this in spite of the fact that they search for them now much more diligently than in the past because of their active campaign against venereal disease, and that all sorts of inducements are offered to prostitutes to present themselves.

In 1913 there were in Moscow 2,000 registered prostitutes. While reliable statistics as between registered and undetected prostitution are obviously not obtainable, it has been assumed with a fair degree of probability that in countries where regulation of prostitution is practised there are at least ten unregistered for every one registered prostitute. It may be assumed, then, that in Moscow in the years immediately preceding the Revolution there were at least 20,000 prostitutes. Yet now, with every encouragement held out to come for treatment and a very elaborate system of detection, there is work in Moscow for only one prophylactorium, the number of inmates of which is rapidly dwindling. I was informed that it was confidently anticipated that within a year it would have to be closed down, as all prostitutes will have been absorbed into industry.

In Russia as a whole conditions have been similar. The campaign against prostitution was begun in 1917 as one of the first of the "capitalist evils" to be tackled. In 1926 there were in all thirty-three prophylactoria. These have now been reduced to sixteen and it is expected that by the end of the present five-year plan the whole problem will have been liquidated and that there will be no further use for prophylactoria.

The Economic Factor

When I inquired from physicians in the prophylactoria and others as to the reasons for this virtual abolition of prostitution from Russian cities I was invariably informed that the main, if not the only reason was the fact that ample employment was now available for women. Women are now not only on an absolute equality with men as regards equal pay for equal work, but they are completely compensated for their natural disabilities. Thus a woman manual worker gets fifty-six days leave on full pay before confinement and another fifty-six days after confinement. For women employed in non-manual work the periods are forty-two days in each case. The

granting of this leave is rigidly enforced. At one factory the manager somewhat resentfully pointed out to me a pregnant worker who had been taken on only a week previously. In another week she would be within two months of her confinement, and although she would have been at his factory for only a fortnight he would have to continue keeping her on his pay roll for the next sixteen weeks. Having a baby is looked upon in the U.S.S.R. as quite as onerous as factory work and therefore deserving of the same pay. After the period of leave is over the mother is still assisted. Every factory I visited had attached to it a crèche, where not only are infants under skilled care, but the employed mothers can come and nurse them twice during the working shift. The disability due to maternity is thus almost completely removed. Charts are actually provided for the woman worker to read off directly when her pre-confinement spell of leave will fall due.

I have gone into this matter somewhat fully to illustrate the great importance that is attached to the necessity for absolute equality between men and women in the field of labour. Women have become completely emancipated in Russia. One saw them driving trams, train-conducting, managing factories, directing polyclinics. In the medical world men are conspicuous by their absence. At one large polyclinic in Moscow, after I had seen some twenty women doctors at work in its various sections, I commented to the lady director who was showing me round on the absence of men.

"Ah," said she, when my remark had been translated by the female intourist guide, "we are just coming to a section of which a male doctor is in charge."

Even then we were doomed to disappointment for when we reached the point where he should have been he was unaccountably not at his post!

Not only has the female equal opportunity in the labour world with the male, but her services are very greatly in demand owing to the shortage of industrial labour. There is no unemployment in the U.S.S.R. On the contrary, the factory managers are continually complaining of the shortage of labour because of the difficulties resulting in keeping up with the five-year plan of factory production.

This, then—the fact that women have not the slightest difficulty in obtaining fully paid work in legitimate industries and professions—is given as the chief reason for the liquidation of the problem of prostitution.

Contributory Factors

Other factors which are considered to be of minor or contributory importance are propaganda, the facilitation of divorce, and the work of the prophylactoria. Propaganda on the part of the State has become very highly developed in Russia. It results in an almost fanatical fervour for attaining the objects set out by the propagandists. In a land where the vision is nowhere, either on hoardings or in newspapers obscured by the commercial advertisements of capitalist countries, propaganda of this kind becomes particularly effective. (One of the first things that strikes the visitor to the U.S.S.R. is the absence of all advertisements and it is an absence for which he cannot but be grateful.) All forms of propaganda are mobilized in the war against disease: addresses, pamphlets, posters, diagrams in clinics. Those regarding prostitution and venereal disease are frank to a degree and to the Western eye sometimes revolting.

The changed laws of marriage have undoubtedly contributed to the abolition of prostitution. Divorce has been greatly facilitated so that incompatible couples are no longer compelled to live together with the almost inevitable development of immorality. Further legal or clerical sanction for liaisons is no longer insisted on and there is no such thing as an illegitimate child. Nevertheless it is wrong to assert that this relaxing of the bonds of marriage has resulted in promiscuity. This may have

been the case to some extent just after the Revolution, with the sudden relaxing of restraints, but it certainly is no longer true. Divorce, though legally easy of attainment, is yet expensive. A first divorce cost 50 roubles, a second 150, for third or subsequent separations the charge is 300 roubles—that is, a month's wage or salary of an average manual worker or a junior professional worker. If there are children there are more serious financial sanctions. If the children are kept by the mother the father is required to pay a quarter of his wages for one child, a third for two, and a half for three or more. The same applies to the mother should the father have the custody of the children.

Prophylactoria

The prophylactoria merit a brief description if only because of the probability that they will shortly cease to exist. They are institutions for the reform of prostitutes and for the treatment of venereal disease, from which all the inmates suffer on admission. I visited two prophylactoria, the one in Moscow and another in Kiev. But it would appear that the procedures are practically identical in all. The women enter the institution voluntarily, presumably after they have been reasoned with by social workers specially trained for the purpose. I was positively assured, however, that there is no police interference whatever with the prostitutes. The girls normally remain in the institution for two years. They receive intensive treatment for their syphilis and/or gonorrhoea during the first week or two after admission. Treatment continues throughout the period of their stay, but after the active manifestations of disease have been cleared up training to fit them for occupation in industry begins. If they are illiterate they receive ordinary primary education. But an essential feature is the technical training designed to fit the girl for a job when she leaves. At Moscow most of the inmates were being trained in needlework in a special needlework shop attached to the institution. For their work they are paid the same wages as those received by workers in ordinary factories. There is no philanthropy. The girl becomes a worker from the first day after she has completed her course of active treatment receiving on an average 70 roubles per month. Of this 35 roubles are deducted for food and use of dormitory. True she receives treatment and education free, but this applies throughout the U.S.S.R., all schools, clinics, and hospitals supplying their services free. A proportion of the patients are mentally deficient. For them other training is provided. Not infrequently they take readily to simple singing and painting.

The ages of the inmates varied from 18 to 24 years. At the Moscow institution ten full-time physicians were employed. To account for this surprisingly large number for only 100 patients it was explained that psychiatric treatment is looked upon as of very great importance. Such treatment is necessarily laborious and slow. The staff, then, consists of psychologists, neuro-pathologists as well as ordinary veneerologists. The institute was well equipped with all the usual requirements of a hospital for venereal diseases, including a bacteriological laboratory, a urological department, and a theatre for physiotherapy.

During the twelve years of its existence the Moscow prophylactorium has dealt with approximately 2,500 cases. Only about 1 per cent of those discharged revert to prostitution. Most of them have married and had children. Others have entered schools and universities for which they are given special facilities. The institute keeps in touch with the girls after discharge, although this is done unobtrusively. The subjects being in most cases unaware of this supervision. Supervision ceases when the authorities are satisfied that all danger of reversion to prostitution is past. Thus of the 2,500 girls that have passed through the Moscow institution 500 only are still under supervision.

It will be realized that each prophylactorium has a special outdoor staff whose duties are not only to supervise the women discharged from the institute but also to be on the look-out for hitherto unrecognized prostitutes. They visit bazaars, railway stations and other places where soliciting is likely to occur. They maintain that they have no difficulty in recognizing the prostitute. It is by means of this staff that it has been possible to estimate the number of prostitutes in Moscow at present as only 240 in contrast to the 20,000 or more of two decades ago. It is the members of this staff too, who engage in conversation girls seen soliciting, telling them of the opportunities offered by the prophylactorium for treatment of the venereal disease from which they are probably suffering and of the facilities for being trained in a more honourable occupation.

A matter which I did not hear discussed in Russia was the male factor in prostitution. Obviously female prostitution cannot flourish unless there is a large population of males seeking its services—the ordinary callous assumption that the supply is largely created by the demand. This demand I should imagine has largely disappeared because of the simpler marriage laws and (what seems to me even more important) the enthusiasm of every citizen for the new conditions. Every Russian one met was clearly convinced that his was the best form of government, and it was up to him to do his utmost to demonstrate to the rest of the world what a fine fellow a member of the Russian proletariat was. With this splendid ardour evil living finds no place. My very first interpreter (as everywhere else a female) told me with pride: 'There is order everywhere.'

Venereal Disease

With prostitution so nearly abolished venereal disease must automatically have greatly diminished. Apart from venality (commercialism) prostitution implies promiscuity and the inevitable harvest of promiscuity is venereal disease. Other factors promoting a decrease in incidence are the greatly increased facilities for diagnosis and treatment, the clean certificate of health required before marriage, and the inevitable propaganda.

The factors which have been mentioned as conducive to the abolition of prostitution all act indirectly, too, in lessening infection. They are all factors aimed against promiscuity, and therefore also against venereal disease. A more direct campaign against these diseases is also being waged. All five of the cities visited by me in European Russia had ample laboratory facilities for diagnosis as well as hospital and dispensary accommodation for patients suffering from venereal disease. Diagnosis and treatment is, of course, entirely gratuitous. Further, they appear to have been amazingly successful in removing all stigma attaching to infection. These diseases are looked upon as a misfortune comparable to any other infection which may have been contracted. On the other hand, the patient is given full information about the infectivity of his condition, and if he wittingly transmits infection to another he is very severely dealt with. Such a crime is punishable with six months imprisonment. Patients who are not amenable to persuasion and who will not take the requisite precautions are dealt with in various ways the most effective of which is by means of the wall newspaper, which one sees in every factory. A patient who refuses to come for treatment has this fact announced on the wall newspaper of his factory, with the added information that he is a danger to his fellows.

Before the Revolution the level of living was so low that there was a tremendous amount of innocent syphilis—that is, infection conveyed extragenitally. This resulted from gross overcrowding in hovels or tenement rooms, all members of the family using the same eating utensils, and the many other well known ways in which infection of this nature must necessarily spread when persons are living in the very lowest levels of degradation. The

obvious general improvement in the level of living of these people, together with preventive propaganda and education, has largely removed this form of venereal disease

Accurate figures regarding venereal disease are not yet available even in Russia, where the reticence which is so great an obstacle has largely been removed. Nevertheless there can be no doubt that the incidence has, during recent years, been very greatly reduced, and from the medical point of view this is one of the obvious and very notable successes resulting from a mighty experiment in social hygiene

Nova et Vetera

HISTORY OF GYNAECOLOGY AND OBSTETRICS

Dr Edwin Jameson's small pocket book on this subject¹ is one of the series of primers on the history of medicine issued under the general title *Clio Medica* and edited by E. B. Krumbhaar of Philadelphia. The author, in a modest introduction, recognizes the difficulty of dealing adequately in a small volume with the history of gynaecology and obstetrics, while "hoping that he has brought to light a few new facts or new points of interest." In this he has certainly succeeded. Dr Jameson does not cite his sources in the text, but appends a bibliography and a list of classic books. The first four chapters deal with the subject under Early Period, Greek and Roman Period, the Renaissance, and Modern Period. The author, in writing of Caesarean section spells it Caesarian, and says the word may be derived from the Latin word *cedere* though it should be *caedere*—*a matris utero caesus* (Pliny). The date of publication of *The Byrth of Man-kynde* is given as 1545, it should be 1540. The important Italian Renaissance work, *La Comare* published by Scipione Mercurio in 1596, should have been mentioned. Mercurio was known by several names—for example, Scipion Mercuri or Mercurii, but not by the name of Mereurali, under which he appears in the index. Jerome (Hieronymus) was his monastic name. The author mentions the *Gynaeciorum* of 1566 and 1586, but not the more important Spachius edition of 1597. An interesting account is given of the foundation of the first lying-in hospital in America by Dr W. Shippen in 1765 just twenty years after the foundation of the Rotunda in Dublin. Dr T. C. James (professor in 1813) is mentioned as the first in America to induce premature labour in a patient with contracted pelvis, but there is no account of the history of the operation in England from 1756 to the present time. The author does well to call attention to the opposition shown to the Maternity Hospital in Philadelphia and to the futile endeavours to restrict the surgical activities of obstetricians.

No less than one third of the book is taken up with the history of the forceps and puerperal fever, leaving only thirty-three pages for the development of gynaecological surgery. We think these chapters might have been curtailed with advantage: the classic work of Kedarnath Das on the forceps is not mentioned. The pair of Chamberlen forceps illustrated is not the most interesting of the Chamberlen instruments which are preserved in the library of the Royal Society of Medicine (not as stated, in the museum of the College of Physicians). A reference is given to O. W. Holmes's valuable contribution to the study of puerperal fever and his eight conclusions are published.

As the author states the chapter on the development of gynaecological surgery is extremely sketchy. This is regrettable, in view of the great part Americans have taken in its development and of the fact that its

"father," Marion Sims, founded the first hospital for the diseases of women, Women's Hospital, New York, in 1855. We think that the author minimizes the work of the English ovariologists Charles Clay and Spencer Wells, to whose publications the world-wide adoption of ovariectomy was chiefly due. Up to the year 1860 when the author says the operation had taken root in America, Clay had performed more successful complete operations (65) than the whole of the American gynaecologists (64) and with a mortality rate of 30 per cent. up to that time the chief American ovariologist (Allee) had only performed ten successful operations, with a mortality rate of 45 per cent. It was to the British and not the American operators that the French and Germans flocked to study ovariectomy, as may be read in Spencer's *History of Ovariectomy* (Proc. Roy. Soc. Med., 1924) where also is recorded Emiliani's (not Gaetano's) operation in Italy in 1815, to which the author had not been able to find a reference. We cannot find any account of chorion epithelioma or of the treatment of cancer of the cervix by the electric cautery (Byrne) or radium. In the epilogue the author adds that a monument has been recently erected to the first ovariectomy patient, Mrs. Crawford, in Danville, Kentucky, where a monument to the first ovariectomist, Ephraim McDowell, was erected in 1879.

A few typographical or nominal errors have been noticed: Paen for Péan, Françoise Rousset for François Rousset, Hendrick for Hendrik, DuBois for Dubois, Emiliani Gaetano for Gaetano Emiliani. Generally we have been struck with the accuracy of this little book which will be welcomed by both specialists and general practitioners, for it contains a good deal of information only to be found in the large and expensive histories, and some facts which even they do not contain.

ANNALS OF MEDICAL HISTORY

The March number of the *Annals of Medical History*¹ contains ten contributions by writers other than the editorial staff, and includes the third instalment of Dr. Silvette's interesting study of the "Doctor on the Stage" during the seventeenth century, it is generously supplied with quotations from contemporary dramatists and there is much about quacks. Dr. Olmsted gives a full account of the posthumously published notes made by Claude Bernard on Pasteur's work on spontaneous generation. Bernard and Pasteur were firm friends and Bernard had never mentioned his criticisms to Pasteur, intending so Dr. Olmsted considers to test the matter fully before any action was taken. Bernard's death prevented this experimentation, and there is not any evidence that he would have allowed their publication. Sir Robert Armstrong-Jones contributes an attractive article on Keats's visit to Scotland in 1818. Dr. J. B. Penfold's analysis of the early history of scrotal elephantiasis shows the rather surprising result that in spite of no anaesthesia or antiseptics the operative mortality was not more than 20 per cent. one terrible operation, however, went on for eight hours. Dr. A. Randall recalls the last major operation performed by Philip Syng Physick, the Father of American Surgery—namely the removal of more than a thousand calculi from the bladder of the Chief Justice of America aged 76 with complete success. In a short note Dr. Thorington describes the iron votive offerings of St. Leonhard the saint of prisoners who died in the middle of the sixth century. A comparative study of medicine among the ancient races of Egypt, Babylonia and Assyria is contributed by Dr. P. J. Moorad. Dr. C. R. Hall writes on doctors and medical practice in the early days of Nassau County, New York, and Mr. J. W. Draper critically discusses the melancholia of Hamlet.

¹ *Gynaecology and Obstetrics*. By Edwin M. Jameson, M.D. New York: Paul B. Hoeber, Inc. 1936. (Pp. 170. 5 illustrations. 2 dollars.)

¹ New Series vol. ix, No. 2, March 1937. Edited by Fran. R. Packard, M.D. New York: Paul B. Hoeber, Inc. Medical Book Department of Harper and Brothers, London. Baillet-Latour and Co. (Pp. 101-200. illustrated. Volume of six numbers. £2. 10s. single numbers 10s. (d).)

BRITISH MEDICAL JOURNAL

LONDON

SATURDAY MAY 29 1937

THE MOTHER AND THE HOME

It has devolved upon members of the Charity Organisation Society to collect material from this country for the approaching International Congress, dealing with "La Mère au Foyer," to be held in Paris. The greater part of the April issue of the organization's quarterly journal¹ is devoted to this subject. Under the general heading "Mothers of Britain. Estimates of their Efficiency," the question is reviewed from the angle of the C.O.S. family case worker and of the doctor, each of whom, through the exceptional opportunities afforded by their daily work, is well qualified to express an opinion. The views of statesmen, administrators, and academic exponents are also given, but the journal rightly allots comparatively little space to the information received from these sources. At a time when the medical profession is not perhaps at the height of its popularity with the general public it is gratifying to read that "our earthly providences are our mother and our doctor," and that "it is essential to our well-being that they work for us in close alliance." The family case-worker is aptly designated as the handmaid of both. The information required for the congress at Paris is indicated by questionnaires which are exceedingly and perhaps unnecessarily comprehensive. If the mother goes out to work, what is the effect on the family budget, the family health, the education of the children, and the atmosphere of the home? What is the proportion of (a) divorces and desertions, (b) child delinquents (1) when the mother did not go out to work and (2) when the mother did go out to work? These are only two comparatively simple examples from a host of questions framed to probe every aspect and ramification of a mother's life. The problem is further complicated by the varying conditions of life observable in different parts of the country, in addition to the wide differences of character and mental outlook in individual homes. In dealing with the information elicited the *Charity Organisation Quarterly* takes the sound view that more is to be learned from a few representative accurate case studies by capable workers than from a large number handled in a purely arithmetical manner.

¹ *Charity Organisation Quarterly*, April 1937 11 No 2.

"We come at last to the all-important question, What are the medical profession saying and doing about the mother in her home?" Evidently the writers have gone to considerable trouble to find out. In addition to a selection of replies by doctors, to whom the questionnaire was addressed, a number of extracts bearing on the subject are reprinted, with full acknowledgement, from articles in the *British Medical Journal*. Nutrition, child guidance, practical psychology, endocrine difficulties, and the menopause are some of the questions rightly included as relevant. But although it is difficult to see the wood for the trees the main theme appears to be the question whether a mother should work or stay at home. Provided that pregnancy is safeguarded, that an adequate alternative to maternal supervision is available for the children, and that the mother's employment does not take the form of heavy manual labour, the general consensus of opinion appears to be in favour of work. With small families housekeeping is not a whole-time job and the beneficial effect of outside interests for the mother, together with the improvement in material living conditions for the family provided by her earnings, are points adduced in support of this view. Whether engaged in outside work or not, it is clear that for a proportion of mothers, at any rate in the humbler walks of life, a certain amount of guidance and help is desirable. This, it is suggested, can best be supplied, not through leaflets, lectures, and regulations, but through the sympathetic personal contact, in their respective spheres of influence, of the family case-worker and the general practitioner.

ACTION OF ACETYLCHOLINE ON THE CENTRAL NERVOUS SYSTEM

In a classical research Feldberg and Gaddum¹ proved that acetylcholine is liberated at the terminals of pre-ganglionic fibres round ganglion cells, and suggested that acetylcholine is the normal transmitter of the nerve impulse at these junctions in the autonomic nervous system. This work has naturally led to fresh speculation as to the means by which impulses are transmitted at the synapses of the central nervous system. Conditions in the central nervous system are, however, far more complex than in peripheral ganglia, especially in the fact that in the latter no process corresponding to central inhibition normally occurs. A number of workers have examined the action of acetylcholine on different parts of the central nervous system. Dikshit² showed that, injected into the cerebral

¹ *J. Physiol.* 1934 81 305

² *Ibid.*, 1934 80 409 1935 83 42 P

ventricles of the cat, it depresses or abolishes respiration and produces a condition resembling natural sleep. Henderson and Wilson² observed that eserine or acetylcholine, when injected into the lateral ventricle in man, gave rise to similar effects—nausea, vomiting, increased intestinal movements, and sweating—but the circulation and respiration were unaffected. Schweitzer and Samson Wright¹ in a recent paper have examined the action of eserine and related substances and of acetylcholine on the knee-jerk of cats under chloralose anaesthesia. Eserine was found to increase the knee-jerk markedly and to heighten general reflex excitability, larger doses of the drug are followed by convulsions resembling those produced by the administration of strychnine. A detailed analysis showed that the excitatory action of eserine on reflexes is not due to changes in the blood pressure or respiration, and depends only in part on the well-known action of eserine of increasing the response of skeletal muscle to motor nerve stimulation. For instance, eserine enhances somatic reflexes in animals under deep ether anaesthesia, in which state the peripheral potentiating action of eserine on skeletal muscle is absent. Additional evidence was obtained from experiments in which the hind limbs were artificially perfused or had their circulation occluded, under these conditions the injection of eserine into the jugular vein still enhances reflex actions, although the drug cannot reach the periphery. It was concluded, therefore, that eserine stimulates the central nervous system, heightening reflex responses. The effects were equally well seen in decerebrate animals—proving that eserine is not merely anti-anaesthetic—and after transection of the spinal cord in the mid thoracic region—showing that the drug acts directly on the lower spinal somatic centres.

It is well known that the effects of eserine on the autonomic nervous system are identical in almost every respect with those of injected acetylcholine. Schweitzer and Wright's experiments with eserine naturally led them to investigate the action of acetylcholine on the central nervous system as they supposed that the results of administering eserine might be due to its anti-cholinesterase action retarding the destruction of normally formed acetylcholine. It was found however contrary to expectation, that acetylcholine unlike eserine usually depressed reflex responses. This effect is annulled by atropine but subsequent injection of larger doses of acetylcholine may still lead to the usual inhibiting effect. Evidence was presented that the inhibition is independent of changes

in circulation, respiration, or in the response of the muscle to motor nerve stimulation, and is due to some action on the central nervous system. The inhibitory action of acetylcholine is, however, intensified by the previous administration of small doses of eserine. To explain these rather unexpected findings further experiments were carried out with other drugs of the eserine series, which, like it, are anti-cholinesterases—that is they inhibit the action of the enzyme (cholinesterase) which normally destroys acetylcholine. Two of these substances, including prostigmine, were examined and found to depress reflexes, in part at all events, owing to an action on the central nervous system. As this result is similar to that of injected acetylcholine the authors suggest that this central inhibition may be explained by an anti-cholinesterase action of the drugs. This means of course that the central excitatory effect of eserine previously described must be brought about by some entirely independent mechanism. Schweitzer and Wright also mention that in preliminary experiments they have found that acetylcholine and prostigmine can abolish the convulsions induced by strychnine.

The authors are cautious in interpreting their results, and wish at this stage only to draw attention to the pharmacological aspect of their researches. It is natural, however, to see in this work the possibility that in the future we may have to consider that acetylcholine or related substances are concerned in an intimate manner with transmission of the nerve impulse in the central nervous system. But even if further inquiry establishes this hypothesis on a sound foundation it will not necessarily follow that naturally released acetylcholine acts, like the artificially injected drug as a depressing or inhibiting agent. With many drugs the route of introduction and the dose employed profoundly influence not only the extent but even the direction of the effect. As was pointed out previously in these columns,³ acetylcholine itself provides a salutary warning. Under certain conditions it causes vigorous repetitive contraction of skeletal muscle, while under slightly different circumstances it may have exactly the opposite effect—namely a curari-like paralysis. A preliminary note by Kremer Pearson and Wright⁴ extends these studies further, and describes observations on patients suffering from hemiplegia in whom small doses of prostigmine were injected into the cerebro-spinal fluid by lumbar puncture. The drug diminished or abolished muscle tone and reflexes like the knee jerk and ankle-jerk and had striking though

¹ *Quart. J. exp. Physiol.* 1936 28 83
² *J. Physiol.* 1937 69 165

British Medical Journal 1937 1 873
J. Physiol. 1937 89 21 P

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY MAY 29 1937

THE CAPITATION FEE COURT OF INQUIRY INTO REMUNERATION OF INSURANCE PRACTITIONERS

The Court of Inquiry set up by the Minister of Health and the Secretary of State for Scotland and presided over by Lord Amulree began its deliberations on the morning of Wednesday May 26. The Ministry of Health and the Insurance Acts Committee of the British Medical Association exchanged Memorandums of Evidence on May 11 and exchanged Rejoinders on May 24. These four documents are given below with the exception of a non-controversial description of the machinery devised for the administration of medical benefit which was included in the Ministry's Memorandum.

MEMORANDUM BY INSURANCE ACTS COMMITTEE OF B M A

1 The Insurance Acts Committee of the British Medical Association believing the present rate of remuneration of insurance practitioners under the National Health Insurance Acts to have become inadequate, submits the following memorandum

History

2 In 1920 the annual capitation fee payable to insurance practitioners was fixed by a Board of Arbitration at 11s. In 1922 the medical profession accepted, on the grounds of the imperative necessity for national economy, the reduced rate of 9s 6d. In 1924 the rate of remuneration was fixed by a Court of Inquiry at 9s a rate which has been in operation since that year, with the exception of the period from October, 1931 to June 1934, when a voluntary deduction of 10 per cent was in operation and the period from July 1934 to June 1935, when a voluntary deduction of 5 per cent obtained. Although the rate fixed by the Court of Inquiry in 1924 was not regarded by the bulk of the profession as adequate, it was, of course loyally accepted. In these circumstances the Insurance Acts Committee does not propose to restate the case as presented to that Court of Inquiry but to confine itself to the changes relevant to the issue which have been manifest since that decision was made.

3 In the Committee's view the National Health Insurance system providing as it does for free choice of doctor and patient and eliminating direct payment to the doctor at the time of sickness is the best means of providing medical attendance and treatment for the lower paid workers of the country. This consideration has led the Committee to take the broadest possible view of the doctors' responsibilities, and continuously to focus its efforts on improving the value and widening the scope of the service rendered. As new methods of treatment and diagnosis have been perfected, the Committee has urged their acceptance as coming within the terms of service without raising the question of additional remuneration. Not without justice it has taken pride in the efficiency of the service rendered by insurance practitioners. To give examples of this attitude it may be stated that the Committee has co-operated in a general overhaul of the disciplinary machinery particularly in relation to medical certification and the keeping of medical records. It has co-operated in improving the machinery for investigating alleged excessive prescribing and has at its own expense, prepared and issued a *National Formulary* which has led to improved and economic prescribing. It has co-operated

with approved societies in a general overhaul of the certification procedure with a view to solving the problem of increased claims for sickness and disablement benefits, and to smoother working as between the doctors and those who administer sickness benefit. It has introduced at the expense of insurance practitioners a scheme for the retirement on pension of aged and infirm insurance practitioners whose means are straitened and against whom complaints may, because of their age and infirmity, arise. It has co-operated in the arrangement of lectures on national health insurance matters to final-year medical students, and initiated a voluntary scheme of superannuation, disablement, and family provision for insurance practitioners. Throughout it has been actuated by the desire to place at the disposal of the insured person an improved and improving service.

Some Testimonies

4 Before passing to the detailed presentation of the Insurance Acts Committee's case it is desired to draw attention to the testimony to the increased efficiency of the insurance service which has appeared in the annual reports of the Chief Medical Officer of the Ministry of Health.

1932 It is gratifying to be able to say that the experience of these officers [Regional Medical Officers] indicates clearly that, except in the case of a small minority of practitioners the standard of the medical service given to insured persons is not only high but is steadily advancing while the service with its capitation payment allows the practitioner to give and the patient to receive effective medical advice without the embarrassment of an impending bill and it may be added without the former disadvantages of contract practice.

1933 The importance of the service to the national endeavour towards raising the level of the health of the people as a whole and increasing the value of the life and capacity of each citizen can scarcely be over-estimated. The medical practitioners who provide the service by virtue of their opportunities for the early detection of disease in the individual form the first line of defence against communal disease and they provide also in most cases the best instrument for the prompt application to individuals of those preventive measures and improved methods of treatment which science puts at our disposal.

"The year 1933 saw the coming of age of the service and on appropriate occasions during the year much was said in celebration of the event by public men who had been or were concerned with the origin of the scheme in its various

aspects These utterances showed remarkable unanimity in their praise of what the service has accomplished. No one suggested that the scheme was or is immune from criticism or incapable of improvement. No human scheme is, and nowhere is the need for the application of every energy towards steady improvement recognized more clearly than among those directly concerned in administering and working the scheme. But no public speaker proposed that insurance should be stopped or curtailed and no one had the least doubt that the medical service given to the insured population to-day is not only vastly superior to the service given to the same class of people before the introduction of national health insurance but that the improvement since its inception has been steady and continuous.

1935 The Insurance Medical Service rightly, therefore, takes its place as one of the most effective branches of the public health service.

"The smoothness of the working of this vast scheme may be regarded as generally recognized. On a conservative estimate, in each year 8 000 000 insured persons seek medical advice and over 50 000 000 attendances are given by the doctors. In these circumstances it is remarkable that during 1935 in only 157 cases was it necessary to investigate a complaint regarding the adequacy of the service and in only 48 of these were the facts held to justify the imposition of a penalty. In addition to this negative evidence from the paucity of the number of complaints there is also ample positive testimony from competent observers to the success of the Insurance Medical Service. The vast majority of insurance practitioners interpret the terms of their contract in no niggardly spirit and undoubtedly the standard of the service they give is not only high, but is yearly rising as fresh advances of medical science add to the general practitioners' armamentarium in diagnosis and treatment. In this connexion it is significant that the interest shown by practitioners in post graduate study courses is steadily growing, and every year more practitioners feel impelled to devote part of their hard-earned leisure to attending the refresher courses of study increasingly provided by many of the medical schools throughout the country.

It is no less gratifying to note that the general improvement in the efficiency of the service is recognized by other leading authorities on national health insurance. In an address to the Annual Conference of the National Federation of Employees Approved Societies in March, 1933, the president (Mr Henry Lesser) said:

Whatever individual lapses there may be—and these are relatively very few—little complaint is heard from insured persons in regard to the treatment they receive from the doctors of their choice."

In his address at the National Conference of Industrial Assurance Approved Societies' Annual Meeting in December, 1934, the president (Sir Thomas Neill) said:

Before leaving this subject I should like to pay tribute to the practitioners on the Insurance Acts Committee for their co-operation and their obviously sincere desire to do everything in their power to ensure that the National Health Insurance Act shall be administered in the best interests of the insured population."

In 1934 the Secretary of the Welsh Board of Health, a civil servant of wide experience, said in a public speech that:

It was the fashion in some quarters to disparage the quality of the service given to insured persons whereas taking the wide view it was a very satisfactory service.

The report of the Departmental Committee on Scottish Health Services issued in 1936 says of national health insurance:

The evidence submitted to us from all quarters points to the success of the medical service under the national health insurance scheme."

General Considerations

5 There are certain general considerations of profound importance. The last twenty years and more particularly the last ten have been characterized by a reorientation of medical thought and a widening of the basis of medical

practice. Whereas, until comparatively recently, modern medicine found its sanction to a large extent in the sciences of pathology and morbid anatomy it now approaches the problems of health and disease from the standpoint of applied biology, concentrating not only on the causes and treatment of disease in its individual manifestations, but on the promotion and maintenance of positive health, viewing the individual less as a vehicle of disease processes and more as a living organism adapting itself to its environment. This change is admirably expressed in a paragraph of the report of the Departmental Committee on Scottish Health Services, 1936:

470 It will be noted that in the modern conception of medical practice great emphasis is placed on the role of the family doctor as health adviser. Owing to the advances of scientific knowledge many specialisms have developed and there is nothing to suggest that this movement will be less rapid in the future than it has been in recent times. On the other hand there has emerged a growing public appreciation of the value of health and of the importance of early attention to departures from normal and a demand for the services of the general practitioner as health adviser. We think that this movement also is bound to develop rapidly and that national policy for the promotion of the health of the people should be so framed as to encourage it. It appears to us that the role of health adviser by the family doctor is a natural development of ordinary medical practice and that the training of the student of medicine should be adapted to fit him for it.

6 Inevitably this change has found expression in the work of insurance practitioners. To their responsibility for the diagnosis and treatment of cases of individual sickness, which is certainly no less than it was, has been added an increasing measure of responsibility for the prevention of disease in the normal person and for the correction of minor departures from the normal. Although as a result of this preventive work the actual sickness incidence may be expected to decrease, there are involved responsibility and skill which find but partial expression in an increase in the number of items of service rendered. It will be agreed that it is of the greatest importance that the insurance practitioner should be encouraged to exercise to the full his opportunities to advise in the early stages of disease in order that so far as possible, serious disease may be prevented and the patient restored to health with a minimum loss of time.

7 There has been an increase in the complexity and effectiveness of insurance practitioners' work as a result of improvement in and elaboration of methods of diagnosis and treatment. For example advances in the knowledge of pernicious anaemia have led to more complicated methods of diagnosis and more laborious methods of treatment. There has been a relatively large increase in the incidence of some diseases and new types of other diseases have emerged. For example, the proportion of persons treated for ulceration of the stomach and duodenum has grown considerably in recent years, involving on the part of the doctor in attendance unremitting care often over prolonged periods. There has been a change in the medical outlook on the diagnosis and treatment of many conditions of which psychological troubles may be given as an example. These disturbing conditions, which are becoming more prevalent with the increased stress of modern life, make heavy demands upon insurance practitioners who, because of their intimate knowledge of the domestic and other circumstances of their patients are peculiarly well situated to deal with them.

8 Modern methods of diagnosis and treatment have increased the time which an insurance practitioner spends in the examination of individual patients. There may be given as examples the use of the sphygmomanometer as a routine method of diagnosis, the use of sera and vaccines for intramuscular, intradermal and subcutaneous injection, the use of sclerosing methods, the treatment of varicose veins and varicose ulceration, the collection of material for biological and bacterial investigation, an

increasing resort to psychological treatment, and the more prolonged and complete ante natal examinations undertaken as a routine to-day. The insurance practitioner spends a larger proportion of his working day with his insured patients than he did prior to 1924.

An Ageing Population

9 The proportion of elderly people for whose medical attention insurance practitioners are responsible is, coincident with the increasing average age of the population, growing with some rapidity. In 1928 the number of in-

mittee Practitioners in almost every Insurance Committee area have responded, and the number of insured persons in this sample has during each of the last six years been approximately 1½ millions. There have been constant changes in the personnel of the doctors keeping these records, and the total number of practices examined for one or more years is over 3,000. Thus the Insurance Acts Committee is now able to produce a volume of statistics in which it places complete confidence. The following is an analysis of the statistics collected in respect of 1922 and during the past seven years.

	1922	1930	1931	1932	1933	1934	1935	1936
Number of Insured Persons	665 118	1 111 041	1 603 152	1 757 980	1 583 102	1 474 373	1 641 208	1 590 207
Attendances at Surgery	1 837 334	3 940 578	5 547 691	6 558 709	6 151 399	5 423 923	6 195 788	6 054 268
Visits	663 262	1 364 539	2 069 283	2 256 777	2 229 495	1 920 496	2 195 869	2 115 992
Average Attendances at Surgery	2.76	3.54	3.46	3.73	3.88	3.68	3.77	3.80
Average Visits	0.99	1.22	1.29	1.28	1.40	1.30	1.34	1.33
Average A's and V's (combined)	3.75	4.77	4.75	5.01	5.29	4.98	5.11	5.13

sured persons over 65 was 873,800 and in 1935 it was 1,257,300. Expressed as percentages of the whole insured population, this means that persons over 65 represented 4.98 per cent of that population in 1928 and 6.7 per cent in 1935. An important contributory factor in lengthening life is the constant medical attention they have been able to command, and in turn older people require more medical treatment. Some of these people, such as those suffering from diabetes and pernicious anaemia, are enabled to live only because they receive, and only so long as they receive, continuous and active medical treatment.

Statistical Evidence

10 It is recognized that the general submissions of the Insurance Acts Committee in regard to the reorientation of medical thought, the increased attention to the preventive aspects of disease, the increased complexity and effectiveness of modern methods of diagnosis and treatment and the increased time devoted to individual patients are incapable of precise expression in statistical form. It is believed that unmistakable evidence of this increase in work and responsibility readily presents itself to all who observe the development of medical thought and the relation of that development to a progressive public opinion. Indeed public opinion and governmental action have to a considerable extent stimulated these developments. Confirmation of the Committee's submissions is, however, found in the statistics which have been obtained regarding the number of items of service actually rendered by insurance practitioners to their insured patients.

11 It was contended by the Committee's witnesses before the Court of Inquiry in 1924 that the figures then submitted involved an understatement of the volume of work which insurance practitioners were called upon to do. The Ministry's estimate at that time of the average number of items of service rendered to each insured person on a doctor's list was 3.5 per annum while the Insurance Acts Committee's estimate was 3.75 per annum. The Committee's figure was based upon statistics supplied by a large number of insurance practitioners obtained by counting the items of service recorded on the official medical record cards in their possession at the end of the year 1922. These figures did not take into account services rendered to persons whose record cards had gone from their possession by reason of change of address, death or cessation of title to benefit.

12 Following that inquiry the Committee decided that in order to obtain an accurate quantitative estimate of the amount of work undertaken by insurance practitioners it was necessary to secure a meticulous daily record of work done by a substantial proportion of them. Each year since 1924 every Panel Committee has been asked to find 10 per cent of its constituents who would be willing to keep day by day records on cards supplied by the Com-

Summarized, these statistics (1930-6) show

- That the average number of consultations at surgery is 3.705 per insured person
- That the average number of visits to patients' homes is 1.315 per insured person
- That the average number of attendances and visits (combined) is 5.02 per insured person

13 Although there has been a concerted effort by the Insurance Acts Committee and approved societies to reduce the number of patients referred to regional medical officers, the number of reports furnished to these officers has greatly increased. According to the Annual Reports of the Ministry of Health and Department of Health for Scotland, the number of references of this kind to regional medical officers in the year 1923 was 165,636, while in 1935 it had become 524,430. The work involved is only partly reflected in the statistics relating to the number of items of service rendered.

Practice Expenses

14 On the occasion of the last Court of Inquiry it was accepted that the ratio of practice expenses to the total income in non-dispensing insurance practice was 25 per cent, while the ratio in dispensing insurance practice was 33½ per cent. Since that date information upon this point has been collected by the Committee and the statistics now available show that in non-dispensing insurance practice the ratio is on average 30 per cent, while that for dispensing insurance practice has increased to 36 per cent. Rates, taxes, and the cost of employing assistants and locum tenens show an increase in comparison with 1924. The young medical practitioner without capital who, ten years ago would have become an assistant in general practice now finds that there are more attractive and remunerative avenues in other branches of medical practice. Consequently, higher salaries are now demanded by assistants.

Travelling Costs

15 For the proper conduct of medical practice a motor car is an absolute necessity. The public demands that medical aid in non-emergency as well as emergency conditions shall be made available in the shortest possible time, rendering the use of a motor car in the visiting of patients inevitable. It should be remembered that a car of good appearance is not without its psychological value. A considerable number of medical practitioners maintain a second car so that at no time are they without an effective vehicle. The mileage involved in the attendance upon a given number of patients is rising a change which applies not only to those patients in respect of whom payment is made from the Mileage Fund but also to patients within the two mile radius in respect of whom no payment is made.

16 The 15 h.p. model is perhaps typical of the car most commonly employed in general practice, although,

of course, cars of greater or less horse power are not uncommonly used. The life of cars in common use to-day is shorter than that of cars in use in 1924, the depreciation is higher and second hand value bears no relation to the intrinsic value of a car at the time of sale.

17 The following comparative figures of costs for a 15 h.p. car have been obtained from the Automobile Association

Running Costs per mile

	1922-24	1936
Petrol (20 miles per gallon)	1 15d	0 96d.
Lubricants	0 14d	0 12d
* Insurance	0 36d	0 36d
† Vehicle Tax	0 36d.	0 27d
Repairs and Replacements	0 19d	0 16d
Tyre Repairs and Replacements	0 40d	0 32d.
‡ Garage—Cleaning and Miscellaneous	1 20d	1 08d
‡ Depreciation on Cost of Car	0 96d.	1 24d.
	4 76d	4 45d.†

* Allowance has not been made for increased rates operating in certain congested areas—for example London, Glasgow and parts of Lancashire.

† Standing charges which do not vary in total amount with mileage.

‡ Increase in the cost of petrol in 1937 would raise this figure to 4.52d.

It may be stated in general terms that doctors have experienced little decrease in the costs of motoring since 1924.

Post Graduate Instruction

18 Nor must the need for post graduate instruction be forgotten, for it has become an indispensable feature of medical life. Every practitioner desirous of keeping himself abreast of medical science must resort from time to time to his medical school or to a neighbouring hospital centre where he can avail himself of facilities for post-graduate study. The remuneration a practitioner receives for his services should be sufficient to enable him to make provision for a periodical 'refresher' course.

Cost of Living

19 It will be recollected that the Insurance Acts Committee submitted as part of its case before the Court of Inquiry in 1924 a memorandum by Professor A. L. Bowley (late Professor of Statistics in the London University and Lecturer at the London School of Economics and Political Science) on the statistical aspects of insurance practice, which was then accepted as an accurate and impartial survey. The Committee has again approached Professor Bowley and attached to this memorandum is an Appendix prepared by him, which contains statistics relating to the cost of living in a typical middle-class household, with special reference to that of a medical practitioner. The data have been arranged for the years 1924 and 1936 and indicate a fall of between 7 and 10 per cent in the cost of living of a doctor's household instead of 13 to 14 per cent shown by the Ministry of Labour's Index. The diminution is due to the different proportions of income allotted to the classes of expenditure and to the assumption that some items of expenditure have not changed. It is also of importance to note that the allotment of expenditure (questioned on the occasion of the last award) calculated by Professor Bowley as appropriate to the budget of a middle-class family has proved to be similar to that published by Professor C. Jones in the *Journal of the Royal Statistical Society* 1928, p. 463.

The Young Adolescent

20 Under legislation shortly to be introduced medical benefit is to be extended to a new age group consisting of young persons under 16 years of age and in insurable occupations. These young adolescents will receive a full general practitioner service although as they will not be entitled to cash or sickness benefit no certification for national health insurance purposes will be required of insurance practitioners. Had certification been required of insurance practitioners for these entrants to national health insurance it would not of itself have proved a serious burden. The responsibility of the insurance practitioner in respect of these persons will be to a not inconsiderable

extent preventive and advisory. He will be concerned less with incapacity than with positive instruction in health and in the early detection and treatment of disease. Further, although he will not actually fill in national health insurance certificates, the responsibility for deciding whether incapacity exists will be imposed upon the practitioner. The employer, for example will almost certainly require a decision on this point.

21 It is not now disputed that one general capitation rate should apply to all insured persons including those shortly to be brought into medical benefit. If as is anticipated, the number of young adolescents in this new group proves to be one million they will form a little over 5 per cent of the new insured population. The absence of the requirement to fill in official national health insurance certificates in the case of 5 per cent of the insured population, a group in which the responsibility would be predominantly preventive and advisory does not justify any lowering of the general capitation rate.

Conclusion

22. If the 9s. of 1924 was a fair award for the number of items of service then undertaken (3.75 in 1923) the annual capitation fee on the basis of the existing number of items of service (five on average in the last seven years) should now be 12s. Admittedly the cost of living has fallen during that period, though not for the doctor to the extent suggested by the official index. The application of the cost of living figures justifies the request that the capitation fee taking into account these two factors alone should be 11s. 1d. But this is not to take into account such general considerations as increased responsibility the widened scope of medical practice, the increased time spent on individual patients, the increased ratio of costs to income and the almost certain prospect of a rise in the cost of living. In all the circumstances the Insurance Acts Committee submits that an annual capitation fee of 12s. 6d. should be paid to the insurance practitioner for every insured worker in medical benefit including those between the school-leaving age and 16 years of age for whom the Government intend to make medical benefit available.

MEDICAL DEPARTMENT
BRITISH MEDICAL ASSOCIATION
TAVISTOCK SQUARE
LONDON W.C.1

May 10 1937

APPENDIX

MEMORANDUM BY PROFESSOR A. L. BOWLEY, Sc.D., F.S.S.

I Cost of Living

The Ministry of Labour Cost of Living Index at certain dates is

July, 1914	100
July, 1923	169
July, 1924	170
July, 1936	146

In connexion with the British Medical Association's case to the Court of Inquiry in 1924 I prepared the following table of estimated annual expenditure of an average doctor's family—man, wife, 21 children, 26 servants (p. 317).

It will be seen that the change in annual expenditure for a doctor's family from 1913-14 to 1923 was estimated as being in the proportion 100:157. The latter figure (157) was lower than that of the Ministry of Labour (169) because some reduction was assumed in the quantities purchased of foods whose prices had then risen most; a smaller increase in the price of clothes, and a larger proportion of expenditure on sundries and personal requirements with a relatively small increase in price. The allotment of expenditure estimated in the above table has proved to be very similar to that found by Professor C. Jones for middle-class families in the *Journal of the Royal Statistical Society* 1928, p. 463.

	1913 or 1914	January 1920		July 1923	
		Percentage Increase over 1914	Total	Percentage Increase over 1914	Total
	£		£		£
Food	188	81½	341	48	278
Laundry	24	100	48	75	42
Wages	58	43	83	43	83
Two-thirds rent	48	0	48	30	62
Two-thirds rates	14	37	19	40	20
Two-thirds fuel and light	20	63	33	80	36
Clothes	90	100	180	100	180
Education fees	35	15	40	50	52
Education boarding	35	50	53	22	43
Postage	6	50	9	50	9
Tobacco	6	100	12	100	12
Drinks	10	100	20	100	20
Holidays	36	50	54	50	54
Sundries— Household	30	75	53	85	55
Personal	70	50	105	50	105
Total	670		1 098		1 051
Relative numbers Labour Gazette	100		164		157
	100		225		169

There are several methods of estimating the fall in prices from 1923-4 to 1936 but as they all lead to nearly the same result it is not necessary to follow them in much detail.

If the doctor's budget for 1914 is re-priced for July 1936, it shows an increase of 46 per cent—precisely the same as for the Ministry of Labour's working-class budget. This result indicates that while the rise was less for doctors than for the working class between 1913-14 and 1923-4 the fall has also been less between 1923-4 and 1936. In other words there was a rise in the ratio of 100 to 157 (57 per cent.) in the first period and a fall in the ratio of 157 to 146 (7 per cent.) in the second period.

Another method of assessing the fall in the cost of living of a doctor's family is by an examination of the rise or fall in the cost of the various items in the Ministry of Labour index numbers and the doctor's budget.

Ministry of Labour Index Numbers

	July 1923	% fall or rise	July 1936
Food	162	—20	129
Rent	147	+ 8	159
Clothing	220	—13½	190
Fuel and light	182	—5	170-175
Miscellaneous	185	— 8	170
All items	169	—13½	146

Doctor's Budget	1923 £	% fall	1936 £
Food	278	12	245
Laundry and wages	125	—	125
Rent and rates	82	—	82
Fuel and light	36	5	34
Clothing	180	13½	154
Education, postage tobacco drinks, holidays	190	—	190
Sundries	160	8	147
	1 051		977

It will be seen that the doctor's budget shows a reduction of £74 on £1,051, or 7 per cent. If however, the full allowance is made of 20 per cent for food (as shown in the Ministry of Labour index numbers), instead of the smaller reduction of 12 per cent. due to the presumed economy in expensive foods in 1923 the reduction is £105 on £1,051 or 10 per cent.

Without pursuing other methods, therefore the reduction in the doctor's budget can be assessed at 8 per cent.—the mean of the two methods illustrated. This reduction is less than that shown by the Ministry of Labour principally because of the items assumed to be unchanged in a doctor's budget and because food is a smaller proportion of the doctor's budget than of the working-class budget.

II The Doctor's Capitation Fee and the Cost of Living

To the 7s 3d of 1914 corresponds 7s 3d × 1.46 = 10s 7d now

To the 9s of 1924 corresponds 9s × 1.46 = 13s 4d last July but 9s × 1.46 = 13s 4d on the Ministry of Labour index. The former reckoning is to be preferred for reasons given.

Prices of food and fuel have risen since July, 1936 but if this is considered to be the normal seasonal increase attention ought not to be paid to it for comparison with previous July figures. It would raise the equivalents by about 2d.

The two index numbers for 1920 are given in the table quoted above as 225 for Ministry of Labour and 164 for the doctor's budget. The present equivalents of 11s in 1920 are about 7s 2d for the former and 9s 7d for the doctor's budget.

On the assumption that the claim for increased remuneration is based upon the increase in attendances per insured person on a doctor's list—5.11 in 1935 compared with 3.75 in 1923—the equivalents raised in proportion become

	Official Index 1924	Doctor's Budget 1924
7s. 3d. in 1914	14 4	14 4
11s. in 1920	9 9	13 4
9s. in 1924	10 6	11 4

MEMORANDUM BY THE MINISTER OF HEALTH AND THE SECRETARY OF STATE FOR SCOTLAND

Basis of Determining Remuneration of Insurance Practitioners

1 The present capitation fee of 9s was fixed on the recommendation of a Court of Inquiry in February 1924, after exhaustive examination, and it follows from the terms of reference to the present court that the award of the 1924 court is to be taken as the starting point of the inquiry as representing the proper and adequate remuneration at that time for the treatment of insured persons. The only points therefore to consider are the changes that have taken place since 1924, and the effect (if any) that such changes should have on the capitation rate.

2 The changes that have occurred since 1924 may be considered under four heads

- (1) The fall in the cost of living
- (2) The fall in the expenses of a doctor's practice
- (3) The variation of (a) the number and (b) the nature

of the services that insurance doctors are called upon to render to their insured patients

(4) The proposed extension of insurance to juveniles

3 As a preliminary it may be remarked that the number of insurance practitioners has since 1924 increased in greater proportion than the number of insured persons

GREAT BRITAIN			
	1924	1936	Increase per cent.
Number of insured persons entitled to medical benefit	15,346,000	18,245,000	18
Number of doctors under contract with Insurance Committees	15,725	20,112	28

While this increase in the number of insurance doctors in relation to the number of insured persons might be held to indicate that the service had become increasingly attractive it is realized that factors other than remuneration are involved.

The four changes mentioned are now considered in detail

Fall in the Cost of Living

4 A factor to be considered in determining the adequacy of a rate of remuneration is its real value in terms of commodities, and in the last arbitration on the doctors' capitation fee, in 1924, both parties based arguments on the variation in the cost of living since the last determination of the fee. It was common ground that the Ministry of Labour index figure could not be applied without adjustment. It was submitted that the proper course was to consider what change had taken place in the remuneration of other professions. In most other professions, however, the issue was complicated not only by the fact that the necessary data were not readily available but also by the fact that fees charged took account of an allowance for clerical and technical assistance of various kinds as well as the remuneration of the principal. The Minister therefore suggested a comparison with appropriate grades of the Civil Service, since in his view the higher ranks of the Civil Service formed, broadly speaking, the only comparable body of salaried professional men for whom the ratio of post war increase in remuneration could be determined with any exactness. It is not known what weight was attached to such arguments by the court of 1924, but in order to assist the court in considering this aspect of the question, which in the Minister's view is important because of the substantial fall since 1924 in the cost of living as measured by the Ministry of Labour Index Figure, an explanation is given below of the method of dealing in the payment of the Civil Service with post-war changes in the value of money.

5 Not only are the higher grades of the Civil Service the only professional class for which exact information is readily available as to the effect on remuneration of post war changes in the value of money, but there is a further argument for using the Civil Service scale as a measure of the adequacy of the remuneration of insurance practitioners. The latter are not, in the strict sense, public servants, but in so far as they are paid out of public or statutory funds their position is analogous to that of public servants and the Government could not in equity treat them differently in respect of variations in the cost of living unless they were satisfied that new considerations had arisen since 1924 which would necessitate special measures to attract and retain general practitioners in the numbers and of the type requisite for the provision of an efficient service. The figures given in paragraph 3 of this part of the Memorandum show that this condition for special treatment is not satisfied. Moreover the fact that so long as they observe the conditions of their contract medical practitioners who have joined the service have a right to remain in it is another feature which makes their position comparable with that of civil servants.

6 It should be explained that the scale used in adapting Civil Service salaries for the post war increase in the cost of living (which was also widely adopted by local authorities) allows war bonus at the full rate of the cost of living index figure in the case of the lowest paid officers only—that is those receiving salaries up to £91 per annum, for salaries beyond this point the rate of bonus was progressively reduced. For remuneration at the level with which the court will be concerned the bonus allowed in respect of increased cost of living was equivalent to a small part only of the increase represented by the Ministry of Labour Index Figure.

7 For the period March to September 1924 Civil Service bonus was calculated on a cost of living index figure of 80 per cent. above the level of July 1924. From October 1 1924 Civil Service salaries were consolidated on the basis of a cost of living index figure of 55. Since that date the cost of living index figure has been uniformly below 55.

8 The practical effect of the Civil Service scale is illustrated in the following table.

CIVIL SERVICE SALARIES

Basic Salary (1)	Salary at Index Figure 80 (1924) (2)	Salary at Index Figure 55 (1934) (3)	Percentage Increase of Col. 3 to Col. 1 (4)	Percentage Decrease of Col. 2 to Col. 3 (5)	9s. Scaled Down by Percentage in Col. 5 (6)
£ 750	976	905	21	7	8 4
800	1 023	954	19	7	8 4
850	1 085	1 011	19	7	8 4
900	1 130	1 058	18	6	8 5
950	1 191	1 115	17	6	8 5
1 000	1 234	1 161	16	6	8 5
1 050	1 294	1 218	16	6	8 5
1 100	1 336	1 262	15	6	8 5
1 150	1 395	1 318	15	6	8 5

9 The salary of a civil servant should however, be more properly compared with the net than with the gross income of an insurance doctor and the effect of the above table is therefore that, on the basis of comparison with Civil Service salaries, the fall in the cost of living since 1924 justifies a reduction in the net income of three-quarters of the amount by which the figures in the last column above fall short of 9s (on the assumption, adopted at the last Inquiry, that practice expenses on the average amount to one quarter of the total receipts). Throughout the range shown such a reduction varies from just under 4½d to just over 5½d, and on average it is submitted that there should be a reduction of slightly over 5d in that part of the 9s that is not absorbed by practice expenses.

Fall in the Expenses of a Doctor's Practice

10 The Minister has not detailed information as to the proportion of a doctor's gross income that is absorbed by practice expenses or the exact proportion of those expenses that is due to the cost of locomotion. It was stated at the Inquiry of 1924, on behalf of the Insurance Acts Committee, that practice expenses were about 25 per cent of the gross income, and the cost of locomotion has been variously estimated as from 75 to 85 per cent of the total expenses of practice. It is proposed to take the lower figure and to assume that the practice expenses were in 1924 25 per cent of the gross income and that cost of locomotion was about three quarters of the total practice expenses. That is, of a capitation fee of 9s., rather over 1s 8d represented in 1924 the cost of locomotion.

11 Since 1924 motoring costs have fallen considerably but the amount of the fall is not easy to estimate. The simplest comparative figures are the mileage rates allowed by the Treasury to such civil servants as necessarily use their own cars on official business and the conditions under which those cars are used do not appear to differ from those of travelling done in the course of an insurance practice sufficiently to invalidate the comparison. The rates per mile at the beginning of 1924 and those now in force are shown in the following table.

	7 h.p.	10-11 h.p.	Over 11 h.p.	
March, 1924	5½d	7d	8d.	
	7-8 h.p.	9-10 h.p.	11-12 h.p.	Over 12 h.p.
1937	2½d.	3½d.	4d	4½d.

It should be added that there was a small reduction later in 1924 and that the current rates were fixed in 1933. The latter have recently been reviewed and they are considered as still holding good.

From this comparison the reduction in motor travelling costs since 1924 would be nearly one half. These rates are not fixed arbitrarily by the Treasury but were arrived at after careful examination in consultation with representatives of the staffs affected.

12. An alternative method of estimating the fall in motoring costs is to construct a typical annual budget for 1924 and for the current year. The information on which

the table below has been prepared has been obtained from various sources, such as *The Motor Industry of Great Britain* published by the Society of Motor Manufacturers and Traders, *The Motor Car Index* published by Messrs Fletcher and Sons, Norwich which shows the prices of most models of cars in 1935 and earlier years current catalogues and information obtained for the investigation mentioned at the end of the preceding paragraph. The individual items are dealt with more fully in the notes that follow the table.

	1924	1937
	£ s. d.	£ s. d.
Cost of car (5 years' life)	48 12 0	28 16 0
Interest on capital expenditure	9 18 6	3 1 7
Tax	11 0 0	7 2 6
Tyres	13 10 8	6 7 9
Petrol	21 17 6	20 6 3
Maintenance	19 0 0	18 13 4
Garage	16 0 0	14 10 0
Insurance	12 17 6	12 2 6
	£152 16 2	£110 19 11

Notes—The Society of Motor Manufacturers and Traders, in its publication mentioned above, shows (p. 38) a reduction in the price of private cars of every make and horse power amounting to 50 per cent. between 1924 and 1935. The reduction takes account not only of changing prices of individual models, but of the greatly increased proportion of cars of lower nominal horse power among the total sales (p. 72). The sales apply to the public generally, and presumably therefore to insurance practitioners. The figures for 1937 are based on a car of 9-10 horse power costing £160; those for 1924 on a car of twice that price, and an annual mileage of 8,000 is assumed for both years.

A five years' life for the car has been assumed with a residual value of 24 per cent. in 1924 and of 10 per cent. in 1937. The first figure in each column is one fifth of the difference between the original cost and the residual value. Interest has been taken at 5 per cent. in 1924 and 3½ per cent. in 1937. Taxation was £1 per horse power in 1924 and 15s. in 1937. A small allowance has been made for the fact that the 1924 typical car was of rather higher nominal horse power. The expenditure on tyres is based on a life of 8,000 miles for covers and 12,000 for tubes in 1924 and 15,000 for covers and 20,000 for tubes in 1937. The cost for covers is taken as 61s. and 52s. 7d., and the cost for tubes as 10s. and 9s. 9d. respectively.

The prices for petrol ruling in 1924 averaged 1s. 9d. per gallon (disregarding the additional charge for petrol supplied in cans). The present price of No. 1 grade spirit is 1s. 7½d. per gallon. Thirty-two miles per gallon has been assumed for both years. The charge for maintenance includes washing and is based on figures agreed for the purposes of fixing the Civil Service mileage rates mentioned above. Allowing for the fall in nominal horse power of the typical car, there has been little change in the insurance premiums for full cover. No allowance has been made for a possible increase in the number of cars covered for third party risks only. The cost of garage varies so widely according to circumstances that any figures given must be speculative. Those shown above were agreed for the fixing of Civil Service mileage rates.

13 These figures show a reduction in motoring costs of 27 per cent. Figures have been obtained from a well known firm from whom cars can be obtained on hire and these show a reduction of approximately 30 per cent. in the present rates as compared with those for 1924. These figures taken together with the Civil Service mileage rates (para. 11) justify an assumption that the cost of locomotion has fallen since 1924 by not less than 30-40 per cent. Taking the mean figure this means that for every 1s. 8d. spent on locomotion in 1924 (see para. 10 above) the insurance practitioner need now spend 1s. 1d. only—a reduction of 7d. on the 9s. capitation fee.

Costs of travelling dealt with above have been taken as three-quarters of the total expenses of practice. The remaining items representing about 7d. out of the 9s. capita-

tion fee must, it is submitted, be presumed to have fallen approximately in proportion to the change in the value of money since 1924, but as the effect on the capitation fee would only be represented by something less than a penny it has not been taken expressly into account for the purposes of this memorandum.

Number of Services Rendered by Insurance Doctors

14 From time to time examinations have been made of the medical records held by insurance practitioners to ascertain the average number of services rendered to their insured patients. The method adopted for the examination made in 1925 (for the purposes of the Royal Commission on National Health Insurance then sitting) was to select in each region into which England and Wales is divided for the purposes of the Regional Medical Service an approximately equal number of doctors who were known to be good record keepers. In this way a representative sample of all types of practice—urban, semi-urban and rural, industrial, and residential—was secured. The examination was made in the spring of 1925 by the Regional Medical Officers and was confined to records of insured persons who were on the list of the selected doctors throughout the whole of 1924 and were still on those lists at the time the examination was made. The examination thus excluded the records of persons who (i) had transferred from one doctor's list to another during the year 1924, (ii) were new entrants into insurance and were placed on a doctor's list for the first time during the year (iii) had gone out of insurance (for causes other than death) or (iv) had died between the end of 1923 and the date of the examination. (The records relating to these last two classes were no longer in the possession of the doctors concerned.)

15 The survey has been repeated this year in relation to services rendered to insured persons during 1936. The 1925 survey covered 568 practices, this year's covered 660. The initial results of the surveys were as follows:

	1924			1936		
	Men	Women	Total	Men	Women	Total
Cards inspected	146,648	75,538	222,006	225,246	111,582	336,828
Percentage of cards bearing entries	43.1	44.4	43.7	50.5	55.4	52.1
Attendances recorded	376,662	204,168	580,790	620,169	356,226	976,395
Visits recorded	118,384	57,203	175,551	163,958	92,181	256,139
Total services recorded	494,970	261,371	756,341	784,127	448,407	1,232,534
Average number of attendances per card examined	2.57	2.71	2.62	2.75	3.19	2.90
Average number of visits per card examined	0.81	0.76	0.79	0.73	0.83	0.76
Average number of services per card examined	3.38	3.47	3.41	3.48	4.02	3.66

16 It was assumed in the calculations for 1924 that on average classes (i), (ii) and (iii) of the classes referred to in paragraph 14 would receive the same amount of medical attention as was given to the persons whose records were inspected, but that the records of persons who had died would show a greater number of visits and attendances. A separate examination was made in April 1925 of the records held by the Department of persons in class iv—that is, persons who had died during 1924 or after the end of the year but before the date of the examination. As anticipated these records disclosed a higher average of services than those dealt with in the main examination. A similar separate examination was made for 1936 in February and March of this year.

17 If the initial figures are corrected for the omission of dead records on the assumption of a death rate of 10 per 1,000 in each case the average number of services per card examined becomes 3.55 for 1924 and 3.72 for 1936, showing a true increase over the period of approximately

5 per cent. It will be observed that the proportionate correction for services on the cards of persons who died before the date of investigation was distinctly less in 1937 than in 1925, further reference will be made to this point later.

18 Comparing the uncorrected figures for 1924 and 1936 it will be seen that there has been an increase of 73 per cent in the average number of services rendered. At the same time there has been a slight shift in the balance of attendances and visits, the number of surgery attendances having increased by 10.7 per cent, while the average number of visits has fallen by 3.8 per cent.

How far this represents a net increase of work is not easy to determine. It is possible that it is the result of early recourse to the doctor. If this were the explanation the work would be lightened by increased opportunity of checking disease before it had progressed so far as to prevent the patient from visiting the doctor. A suggested method of estimating the net effect of the change is to weight the visits and attendances respectively in the ratio of 1½ to 1 (the average charge in private practice for a visit being usually about half as much again as the charge for an attendance). On this basis there would be on the uncorrected figures a net increase of work of about 6 per cent.

	1924	1936
Attendances	2.62	2.9
Visits × 1½	1.18	1.14
Total	3.8	4.04

If this weighting is applied to the figures corrected for the "dead" records the totals become 3.99 for 1924 and 4.12 for 1937 and the estimated net increase of work is about 3½ per cent. Applying this percentage to the capitation fee of 9s., the appropriate increase under this head is rather less than 4d.

19 The two essentials in an investigation of this kind are, of course, that the practices inspected should be a true sample and that the figure obtained should be properly comparable with those of the previous investigation. As to the first of these points the Insurance Acts Committee was furnished in 1925 with a copy of the instructions to the Regional Medical Staff concerned in the examination of the medical records. In a letter dated March 24 1925, the secretary of the Insurance Acts Committee stated, after consulting the chairman of that Committee, that they did not desire to take any exception to the instructions, and thought that the instructions would result in a fair sample being taken. Copies of the instructions for the latest survey (which follow closely the earlier instructions) are appended to this memorandum (Appendix II).

20 It will be seen from what is said above that care has also been taken that the figures deduced from the examinations of doctors' records in 1925 and 1937 should be truly comparable. A possible cause of error appeared to be shift of population since 1924 and this question was specially examined. In both 1924 and 1937 the number of records examined in Northern England and in South Wales where the demand on doctors' services is more marked than elsewhere was larger in proportion to the population of those districts than the number for the rest of the country. This excess of records for Northern England and for South Wales was more marked in 1937 than in 1925 and the resulting error is a slight exaggeration of the number of services given in 1936 as compared with 1924.

21 It is perhaps relevant to add that the assumption that (ii) and (iii) of the classes mentioned at the end of paragraph 14 would receive on average the same amount of medical attention as those who were on doctors' lists throughout the year seems to have been incorrect. Examination of the records for 1936 shows that if proper account were taken of these groups the number of services per insured person would be slightly reduced. Since the correction is small and to preserve the com-

parability with the earlier 1924 figures to which this correction was not applied, the correction has not been made for 1936.

Nature of Services Rendered

22 It is necessary at this stage to consider whether there has been any change in the average range of the services rendered by an insurance practitioner. In the Minister's view there has been since 1924 no such change in professional practice in regard to services that are within the scope of the general practitioner as would, without alteration of the Regulations, affect the service required under them. In so far as scientific advances have increased the armamentarium of diagnosis and treatment, the improved methods are mainly of specialist concern. In the few instances in which new methods are applied by the general practitioner (for example, the injection of varicose veins) they have tended to reduce the total work entailed. A few modern methods of treatment (for example the use of insulin in diabetes and liver extract in pernicious anaemia) have certainly prolonged life and consequently entail more extended treatment, but the incidence of these diseases in an average practice is negligible. The great bulk of the work of a general practitioner is concerned with the treatment of such conditions as influenza, catarrhal disease of the upper respiratory tract, and chronic rheumatic affections, which require the application of no greater skill in diagnosis or treatment than they did in 1924.

23 On the other hand, there are various indications suggesting that insurance practitioners have been relieved of some of the more onerous part of their work by recent developments of health services. Some interesting facts for example, emerge from the special counts made to correct the initial deductions arising from the examination of doctors' records for the years 1924 and 1936. In 1925 an examination was made of 2,000 cards relating to persons who had died since the end of 1924. The cards disclosed 36,047 services rendered during 1924 an average of 18.02 services per card. A similar examination this year of 3,685 cards relating to persons who died since the end of 1936 disclosed 36,112 services rendered during 1936 an average of 9.8 per card examined. The fall in the number of services shown per "dead" card is remarkable, particularly when the total is divided into attendances and visits.

	Attendances	Visits	Total
1924	6.8	11.2	18.02
1936	5.15	4.65	9.8

An examination of batches of "dead" cards for 1936 revealed numerous cards in which the record of treatment ended with the entry "removed to hospital" or "died in hospital" an interval of, frequently months occurring, between the last service rendered by the insurance doctor and the patient's death. In other cases it was not stated definitely on the card that the insured person died in hospital but the interval since the last service recorded (combined, in some cases with the condition from which the patient was suffering) raised the presumption that the insured person was removed to hospital about the date of the last recorded service and subsequently died there.

24 The conclusion suggested by these figures is reinforced by the fact that in recent years the number of persons admitted to the general and municipal hospitals has increased largely. Many of the general hospitals have been considerably extended since 1924 and there has been a striking growth of the various schemes such as the Hospital Saving Association and other contributory schemes etc. for securing hospital treatment where necessary in return for small weekly contributions. Moreover the Local Government Act of 1929 transferred the Poor Law infirmaries to the local authorities and freed them from the "pauper taint." These municipal hospitals have been to a large extent reorganized and improved and many of them now compare with the best voluntary

hospitals and attract an ever growing number of patients. The increase of their work is illustrated by the following figures

Voluntary Hospitals			
New In-patients		Provinces	
London			
1927	212,115	1925	528 349
1935	279 196	1935	821 865
Increase 32 per cent.		Increase 56 per cent.	
Municipal Hospitals			
In patients		Out patients	
1931	567 039		784 134
1936	729 196		1 633,522
Increase 29 per cent.		Increase 115 per cent.	

25 Similar figures, which are aggregated below, have been obtained in regard to the Edinburgh Royal Infirmary and the Royal, Victoria, and Western Infirmarys, Glasgow

In patients		Out patients	
1923	40,512	1923	151,766
1936	60,403	1936	291,204

The increase in numbers since 1923 is 50 per cent for in-patients and 92 per cent for out patients, further the hospitals estimate that of the in patients for 1936 about half were insured persons

26 From data given by approved societies under the Scottish scheme for collecting statistics of sickness among the insured population, figures relating to a sample examination of incapacities lasting over two months have been extracted, and show that the number of cases in which the incapacity was certified by a hospital official increased from 3,302 in 1934 to 3,698 in 1936, an increase of 12 per cent in two years. In the same period the number certified by insurance practitioners increased by 61 per cent and the number of insured persons by 3.8 per cent.

27 In the annual reports of the Chief Medical Officer of the Ministry of Health for 1924 and 1933 figures are given of the proportion of injuries and accidents to all cases treated in a sample of insurance practices (pp 17 and 15 of those reports). The proportion fell from 104.9 per 1,000 in 1924 to 86 per 1,000 in 1933.

28 It seems, in fact, difficult to resist the conclusion that recent developments in medicine and in public health organization have relieved the general practitioner of some of his more onerous responsibilities and it may be relevant to quote from a paper read recently to the Insurance Institute of London by Mr C E A Bedwell, House Governor of King's College Hospital, on Hospitals and Social Insurance. After referring to the development of insurance schemes such as the Civil Service Nursing Aid Association, he remarked: "All these schemes of insurance have one general effect which deserves attention. There is a marked tendency on the part of the general public to seek the services of specialists which leads the insured patient to go to the hospital rather than his panel doctor."

Proposed Extension of Medical Benefit to Juveniles

29 The Government has announced its intention of introducing legislation to provide that young persons entering insurable employment between school leaving age and the age of 16 shall be brought into insurance (for medical benefit only) immediately instead of waiting as now until they attain the age of 16 and it is estimated that this will add at the outset about one million to the number of persons entitled to medical benefit. For convenience this new class is referred to in this memorandum as "juveniles."

30 Until the general question of the capitation fee to be paid in respect of all persons entitled to medical benefit was reopened the Minister had proposed that the rate to be paid in respect of juveniles should be lower than that for the persons now entitled to medical benefit. There are however obvious administrative advantages in having one flat rate for all persons entitled to medical benefit, and

the special circumstances of this class are here set out as one of the factors to be taken into account in arriving at the capitation fee which should be paid in respect of all persons (including this new class) for whose medical treatment insurance practitioners would be responsible.

There is a strong presumption that the services which doctors would be called on to render to juveniles would be substantially less onerous than those required by the general body of insured persons. The evidence for this view may be considered under the following heads:

- The mortality rates at different ages,
- the sickness and disablement experience of insured persons at different ages,
- the return of services rendered by insurance doctors to persons under 19 years of age, and
- the absence of certification in respect of the new juvenile class.

Mortality Rates

31 The table in Appendix III, which is extracted from the Statistical Review of England and Wales, 1933 gives the annual death rates for all ages for three years 1930-2. It will be seen that at the ages of 14 and 15 the death rate is nearly at its minimum, and that for later ages it rises almost without a break. The boy or girl at that age has passed the years of maximum incidence of infectious disease and of other special risks of childhood and is as yet little affected by the chronic complaints of adult life such as chronic bronchitis, rheumatoid arthritis, cancer, etc.

Sickness Experience of Insured Persons

32 Some indication of the amount of incapacitating sickness in the new group as compared with the average amount of such sickness in the insured population generally may be obtained from a comparison of that average with the average sickness experience of the insured population nearest in age to the new group. The figures quoted are calculated from those on which the finance of the National Health Insurance Act rests (as appended for example, to the National Health Insurance (Valuation) Regulations, 1933). A valid comparison cannot be made with the experience for insured persons aged 16 to 17 because an abnormal proportion of this class will not have paid the number of weekly contributions necessary to qualify for cash benefits, and the records of benefits paid for those ages are not an adequate record of the disabling sickness. By the age of 18 this special factor may be considered largely to have disappeared, and for persons between the ages of 18 and 19 the number of weeks of sickness and disablement expected to be experienced by young men is 0.86 and for young women 1.02. For the insured population between the ages of 16 and 65 the average expected number of weeks of sickness and disablement is 1.69 for men and 2.39 for women.

In the absence of proof to the contrary it is suggested that the experience of incapacitating sickness at any age is a reasonable relative measure of the demand likely to be made for medical services by persons of that age. It should be noted also that the persons entitled to medical benefit include and the above figures of disabling sickness exclude persons over 65 years of age. The above comparison therefore underestimates the difference in demand for medical services.

Services Rendered to Insured Persons under 19

33 A special inquiry has been made into the number of services rendered during 1936 by insurance doctors to persons who first became insured during 1935 at the age of 16 or 17 and were still on the doctors' lists at December 31, 1936 by which date they would be under 19 years of age. A special difficulty is encountered in considering the services rendered by doctors to this class of insured person. As is well known many insured persons do not trouble to place their names on a doctor's list until they

need medical attention, and this period may even extend to several years. During this period the insured person is unallocated. In all there are nearly 500,000 unallocated persons in England and Wales out of the total insured population of roughly 16,000,000. A large part of this 500,000 consists of young persons under 20 years of age. By the time a person has been in insurance for several years he has almost invariably had need of medical attention and has taken steps to select a doctor. The young persons under 19 years of age on doctors' lists are therefore only a selected portion of the total insured population of that age, and are largely those who have needed treatment in the comparatively short period since they entered into insurance. A survey of services rendered to persons of this age thus includes those who have received treatment since entry into insurance but excludes many who have not required medical attention; the average number of services to such persons per insured person on list under 19 years of age shown by the survey is therefore an abnormally high figure.

34 The result of the special survey is as follows.

Of the 600 practices included in the main survey fifty-nine practices were examined for persons under 19, the practices being specially selected so that the collective average number of services rendered by the fifty-nine doctors to their insured patients was nearly equal to the collective average of the 600 practices. The lists of the fifty-nine doctors included 2,883 persons under 19 years of age who entered insurance in 1935.

The services rendered to them were as follows.

	Number	Average Number per Card examined
Attendances	6,745	2.34
Visits	1,342	0.47
Total services	8,087	2.81

Even these figures, which as explained above, exaggerate the average number of services for insured persons of that age, indicate that persons under 19 receive on average substantially fewer services than are rendered to insured persons generally, and that in particular the number of visits which the doctor is called upon to make is low. It may reasonably be presumed that the new class of juveniles will receive broadly the same amount of medical attention as young persons now in insurance under the age of 19.

Absence of Certification

35 As indicated above, the juvenile class will not be entitled to sickness or disablement benefit until they attain the age of 16 (and have paid the qualifying number of contributions after reaching that age), and there will be no obligation on the insurance doctor to furnish certificates of incapacity. The responsibilities of an insurance doctor in connexion with certification include not only the giving of certificates but also the obligation to furnish to the Regional Medical Officer any information which the latter may require with regard to any patient to whom the practitioner has issued or declined to issue a certificate of incapacity.

36 Not only does the obligation to give certificates involve the doctor in extra clerical work (the value of which in terms of capitation fee has been estimated at 6d.) but in

the Department's experience an insured person who is entitled to certificates of incapacity makes visits to his doctor in connexion therewith which otherwise he would not make, if only because an insured person who has recovered from illness must go to his doctor to obtain a final certificate. There is a tendency also for a patient who has seen his doctor say on Tuesday to pay a further visit on Thursday to get his weekly certificate, when otherwise he would probably have waited until the Saturday before going to the doctor again. All the persons under 19 years of age included in this special survey would normally be entitled to sickness benefit, but not generally to disablement benefit. The new juvenile class will be entitled to neither sickness nor disablement benefit.

37 There is good cause, therefore, to presume that the new juvenile class will in fact receive still fewer services than insured persons under 19. Bearing in mind that the average number of services for those under 19 (2.81) is itself an inflated figure (paragraph 33), it appears reasonable to assume that the average number of services rendered to the new juvenile class will not be materially in excess of one-half the average number of services rendered to the insured population generally and will include a relatively small proportion of visits.

38 Reviewing all the available evidence and having regard to the number and nature of the services likely to be rendered and the absence of certification, it appears not unreasonable to assess the claim which juveniles will make on the doctors' time and energies as roughly one-half that made by an equivalent number of adult insured persons.

As the total number of insured persons in Great Britain is in the neighbourhood of 18,000,000, the inclusion of a further 1,000,000 at one-half the rate of services would warrant the reduction of the capitation fee by about 3d. for the whole insured population. Alternatively, if this number were included at two-thirds the rate of services the equivalent reduction would be about 2d.

Summary

39 The results of the survey made above of the changes which have occurred since 1924 and of the effect of the proposed introduction of the juvenile class, may be summarized as follows.

Change in Capitation Rate due to	Increase	Decrease
	d.	s. d.
Increase in the average number of services rendered by insurance doctors	4	—
Fall in cost of living	—	0 5
Fall in expenses of practice	—	0 7
Reduced services to juveniles	—	0 3
	4	1 3

yielding on balance, a reduction of 11d., or, on the alternative mentioned at the end of paragraph 38, a reduction of 10d.

This reduction however, takes account only of those data which can be evaluated and disregards such qualitative factors as are indicated by the increasing reference of patients to hospitals. The Minister therefore submits that the appropriate fee payable to insurance doctors as from January 1, 1938, for the treatment of insured persons, including persons under the age of 16 years proposed to be brought into national health insurance, is 8s.

APPENDIX I

CORRESPONDENCE BETWEEN MINISTER OF HEALTH
AND INSURANCE ACTS COMMITTEEMINISTRY OF HEALTH
WHITEHALL, S.W. 1

December 23 1936

Sir,

I am directed by the Minister of Health to refer to the recent conference held between representatives of the Insurance Acts Committee and officers of the Department on the question of the capitation fee to be paid to insurance practitioners in respect of employed juveniles under the age of 16 who would be brought within the National Health Insurance scheme under the legislation proposed to be introduced by the Government.

The Minister has given careful consideration to the representations made on behalf of the Insurance Acts Committee. While he remains satisfied that persons within the age group in question are likely, having regard to their comparatively low sickness experience to make fewer demands on the services of practitioners than persons of older ages he does not wish to press this point unduly, since he recognizes that in the interests of public health it is desirable that juvenile workers should remain as far as possible under medical supervision.

On the other hand the Minister considers that in suggesting that on account of the absence of any obligation to issue certificates of incapacity the capitation fee should be only 5 per cent. less than that paid in respect of adults the Insurance Acts Committee have attached far less weight to this factor than the circumstances require. It seems clear to him that account must be taken not only of the medical and clerical work involved in the actual issue of certificates but also of the fact that patients who are not entitled to weekly payments of sickness benefit will not present themselves to their doctors with such frequency as those who are so entitled, and therefore require the certificates in support of their claims. The Minister cannot accept the contention that in view of requests for certificates required by the patients' employers practitioners would not in effect be relieved of this work to any considerable extent.

In all the circumstances the Minister is prepared to provide for a capitation fee of seven shillings and sixpence on the understanding that if the standard capitation fee for adults should be increased or reduced in future the rate for juveniles should be varied proportionately.

The Minister also wishes to take this opportunity of informing you that he has found that the number of new patients who would be brought within the scope of medical benefit in Great Britain is owing to the recent increase in the employment of juveniles likely to be about 1 000 000 at the outset instead of 700 000 as intimated to the representatives of your Association. It will be appreciated however that the number is subject to variation for reasons dependent on the birth rate and that in any case it will fall when the change in the school leaving age comes into force.

I am to add that the Minister has consulted the Secretary of State for Scotland and the Ministry of Labour for Northern Ireland and that they wish to be associated with him in the terms of this letter.

I am Sir your obedient Servant

E. J. MAUDE.

THE MEDICAL SECRETARY
BRITISH MEDICAL ASSOCIATIONBRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQUARE
LONDON W.C. 1

January 8 1937

Dear Sir,

I refer to your letter of December 23 conveying the offer of the Ministry of Health of a capitation fee of 7s. 6d. for medical attendance for employed juveniles under the age of 16 who would be brought within the National Health Insurance scheme under the legislation proposed to be introduced by the Government.

At a Special Conference of Representatives of Local Medical and Panel Committees held yesterday the following resolutions were passed unanimously:

That the offer of the Ministry of Health of a capitation fee of 7s. 6d. for medical attendance on insured persons under 16 years of age be rejected.

That this Conference recommends insurance practitioners to decline service for the provision of medical benefit for insured workers under 16 years of age at the terms offered by the Minister of Health.

That in view of the inadequacy of the existing capitation fee and pending the result of negotiations for its increase this Conference is not prepared to accept for attendance on insured workers under 16 years of age a capitation fee less than that which is paid for adult insured workers.

That the Insurance Acts Committee be authorized to take action in the light of the decisions reached by the Conference.

Yours faithfully,

CHARLES HILL,
Deputy Medical Secretary British
Medical AssociationTHE SECRETARY
MINISTRY OF HEALTHBRITISH MEDICAL ASSOCIATION HOUSE
TAVISTOCK SQUARE
LONDON W.C. 1

February 11 1937

Dear Sir,

I am instructed by the Insurance Acts Committee to make formal application on behalf of the medical practitioners engaged in National Health Insurance medical practice for an increase in the annual capitation fee this increased capitation fee to be applicable to all insured persons including those under 16 shortly to be brought into National Health Insurance as a result of legislation promised by the Government.

It will be recalled that the capitation fee of 9s. has remained unchanged since it was assessed by the Court of Inquiry in 1924. Since that year as a result of the operation of a number of factors insurance practitioners have borne an increasing responsibility in respect of insured persons and it is considered that the time is appropriate for a substantial increase in their remuneration.

At the Annual Conference of Representatives of Local Medical and Panel Committees in 1936 the following resolution was passed:

That the Insurance Acts Committee be instructed to proceed with an application to the Minister of Health for an increase in the capitation fee.

I am to ask that the Minister will be good enough to receive a deputation from the Insurance Acts Committee in order that the case may be placed before him.

Yours faithfully,

CHARLES HILL,
Deputy Medical SecretaryTHE SECRETARY
MINISTRY OF HEALTHMINISTRY OF HEALTH
WHITEHALL S.W. 1

March 22 1937

Sir,

I am directed by the Minister of Health to refer to the deputation from your Committee which was received on 11th instant and to state that the Minister has been considering in conjunction with the Department of Health for Scotland the terms of reference to the proposed Court of Inquiry. The terms of reference which are considered appropriate in the present circumstances are shown in the enclosed draft. It will be seen that the form of words follows that used in the case of the Court of Inquiry in 1924 subject to such modifications as are necessary to cover the projected inclusion of juvenile employed persons in the National Health Insurance scheme so far as medical benefit is concerned.

The Minister is not yet in a position to inform you of the names of the proposed members of the Court of Inquiry but it is contemplated that the Court will consist of three members as in 1924 and that the procedure generally will be on the same lines as on that occasion.

A further communication on these matters will be addressed to you as soon as possible.

I am Sir Your obedient Servant

A. W. NEVILLE

THE SECRETARY
INSURANCE ACTS COMMITTEE
BRITISH MEDICAL ASSOCIATION

APPENDIX II

INSTRUCTIONS FOR EXAMINATION OF DOCTORS
RECORDS

(A)

TO DIVISIONAL MEDICAL OFFICERS

SPECIAL INSPECTION OF RECORDS

I informed you at our Conference on January 28 that as the amount of the Capitation Fee payable to insurance practitioners for insured persons on their lists is at present under review the R M staff might be required to undertake a special scrutiny of medical records for the purpose of ascertaining approximately the number of services given by insurance practitioners during the year 1936. It has now been decided to proceed with the least possible delay and the matter should therefore be regarded throughout as urgent.

The inspection will be conducted on similar lines to those followed at the previous inspection in the early months of 1935. The records of twenty practices will be inspected in each region and for each division as a whole the three types of practice (urban mixed and rural) should be represented approximately in the proportions of 7 2 1.

We agreed at the Conference that the method which was most likely to indicate whether there had been any change in the number of services rendered by practitioners would be to scrutinize the records of the same practices which were used for the previous Special Inspection in 1935 provided that the R M O had no reason to believe that the record keeping in any of these practices had in the meantime deteriorated. I enclose a list of the names and addresses of the practitioners in your division whose records were scrutinized on that occasion. From this you will be able to prepare a list of those practitioners whose records were scrutinized in each region. The appropriate list should be forwarded to each R M O, who should be instructed to inform the D M O whether he has any reason to think that any of the practices mentioned in the list will not be suitable for scrutiny on this occasion and to submit the names of thirty practitioners (a partnership counting as one) including those practitioners on the list supplied whom he thinks there is no reason to exclude who have not fewer than 500 persons on their list and who are known from the R M O's personal experience or from the personal files to keep reasonably accurate records. The type of each practice will be indicated by the R M O in the list submitted.

The R M O should as far as the circumstances of his region allow include in his selection the three types of practice in the proportions already indicated. Where an R M O finds difficulty in making his selection from good records in these proportions he will complete the required total number of practices by increasing the proportion of the available type or types.

In view of the urgency it is hoped it will be found possible to secure that the lists prepared by the R M Os are submitted to the D M Os as soon as possible and not later than February 22.

When the R M Os lists have been received D M Os bearing in mind that as many as possible of the practices in which the records were scrutinized at the previous Special Inspection are to be included will proceed to make a final selection to secure that the total number of practices chosen in the division as a whole is twenty multiplied by the number of regions and that urban mixed and rural practices are included approximately in the proportions of 7 2 1.

An R M S Minute of Instruction to the staff and a further D M O Minute will be issued shortly. Until these have been issued it is of importance that no practitioner should be approached in the matter or informed that such an investigation is contemplated.

R PATERSON

February 11 1937

(B)

TO DIVISIONAL MEDICAL OFFICERS

THE SPECIAL INSPECTION OF MEDICAL RECORDS

A final decision in regard to the Special Record Inspection of which you were informed in D M O Minute 4 37 has only now been taken and at the same time the matter has become urgent.

An R M S Minute of which a typed copy is attached has been sent to-day to New York and it is hoped it will be ready for use to-morrow or at latest on Friday when it will be dispatched direct to the R M staff. The special schedules and

summary forms are being printed but will not be available until Monday, when supplies will also be dispatched direct to R M offices.

From the R M S Minute it will be noted that R M Os will look to their D M O for instructions regarding the time to be devoted by themselves and by the D R M Os respectively to this work. This time is to be taken by Divisional Medical Officers as the maximum possible having regard to the avoidance of material delay in the clearance of references, and during the course of the investigation the services of Part time Referees should be employed to the utmost limit.

It is hoped that in all divisions the D M O will by this time have received from his R M Os the list of thirty practices and he should at once proceed to select the requisite twenty practices in each region and send the selected list to the R M O. The programmes of both R M Os and D R M Os should be arranged to enable the officers to commence the actual inspection of records on Thursday February 25. This means that notification of the practitioners concerned will have to commence on Monday or Tuesday next and in transmitting the list of selected practices D M Os will so inform their staff.

It is hoped that the whole of the actual work of inspection will be completed not later than March 9 but as the Minister is meanwhile extremely anxious to have even an approximate guide to the position as soon as possible I have instructed the staff to forward the schedules for each practice as soon as completed direct to me.

R PATERSON

February 17 1937

(C)

TO REGIONAL MEDICAL STAFF

SPECIAL INSPECTION OF MEDICAL RECORDS

1 The R M staff have already been informed through their D M O that it will be necessary to examine medical records relating to the year 1936 in order to extract such particulars as will enable an estimate to be made of the amount of medical attendance given by insurance practitioners in that year under the Medical Benefit Regulations. The matter has now become urgent, and both R M Os and D R M Os will devote to the work the whole of the time which the D M O decides is not required for reference or routine office work.

2 Each R M O will receive from his D M O a list of the practices in his region the records of which are to be examined and he will be informed of the times to be allotted to the work by the R M O and D R M O respectively. R M Os will apportion the work of inspection between themselves and the D R M Os in such a manner as will secure the earliest completion of the task and D R M Os will in this matter act under the direct instruction of their R M O.

3 For notifying the practitioner of the proposed visit Form R M 51b will not be used but a personal note will be sent indicating the special statistical nature of the investigation.

4 From the records of each practice 500 cards (subject to what is stated in paragraph 8) will be selected in the manner described below. Care must be taken that any batches of cards kept apart from the general stock—for example cards of the persons at the time under treatment—are included among the cards examined. Care will also be necessary to deal with the particulars of continuation cards inside envelopes even where there is no entry on the envelope itself.

5 In order to avoid the introduction of unnecessary assumptions in the deductions to be drawn from the figures obtained examination particulars should be taken from those cards only which were in the doctor's possession throughout the year 1936. These cards should be identified by the fact that the latest date stamped by the Committee in the space headed Committee's cipher and date is earlier than January 1 1936.

6 It is important that no entries relating to any year other than 1936 should be included and if on any card it is uncertain whether any entries relate to 1936 or not the card should be rejected. If the proportion of such cards in any practice is large the practice should not be included among those reported on but another should be substituted.

7 The scrutiny will begin with the cards of persons whose surnames start with the letter A and will be continued with the cards under succeeding letters in alphabetical order (the cards always being rejected which are shown by the date stamp to have been received by the doctor in 1936 or later) until the particulars have been extracted from the required number of cards.

8 It will in general be impracticable to sort together in an alphabetic order the total number of cards when they are normally kept by the doctor in two or more batches. In such

cases accordingly the "A" cards should be examined in the several batches care being taken that all the batches have been examined before the examination of the "B" cards is begun, later letters will be dealt with similarly and the examination continued until at the end of a letter or a combination of letters (for example Da De etc.) an aggregate which approximates as nearly as may be to 500 cards has been reached.

9 Special schedules or working sheets for the entry of the required particulars are being prepared and a supply will be forwarded to each R.M.O. within the next few days. At the head of the first schedule will be entered the name and address of the practitioner or firm of practitioners and the total number of insured persons on this list and the character of the practice will be indicated by classifying it as Urban (U) Mixed (M) or Rural (R). At the head of the second and subsequent schedules the doctor's name alone need be entered. The schedules relating to each practice should be consecutively numbered at the top right hand corner of the schedule.

10 On the schedule a line is to be used for the entry of particulars of each card examined the entries being in the first column the number of attendances and in the second column the number of visits. The schedule is a reprint of that used in former similar investigations and contains a third column which was then used for the entry of certificates. On the present occasion statistics relating to certificates are not required and this third column will be ignored. When there was no attendance or no visit in the year a dash will be made in the appropriate space on the line.

11 It will be noted that the schedule contains separate columns for entries relating to male and female patients respectively. It is important that separate figures should be obtained for each sex.

12 In addition to the schedules each R.M.O. will receive a supply of forms of summary. One of these will be completed in respect of each practice by the R.M. clerk as soon as possible after the inspection and the schedules together with the summary will at once be transmitted to the S.M.O. direct.

R PATERSON

February 18 1937

APPENDIX III

TABLE XXX

STATISTICAL REVIEW OF ENGLAND AND WALES

Annual Death Rates per 1000 Living at each Year of Age in the Three Years 1930-32

Age	Males	Females	Age	Males	Females	Age	Males	Females
All ages	12.7	11.2	33	3.8	3.4	67	46.4	33.8
0	76.5	57.0	34	4.0	3.5	68	50.0	37.0
1	15.6	13.6	35	4.4	3.6	69	56.7	41.6
2	6.6	6.1	36	4.5	3.8	70	60.5	44.0
3	4.5	4.1	37	4.7	3.9	71	66.6	49.6
4	3.6	3.4	38	5.0	4.0	72	77.7	57.6
5	3.4	3.0	39	5.3	4.4	73	83.3	63.1
6	2.6	2.4	40	5.4	4.4	74	91.6	68.5
7	2.1	1.9	41	6.0	4.7	75	98.0	76.9
8	1.8	1.6	42	6.6	5.1	76	109.2	85.9
9	1.6	1.5	43	6.8	5.1	77	121.8	92.6
10	1.5	1.3	44	7.4	5.3	78	132.0	106.5
11	1.3	1.2	45	8.3	5.7	79	147.3	116.6
12	1.6	1.6	46	8.6	6.2	80	148.9	119.7
13	1.5	1.6	47	9.4	6.9	81	174.6	143.5
14	1.6	1.6	48	9.6	7.0	82	188.3	151.9
15	2.0	1.9	49	10.7	7.8	83	204.8	169.3
16	2.2	2.1	50	10.9	7.7	84	221.1	183.2
17	2.6	2.4	51	12.1	9.0	85	238.3	200.1
18	2.9	2.4	52	13.5	9.8	86	252.3	216.1
19	3.0	2.7	53	14.1	10.3	87	278.5	231.1
20	3.2	2.7	54	15.1	10.9	88	286.9	249.3
21	3.3	2.7	55	15.6	11.2	89	308.1	270.3
22	3.3	2.8	56	17.8	13.0	90	314.9	290.6
23	3.4	2.8	57	19.3	14.2	91	387.4	308.5
24	3.2	3.0	58	20.5	15.0	92	368.4	347.0
25	3.2	2.9	59	23.1	16.7	93	431.7	360.4
26	3.2	2.9	60	23.6	16.8	94	422.6	369.4
27	3.3	3.1	61	26.7	19.8	95	442.1	403.5
28	3.3	3.1	62	29.6	21.9	96	491.1	426.6
29	3.5	3.3	63	32.3	23.5	97	391.0	435.6
30	3.3	3.1	64	35.0	25.7	98	533.3	422.4
31	3.5	3.2	65	40.0	28.4	99	447.2	403.4
32	3.8	3.5	66	42.3	30.2	100 and over	592.6	550.4

BRITISH MEDICAL ASSOCIATION'S REJOINDER

Basis of Determining Remuneration of Insurance Practitioners

(Paragraphs 1-3)

1 The Insurance Acts Committee does not dispute the general statement of the factors to be considered by the Court of Inquiry with one important qualification. The Court of Inquiry of 1924 considered certain evidence, including a quantitative estimate of work undertaken by insurance practitioners relating to and collected in not the year 1924 but a previous year. It is the changes if any which have taken place in certain factors as expressed in the difference between the evidence before the Court in 1924 and the evidence before the Court of 1937 that are under consideration.

2 The Ministry would have given a truer comparison between 1924 and 1936 if it had added to its statements that the number of insured persons had increased by 18 per cent and the number of insurance practitioners by 28 per cent the further statement that in that time the number of doctors on the *Medical Register* in Great Britain had in that period increased by 22 per cent. After allowing for the disproportionate growth of other fields of medical practice there is no evidence for any suggestion that the increase in the number of insurance doctors indicates a more attractive service.

3 Now that National Health Insurance is an established part of the nation's health services no general practitioner who is not practising exclusively among the middle or upper classes can afford to remain outside it. Since 1924 the average number of insured persons on a doctor's list has fallen from 976 to 916 and the average remuneration from £2.50 to £2.13.

Fall in the Cost of Living

(Paragraphs 4-9)

4 The Committee accepts the conclusions of the Ministry in regard to the cost of living.

Fall in the Expenses of a Doctor's Practice

(Paragraphs 10-13)

5 This Section of the Ministry's memorandum opens with the statement that the Ministry has not detailed information as to the proportion of a doctor's gross income that is absorbed by practice expenses or the exact proportion of these expenses that is due to the cost of locomotion. This deficiency can now be remedied by the Insurance Acts Committee.

6 The Ministry makes two main assumptions

(a) that in 1924 practice expenses constituted 25 per cent of the gross income

(b) that in 1924 the cost of locomotion amounted to 75 per cent of all practice expenses

(a) PRACTICE EXPENSES

7 The summarized accounts of a number of doctors for two periods of three years 1923-5 and 1929-31 are now available. Formerly the only information on this subject was that obtainable from a comparatively small number of practices collected during the abnormal years of the war. In order that the fullest information might be available the Insurance Acts Committee arranged for the figures of a number of widely distributed practices to be furnished for two periods of three years. These

returns which will be available to the Court, are summarized in the following table

Year	Type of Practice	No of Practices	No of Practitioners	Average Income per Practitioner	Average Income per Practitioner	Percentage of Practice Expenses to Income	Percentage of Expenses to Income of all Practices Combined
1923	1	28	30	£ 1,493	£ 1,393	37.67	33.66
	2	66	93	2,363	1,677	32.73	
	3	29	46	2,788	1,757	34.03	
	4	5	6	2,013	1,667	28.10	
1924	1	30	32	1,472	1,380	36.79	34.61
	2	71	102	2,457	1,710	34.45	
	3	30	47	2,742	1,750	34.88	
	4	5	6	1,900	1,583	24.94	
1925	1	31	32	1,444	1,399	36.92	33.91
	2	71	103	2,479	1,709	34.02	
	3	29	45	2,830	1,824	32.90	
	4	5	6	2,005	1,671	26.8	
1929	1	31	34	1,621	1,475	35.33	34.03
	2	71	109	2,515	1,638	32.37	
	3	30	46	3,095	2,018	36.90	
	4	5	6	1,988	1,645	30.50	
1930	1	32	35	1,588	1,452	36.36	34.16
	2	72	110	2,541	1,645	33.70	
	3	30	46	3,061	1,996	37.70	
	4	5	6	2,138	1,932	32.31	
1931	1	32	35	1,592	1,456	36.44	34.77
	2	70	108	2,512	1,629	33.15	
	3	30	46	3,058	1,994	37.70	
	4	5	6	2,083	1,736	28.03	

Percentage of Total Expenses to Income for Each Type of Practice

Type of Practice	Period	Percentage of Total Practice Expenses to Income
1 Insurance with dispensing for all patients	1923-25	37.11
	1929-31	36.04
2 Insurance with dispensing for private patients only	1923-25	33.77
	1929-31	33.08
3 Insurance with dispensing for part insured and all private patients	1923-25	33.95
	1929-31	37.43
4 Insurance with no dispensing	1923-25	26.63
	1929-31	30.29

8 The class of practice in respect of which the ratio of 25 per cent (total expenses to gross receipts) was adopted in 1924 is that referred to as Type 2. It is shown that a more accurate figure for this ratio is 33 per cent, an increase of expenses, in terms of the 9s capitation fee, of approximately 9d.

9 Whatever reduction in travelling costs can be shown to have taken place or whatever is the proportion of expenses which goes in locomotion costs, the gross practice expenses can be shown to be substantially higher than those accepted in 1924.

(b) LOCOMOTION

10 The assumption that the cost of locomotion was 75 per cent of total practice expenses is disposed of by these accounts. Travelling costs in terms of percentages of gross income and percentages of gross practice expenses for each of the four groups are as follows:

Type of Practice	Period	Percentage of Travelling Expenses to Income	Percentage of Total Practice Expenses to Income
1 Insurance with dispensing for all patients	1923-25	11.57	37.11
	1929-31	12.06	36.04
2 Insurance with dispensing for private patients only	1923-25	10.56	33.77
	1929-31	10.62	33.08
3 Insurance with dispensing for part insured and all private patients	1923-25	13.27	33.95
	1929-31	11.28	37.43
4 Insurance with no dispensing	1923-25	11.73	26.63
	1929-31	14.52	30.29

The Treasury Figures

(Paragraph 11)

11 Figures which represent the amounts per mile which another Government department sees fit to pay at different times appear to have no relevance to the issue unless they are accompanied by the detailed calculations upon which they are based. Such figures may well be an example of the Treasury's generosity in 1924 or its parsimony in 1937 or both.

12 The Treasury figures do not agree with those put forward by the Ministry itself based on its own calculations.

a fact which demonstrates that either the Treasury figures or the Ministry's figures (or both) are inaccurate. The figures put forward by the Association in its first memorandum to the Court of Inquiry were supplied by the Automobile Association, a body independent of the Ministry, the Treasury, and the Insurance Acts Committee.

13 In any case the statement that the conditions under which civil servants use their cars do not appear to differ from those of travelling done in the course of an insurance practice sufficiently to invalidate the comparison is unsupported by arguments that civil servants using their own cars on public business make a large number of short journeys, with repeated stopping and starting or that they need to maintain a car of the type and in the condition necessary for medical practice.

14 It is significant that these Treasury rates, ostensibly put in for comparative purposes, to show the reduction in rates between 1924 and 1937, are in paragraph 13 used as if the rates themselves had been established. The Ministry having argued from its own figures that the reduction in motoring costs is 27 per cent proceeds with the aid of the Treasury figure and an irrelevant hireage figure, to make it 35 per cent.

The Ministry's Calculations

(Paragraph 12)

15 The Ministry quotes from *The Motor Industry of Great Britain* published by the Society of Motor Manufacturers and Traders, as showing a reduction in the price of private cars of 50 per cent between 1924 and 1935.

16 The index figures for 1924 and 1935 given in this publication relate to the cost measured in horse power units of the cars purchased in the greatest numbers by the motoring public. In 1935, of all cars purchased almost 30 per cent were of horse-power 8 or under, and almost 61 per cent were of horse power 10 or under. In 1927, the earliest year for which figures are given, of all cars purchased just over 16 per cent were of horse power 8 or under and 23.5 per cent were of horse power 10 or under.

17 Have insurance practitioners been able to enjoy this average reduction in cost by utilizing lower power cars in the same proportion as the general motoring public? They have not, for the nature of the travelling required of them has necessitated the use of cars of fairly high horse power and at least medium size. In consequence their purchase costs have not fallen by 50 per cent.

18 A very important consideration is entirely neglected by the Ministry. It is assumed in its calculations not only that insurance practitioners utilize 10 horse power cars but also that they keep them in use for five years. It is difficult to conceive of an assumption more removed from reality. The practice of changing cars every one two or three years is in the medical profession practically universal. It renders nugatory calculations based on the five years' use of a 10 horse-power car. Those few doctors who do use 10 horse power cars usually replace them after a year's use or at the most two years' use. Of those who use cars of horse power 12-20, the great majority usually replace them after one two or three years. The net effect of this practice is that the factor of depreciation is the one of greatest importance.

19 On receiving the Ministry's memorandum the Insurance Acts Committee decided to ask the Society of Motor Manufacturers and Traders to name an independent motoring expert. Mr Scott Hall was one of two persons named and he was asked to prepare an independent statement on the changes which have taken place since 1924 in the motoring costs of general practitioners. Mr Scott Hall is a member of the Institute of Automobile Engineers and a member of the Industrial Transport Association. He is an acknowledged expert on the subject of transport.

economics and consultant on this matter to *The Commercial Motor*. His report is given in full below

5 Tudor Chambers
Station Road
London N.22.
May 17, 1937

To the Medical Secretary
BRITISH MEDICAL ASSOCIATION
19b Tavistock Square
London WC1

SIR

I have pleasure in presenting in accordance with your request figures for the operating costs of motor cars as used by general practitioners. The figures appear in the Schedule and give data for cars operated during the year 1924 and also for cars in use at the present time. The following notes are explanatory of the items and of the way in which I have arrived at the figures

Initial Outlay on Car

In arriving at this I have in the first place taken the list prices of twenty two cars of horse powers ranging from 12 to 17 and prices from £210 to £465. All of them are of the type normally used to a greater or less extent, by doctors. In arriving at the average price however I have taken cognizance of the fact that certain particular makes and types of car are more popular for this purpose than others and have weighted the averages accordingly.

By the foregoing method I have arrived at the figure of £320 as being the average price of a doctor's car in 1924 and £255 the corresponding figure to-day.

In the course of making this analysis I came to the conclusion that the average horse power in 1924 was a very small fraction in excess of 12 and for the present day 12.8. The difference is one which might naturally be expected as the result of the diminution in the annual Road Fund tax from £1 per horse power to 15s per horse power.

My attention has been drawn in this particular aspect of the matter to certain figures produced by the Society of Motor Manufacturers and Traders which appear to show that the average price of motor cars has halved in the period under review. In my opinion the calculations which form the basis of that conclusion have no bearing whatever upon the present investigation.

In 1924 there was a considerable number of motor cars of a luxury type and of a price which would not be considered as practicable in the case of a purchase of a car by a doctor. None of those cars has been taken into consideration in the investigations which form the subject of this present report.

Road Fund Tax

Thus as quoted in the Schedule is on the basis of £1 per horse power for a 12 h.p. car in 1924 and 15s per horse power for a 12.8 horse power car in 1937.

Insurance

The cost of insurance on the whole is somewhat greater now than it was in 1924. It is true that there is a slight reduction in what might be termed basic premiums but this is more than offset by the considerable increases in those premiums as applied to cars in use in the Metropolitan Police area and in what are called the black areas. The figures quoted for insurance premiums in the two columns in the Schedule are as near as can be assessed fair averages for the periods named.

Interest

In calculating the figures for interest on first cost I have taken 5 per cent per annum for 1924 and 3½ per cent per annum for 1937.

Car Hire

It is somewhat difficult to assess the extent to which the expense of putting a car has diminished but taking provincial as well as metropolitan areas it is reasonable to assume that an average of 5s 6d per week would apply in 1924 and 5s per week at the present time. In assessing the figure at this amount I have in mind the fact that a considerable proportion of doctors house their cars on their own premises in which cases the assessment of rent and rates would be lower than the figure named. That offsets a debit on the balance in excess of the average which is involved when a car has to be parked elsewhere.

Depreciation

The figures for depreciation are not calculated and are not on any hypothetical basis whatever. Actual selling prices of cars have been taken after periods of use of one, two and three years. The average has then been taken of these figures, subject to the following assumptions.

- That only a minority of doctors change their cars annually.
- That a considerable number do effect such a change in alternate years—that is to say, they keep a car two years and then dispose of it in part exchange for a new one.
- That a fair number of doctors keep their cars for three years before disposing of them.
- That a minority keep them for more than three years.

In calculating the average figure no cognizance has been taken of cars kept for more than three years. It is certain that in such cases the additional cost of maintenance and repair involved in the third and subsequent years will be more than enough to compensate for any apparent saving in respect of depreciation. (See also notes on item 'Maintenance'.) The figure included on account of depreciation is a fair average, subject to the above hypotheses. A doctor who changes his car annually will be at a slightly greater expense on account of this item. A doctor who keeps his car three years may save a few pounds. The figure as it stands is representative.

Maintenance

The cost of maintenance as set down is calculated on the assumption that a car is not kept for more than three years. It provides for the vehicle being thoroughly washed and polished on an average not less frequently than three times in two weeks for periodic greasing and lubrication and minor adjustments for decarbonizing once a year and for such small and inexpensive replacements as are all that should normally be required in the period named having in mind the mileage which is expected to be covered annually.

The foregoing are fixed or standing charges, and the total of them is not likely to be materially affected so long as the annual mileage does not greatly differ from that which has been suggested to me.

Petrol Consumption

The petrol consumption of motor cars of equivalent power has not improved to any appreciable extent as between 1924 and the present day. The very slight diminution which might have been recorded is offset by the increase in the average horse power of cars used for the purpose in view.

The figure of 20 miles per gallon meets the case in respect of both periods. During 1924 there were two alterations in the price of petrol which varied from 1s 11d to 1s 6½d. 1s 9d per gallon is a fair average price and that is what has been taken to calculate the figures for 1924. For 1937 the current price of 1s 7½d per gallon is taken.

Oil Consumption

In assessing the figures for expenditure on lubricating oil provision has been made for periodic replenishment of the crankcase as well as for the occasional and customary addition to that which is already in the sump.

Tyres

Recent increases in the price of tyres have brought the cost of equipment for the average doctor's car to about the same total to-day as existed in 1924. The price of a set averages £18 4s. In 1924 the life of a set of tyres under such conditions for use as are involved in the operation of a doctor's car was 10,000 miles. To-day the corresponding life is 14,000 miles. In making this statement I should draw attention to the fact that during the last three or four years there has for various causes been a diminution in the wear or mileage to be expected from car tyres.

Totals

The sum of the above running costs has been multiplied by 8,000 the annual mileage to give a total of running cost, this added to the total of fixed charges is the total cost per annum. For 1924 that cost was £209 3s 4d as against £197 12s to-day.

An Increase Probable

In conclusion I would draw attention to the final note on the Schedule in which provision is made for an increase of 5 per cent on the current figures as set down in that Schedule. In my opinion it should be appreciated by all parties concerned that the prices of all commodities involved in the

sheet" from which the final calculations are made which produce the final figures.

Summary

35 To summarize the position

I The Ministry's method of collecting data of items rendered is imperfect

II The Ministry's returns are inevitably incomplete because in practice all items are not recorded on the medical record cards

III If in the Ministry's returns the proportionate increase in number of persons attended is compared with the proportionate increase in items of service the imperfection is obvious

IV A comparison of the Ministry's return for frequency of prescribing and the Ministry's return for total items of service rendered can be explained only on the assumption that the Ministry's returns for items of service are incomplete

V Even in its own calculations the Ministry makes a false comparison, and returns as approximately 5, a percentage which should be between 9 and 10

VI The returns submitted by the Insurance Acts Committee are both exhaustive and reliable, relating to a far greater number of insured persons for a much longer period and collected by a method which is free from the defects in the Ministry's method

VII A comparison between the figures (375 items) placed before the 1924 Court and those (approximately 5 items) now available justifies a claim for an increase on the 9s capitation fee of 3s. After weighting on the lines suggested by the Ministry the percentage increase in work becomes 36 per cent, justifying an increase in the capitation fee of 3s. 3d

Nature of Services Rendered

(Paragraph 22-28)

36 It is not easy to see the relevance of much that appears in this section, the main conclusion to be drawn from it is that its authors are without present or recent experience of the realities of general practice. The Ministry contends that amid the rapid and extensive changes which have characterized medicine in the last thirteen years insurance practice has stood still, and that if there has been anything new it has merely lightened the responsibility of a group of practitioners whose attention is focused on influenza, catarrhal disease, and chronic rheumatism. These statements are made in relation to a service which, in his report for 1935, the Chief Medical Officer described as 'one of the most effective branches of the public health service. In the same report he said

The vast majority of insurance practitioners interpret the terms of their contract in no niggardly spirit, and undoubtedly the standard of the service they give is not only high but is yearly rising as fresh advances of medical science add to the general practitioners' armamentarium in diagnosis and treatment

Which statement is right—the one made in 1935 or the one made in 1937? Is the Ministry ignorant of the greatly improved methods in the diagnosis and treatment of a large number of physical and psychological conditions some of which are referred to in paragraphs 6-8 of the Committee's memorandum? Does it not value the newer attitude of medicine in its emphasis on positive health and preventive medicine? Is the correction of a minor departure from health before it becomes a major one of less value to the State or does it involve less responsibility on the part of the practitioner than the treatment of grave conditions within the walls of a hospital?

37 The choice of catarrhal conditions and chronic rheumatism as conditions in which no greater skill in

diagnosis and treatment is required is unfortunate, as they are good examples of conditions in which advances have been made

38 The question of the number of items of service has been dealt with elsewhere, although some of the references in these paragraphs appear to have relevance to this issue. It is common knowledge that as the result of advances in medicine and surgery, the hospital can now do much more for a greater number of persons than formerly. But what is the relevance of this? Specialist or consultative work such as is undertaken at hospital is not within the insurance practitioner's contract. Because more specialist work is done it does not follow that the responsibility of the insurance practitioner is lightened or that his work is less onerous. It is he who sends the patients to hospital and the increased usefulness of the hospital imposes upon him the heavier responsibility of deciding in which cases specialist advice or treatment is necessary. The responsibility of diagnosing a case of appendicitis at home and sending the patient to hospital is no less than that of operating in the hospital. And the fact that a life in this condition can be saved by operation confers upon practitioners the increased responsibility in all cases of lower abdominal pain, whether they turn out to be appendicular in origin or not. In short, the greater the number of conditions in which hospital advice or treatment is necessary the heavier the responsibility of the doctor who diagnoses them and sends the patients suffering from them to hospital.

39 Similar considerations apply to out-patient departments. The British Medical Association has long urged and with considerable success that, except in emergency, out-patient departments should be utilized for consultation purposes only. To-day few hospitals admit patients to their out-patient departments who attend without a doctor's letter; they are consultative in character. This change is referred to in the report of the King Edward's Hospital Fund for London for 1935.

The fluctuations in the figures in the tables may be an indication that the number of new out-patients is approaching a fairly constant level, one reason for this may be the change that is taking place in the work of the out-patient department in the direction of developing its consultative functions and of providing facilities for specialized long treatments while discouraging trivial complaints that do not require hospital treatment or for which other more suitable agencies are available.

40 In view of these considerations the actual numbers and percentages relating to hospital in-patients and out-patients are immaterial. But they provide a further illustration of the Ministry's use of statistics. The in-patient figures for London and the provinces are given, but not the figures for new out-patients despite the fact that they are easily collated from the *Hospital Year Book* and the report of the King Edward's Hospital Fund for London. They show an increase of out-patients between 1927 and 1935 of 18 per cent. The only out-patient figure the Ministry gives, that for municipal hospitals, is grossly misleading. There were few if any out-patients at municipal or county hospitals before 1930. The development of out-patient departments at municipal hospitals followed the Local Government Act, 1929 which came into operation in 1930 and has only in the last three years been substantially implemented. The Ministry by comparing the years 1929 and 1936 could have shown a percentage increase running into millions—a figure of as much value as the one given.

41 The fact that persons suffering from injuries resulting from accidents are treated in greater numbers than formerly at hospital where the all important x-rays can be utilized does not seem to indicate that the items of service undertaken by insurance practitioners are less onerous or less responsible.

42 Underlying this section is the assumption that the more serious conditions from which persons suffer—the more dramatic they appear to the public mind—the

greater responsibility and skill involved. To a great extent the contrary is the case. The general practitioner provides to-day a service which, whether in its preventive or curative aspects or even on its advisory side, involves a high skill and a heavy responsibility for the future as well as the present of the patient.

43 The remark of a lay house governor, Mr C E A Bedwell, which hardly deserves its position at the summit of the Ministry's argument might have been amplified by pointing out that it is the practically universal custom of hospitals (including Mr Bedwell's hospital) of referring to his insurance practitioner any insured person who attends hospital without an accompanying letter.

Proposed Extension of Medical Benefit to Juveniles

(Paragraphs 29-38)

44 In short, the suggestion of the Ministry is that for medical care upon young persons who have left school and entered insurable occupations, insurance practitioners should be remunerated at half the rate at present paid for adults. In view of this extraordinary proposal it is desirable to set down, as an illustration of the methods employed by the Ministry, the history of its various proposals on this subject.

(1) In November 1936 officials of the Ministry suggested to representatives of the Insurance Acts Committee as a basis of discussion a capitation fee of 6s for these new entrants into insurance. It was argued on the Ministers' behalf that his proposal was based firstly on the assumption that these young adolescents would make fewer demands on the services of practitioners than persons of older ages and secondly on the decision not to require certification.

(2) In December 1936 it was officially intimated on behalf of the Minister to the Insurance Acts Committee that he now offered a capitation rate of 7s 6d per annum. The official letter included the following sentence:

"While he [the Minister] remains satisfied that persons within the age group in question are likely having regard to their comparatively low sickness experience to make fewer demands on the services of practitioners than persons of older ages *he does not wish to press this point unduly since he recognizes that in the interests of public health it is desirable that juvenile workers should remain as far as possible under medical supervision* (Appendix I Ministry Memorandum)

(3) In January 1937 a further discussion took place between officials of the Ministry and representatives of the Insurance Acts Committee. No official offer was made to the Insurance Acts Committee but a proposal of which no doubt the Ministry's representatives will inform the Court, was made which if pursued, would have meant the payment of a full capitation fee for these young persons.

(4) Now in May 1937 the Ministry comes forward with a claim that 4s. 6d is the appropriate capitation rate for juveniles and 8s the appropriate rate for juveniles and adults alike.

45 It is desired to refer to the important principle involved in the suggestion that the young adolescent requires less medical care than the adult. It is an understatement to say that the Insurance Acts Committee is astonished to learn of the view of the Ministry of Health that the duties of medical practitioners in respect of these persons are less onerous and less responsible than for the insured community generally. The development of national health insurance in this country has been characterized by a growing recognition on the part of the community and the medical profession in particular, of the profound importance of preventive medicine, of the early detection of disease, and of the speedy and efficient treatment of apparently trivial complaints. The Committee had assumed that the outlook of the Ministry of Health had been expressed in such statements as the following, made by the Chief Medical Officer in his Annual Report for 1933:

"The insurance medical service is that branch of the public health services which under the terms of the National Health

Insurance Acts is concerned with the prevention and treatment of disease as it affects the individual members of the insured population. The importance of the service to the national endeavour towards raising the level of the health of the people as a whole and increasing the value of the life and capacity of each citizen can scarcely be over-estimated. The medical practitioners who provide the service by virtue of their opportunities for the early detection of disease in the individual form the first line of defence against communal disease and they provide also in most cases the best instrument for the prompt application to individuals of those preventive measures and improved methods of treatment which science puts at our disposal.

46 While the items of service which medical practitioners render to these young people are different in kind, they are *more* rather than less important than those rendered to older members of the community. While the conditions which bring the young adolescent to the doctor may, in some measure be classified on clinical grounds as minor, they are major in their importance to the individual and to the community. The Ministry's proposal to remunerate insurance practitioners at half rate for services rendered to these young adolescents would, if adopted, inevitably damage the national health insurance service as an important agency of positive health—as opposed to its function of healing established disease—and would definitely discourage insurance practitioners from giving to these young adults the full preventive and curative service which they need.

47 It should not be necessary to point out that the phase of transition from the sheltered years of school life to the early years of wage-earning is very commonly a difficult and trying one, when the friendly supervision of the family doctor is of paramount importance. The State ensures—and rightly so—that during school life the child is subject to careful medical supervision and the prompt treatment of defects minor and major. The suggestion that in the years that intervene between leaving school and attaining the age of 16 the need for medical supervision is not only less than that necessary during previous years, but also less than that which is necessary in the years which follow is an extraordinary one. Such a suggestion might be construed as an admission that the national health insurance system in this country is regarded by the Ministry of Health, not as an enlightened progressive agency to promote health and prevent disease but as a narrow restricted service concerned only with the treatment of established disease. It is a retrograde and reactionary proposal.

Mortality Rates

(Paragraph 31)

48 Of what value is the evidence afforded by the death rate of a group of persons of this age? The services rendered by a doctor to his patient are not more valuable because the patient dies. Nor is the service which is rendered in a killing disease more onerous than the service which is rendered in the encouragement of positive health in a patient who is well or practically so. Indeed, the skill demanded and the responsibility are the greater in the preventive and advisory work than in the treatment of the more dramatic manifestations of disease.

49 Admittedly the chance of dying at the age of 15 is one twentieth of the chance of dying at the age of 65. But the chance of living to be 65 is greater than it was even in 1924 largely as the result of an increased interest shared by insurance practitioners in the enlightened attitude (evidently not shared by the Ministry) to the health of insured persons.

50 It would appear from the use of this argument that the Ministry wishes to relate the insurance practitioner's remuneration for a particular group of persons to the death rate of this particular group. The Insurance Acts Committee can hardly be expected to object, provided the Ministry is logical and proceeds, on its basis of 4s 6d per head for the under 16 group, to pay a capitation fee of £1 1s per persons aged 50 and £5 17s for those aged 70.

51 The death rates afford no indication whatever of the responsibilities of the medical profession for this group. The distinguishing feature of much of the sickness experienced by the young adolescent is that it does not kill: tonsillitis, septic infections, minor accidents, ear infections, and skin diseases are examples.

Sickness Experience of Insured Persons

(Paragraph 32)

52 Analogous considerations apply to this argument. While the statistics for incapacity relate only to illness which incapacitates for longer than three days, the characteristic of much of the sickness which young persons experience is either that it does *not* incapacitate or that it does not incapacitate for longer than three days. This is perhaps one of the considerations which has led the Government not to include sickness benefit among the benefits to be available to those entrants to insurance. The Ministry refrains from adducing evidence for its suggestion but asks the Court to assume that the experience of incapacitating sickness at any age is a reasonably relative measure of the demand for medical services *'in the absence of proof to the contrary'*. This is a new method of offering evidence. Neither a lesser experience of incapacity lasting over three days nor a low death rate provides a measure, either reasonable or relative of the nature or number of the items of medical service rendered to young adolescents.

Services Rendered to Insured Persons under 19

(Paragraphs 34 and 35)

53 It is suggested by the Ministry that the *number* of items of service rendered to the under 16 'group' is less than those rendered to the adult community. Even if this were so it would be contrary to the interests of the community to encourage and perpetuate such a state of affairs by governmental action.

54 The criticisms advanced in the paragraphs of this statement relating to the number of services rendered by insurance doctors apply with particular force to the figures put forward by the Ministry in paragraph 34. The items of service rendered to juveniles are more commonly trivial as clinical manifestations of disease (although none the less important from the point of view of the patient's present and future health) and in consequence still less likely to be recorded as A's and V's.

55 The Ministry bases its calculations in regard to insured persons under 19 upon the lists of fifty-nine out of a total of 18,000 insurance practitioners. Figures relating to 2,883 persons between 17 and 19 are used as the basis for calculating a capitation fee for 1,000,000 persons of between 14 and 16.

56 Further the Ministry does not indicate that to these figures has been applied an important correction. It refers in paragraph 14 to the fact that new entrants into insurance, placed on the doctor's list during the year in question were excluded and in paragraph 21 states that, in view of its smallness no corresponding correction was made. But on the Ministry's own statement this correction would not be small for this group. It is stated in paragraph 33 that many persons do not place themselves on a doctor's list until they need treatment—a factor of far greater importance in the case of young entrants to insurance. By this method if a young person needing medical care and selecting a doctor for this purpose makes his choice from January 2 to December 31 his card with its high proportion of entries is discarded. If he made his choice in the previous year the items of service which were concentrated in the period of time immediately following the choice are not included—unless the patient made his choice of doctor in the last few days of the previous year. In short the method of

collecting statistics gives the least possible return of the items of service actually recorded.

57 The only reliable guide on the subject is the experience of general practitioners in actual practice and it will not be denied that the Insurance Acts Committee is well equipped to express an opinion. It is their experience that the number of items of service rendered to young adolescents in this age group is not materially less than the number of those rendered to the present insured population. By governmental and other propaganda this section of the community is being encouraged to seek the advice of the medical profession. To give an example of official encouragement to seek doctors' services it should be borne in mind that the widely accepted policy for improving physical fitness will add to the profession's responsibilities in respect of these persons. The young adult is looking more and more to his doctor for advice on minor troubles, an attitude which it is in the public interest to encourage and which, it is assumed, the Ministry of Health would desire to encourage in any extension of national health insurance. The act of including these persons in national health insurance will inevitably and properly have the effect of encouraging them to seek the help of their doctor in increased numbers.

Absence of Certification

(Paragraphs 35–38)

58 It is recognized that certification for national health insurance purposes will not be required of insurance practitioners for these entrants to national health insurance. Had certification been required it would not of itself prove a serious burden, for as has been pointed out earlier in this memorandum, the responsibilities of the insurance practitioner in respect of these persons is to a not inconsiderable extent preventive and advisory. The practitioner would have had less duties in relation to incapacity and more in relation to positive instruction on health and in the early detection and treatment of disease. Although he will not be required to undertake the actual filling in of national health insurance certificates, his responsibility in so far as certification is necessary for other purposes remains unchanged. For example, the employer will require certification of evidence of incapacity in most cases. Insured persons over 65 do not receive certificates to day and it has never been suggested that the capitation fee should be lowered because of this.

59 While the Ministry has withdrawn its original suggestion that there should be differential capitation rates it has introduced the argument that because on its calculation the numbers of items of service rendered to this new group are less than those rendered to the existing insured population the general capitation rate should be lower.

60 On the one previous occasion (in 1923, when old age pensions were not obtainable till 70) on which an additional group was introduced to national health insurance—that is, when medical responsibility for a number of persons over 65 was added—insurance practitioners were asked by the Ministry to accept these old persons, many of whom had been compelled by infirmity to give up work at the general capitation rate. Although the sickness liability for these persons was known to be well above the average of the insured community generally, the Insurance Acts Committee unhesitatingly accepted them at the current rate without special loading because it assumed it to be a fundamental principle of national health insurance that a flat rate should be applicable to all groups, and that excessive sickness incidence in one group might be balanced by a lesser incidence in another.

61 The Ministry's new principle has its implications. Older persons certainly require more items of treatment of a curative character than younger persons. The population as the result of the interplay of a number of factors including the work of insurance practitioners is ageing with some rapidity. The average age of the

population is greater than it was twenty years ago the number of insured persons over 65 increased by 44 per cent (from 873,800 to 1,257,300) between 1928 and 1935, a part of the period under consideration

62 To refer to curative items only, the addition of a group of young persons demanding fewer of these items will soon be more than counterbalanced by the items of service for the growing proportion of older persons in the community. The Insurance Acts Committee does not desire to reopen the question of the capitation fee every few years—whenever this proportion rises materially—but the acceptance of this principle would seem to necessitate this course

63 The Ministry assuming that 1,000,000 young persons would, by the Government's proposed legislation, be added to the existing insured population of 18,000,000, has converted a 4s 6d reduction in the capitation fee as a 3d reduction spread over the whole of the insured population. Assuming all the contentions of the Ministry to be sound this proposal would be equitable only if the proportion of the new age group to the existing age group remained 1 to 18

64 When the Ministry first discussed this proposed extension they anticipated that the number entering was likely to be in the region of 700,000. Subsequently, in an official letter of December 23, 1936 the Minister changed the estimate to 1,000,000, and at the same time referred to possible variations

The Minister also wishes to take this opportunity of informing you that he has found that the number of new patients who would be brought within the scope of medical benefit in Great Britain is owing to the recent increase in the employment of juveniles likely to be about 1,000,000 at the outset instead of 700,000 as intimated to the representatives of your Association. It will be appreciated however that the number is subject to variation for reasons dependent on the birth rate, and that in any case it will fall when the change in the school leaving age comes into force

65 The Ministry anticipates a definite and no doubt substantial fall when the change in the school leaving age comes into force, and refers to variations dependent on the birth rate. There is a third factor of considerable importance to which the Ministry does not refer. This is the "hump" in the birth rate curve, corresponding to the post-war babies, which is at present affecting this particular group. It is inevitable that there should be a substantial reduction in the number of persons of this age group in the community within the next few years. A capitation fee which is to apply to more than a single year should have reference to these prospective changes in the ratio of 1 to 18

Summary (Paragraph 38)

1 The Ministry, which has in the last six months suggested widely different capitation fees and has officially offered 7s 6d (rejected unanimously by insurance practi-

tioners) now offers a capitation fee of 4s 6d for the 'under 16' group

II The arguments on death and incapacity statistics are irrelevant

III The medical services rendered advisory, curative, and preventive, will be not materially less in number and nature, in the responsibility they involve and in their importance to subsequent life of the patient, than those rendered to adults. In any case it would be contrary to the national interest to pay half-rate, and thus convey the impression that a 'half service' is being provided for this important group of the insured community

IV The Ministry's figures are subject to important errors which invalidate them

V Any immediate lowering of the average age of the insured community will be adjusted comparatively soon because of the growing average age of the community generally

VI There is no case for paying less than the full adult capitation fee for young adolescents—despite the absence of certification

General Summary

(Paragraph 39)

A On a proper interpretation the Ministry's own returns show a 9½ per cent increase in the items of service given to insured persons. The Insurance Acts Committee returns show an increase of 33 per cent without weighting, and 36 per cent with weighting, justifying an increase in the capitation fee of 3s to 3s 3d, according to whether the Ministry's method of weighting is adopted or not

B The agreed basis of fall in cost of living justifies a reduction of 5d

C The figure adopted by the 1924 Inquiry for the ratio of gross expenses to gross receipts in a Type 2 practice was 25 per cent. The true ratio is shown to be 33 per cent. There should be a corresponding increase of 9d. The cost of locomotion is included in these figures

D There is no justification for the payment, in respect of "juveniles," of a capitation fee less than that payable in respect of the existing insured population

E Perhaps the least justifiable of all is the claim of decreased responsibility and less onerous service used by the Minister to justify the final reduction of one penny and the convenient figure of 8s. There has been a substantial increase in the responsibility borne by insurance practitioners

It is apparent that the Minister has strained every nerve and not a few figures so as to justify the suggestion that the capitation fee should be reduced to 8s

In the submission of the Insurance Acts Committee no capitation fee less than 12s 6d for all insured persons, including the under 16 group will provide adequate remuneration for the services rendered

REJOINDER OF THE MINISTER OF HEALTH AND SECRETARY OF STATE FOR SCOTLAND

1 The Minister of Health and the Secretary of State for Scotland (hereinafter referred to as 'the Ministers') do not desire to take exception to anything in the historical review of the situation contained in the Memorandum and they have no desire to offer any comments (even if they were within the terms of reference of the Court of Inquiry) as to the general standard of service given by insurance practitioners

2 The facts as to recent developments in medical science are substantially admitted but the Ministers as will be seen from paragraphs 22 to 28 of the second part of their Memorandum consider that the Insurance Acts Committee exaggerates their practical importance to the average

general practitioner and that, in any event, the net effect of these developments has been to reduce not to increase his work and responsibility

3 The increasing proportion of elderly people in the population is admitted but since any increase in medical work resulting from this change must be reflected in the statistics of services rendered there is no need to consider separately the effect of this gradual change of average age. It may be pointed out however that since 1926 certificates of incapacity have not been required for persons over 65 (the age limit for this purpose having previously been 70), but that practitioners have continued to receive the same capitation fee notwithstanding this relief in their duties

Statistical Evidence

4 The most important issue is clearly the extent to which the average number of services rendered in each year to each insured person on a doctor's list has increased since 1924. The difference between the figures submitted in the two Memoranda is striking and, it will be noted, is much greater in the figures for 1936 than in those for 1922. The figures in the two Memoranda purport to be a measure of the same phenomenon and the cause of their difference must therefore lie in the method of measurement. The Ministers have given in some detail the method followed in the collection of their statistics, and the steps taken to secure the representation of all types of practice and all parts of the country. They are satisfied, and will contend, that the methods adopted are such as to produce true average figures, and must therefore conclude that the comparison afforded by the figures of the Insurance Acts Committee is in some way faulty. It is, however, impossible to criticize these figures in detail until similar detailed information as to the methods adopted for their compilation is available from the Insurance Acts Committee, showing *inter alia* how the record keeping doctors have been selected (with evidence that they are a representative sample of the service as a whole) precisely what they were asked to enter on the special forms supplied, and how the number of insured persons to whom the aggregate services rendered by each doctor have been related, was calculated. It will, of course, be essential for the present purpose that the figures for 1936 should be properly comparable with those for the year with which a comparison is to be made. It is to be noted that the Insurance Acts Committee makes its comparison with the year 1922 and not with 1924 and that its figures for 1922 and those for 1936 have been collected from different sources. There is indeed a suggestion in paragraphs 11 and 12 of its Memorandum that the method by which the 1936 figures have been collected is claimed to produce a more accurate result than that used for 1922.

It may be admitted that though the practitioners selected for the purpose of the figures in the Ministers' Memorandum were chosen as being good record keepers, it is possible that they have not in every case kept perfect records of all services given by them but this does not vitiate the comparison with the year 1924 unless the accuracy of the official records was substantially different in 1924 and in 1936.

Reference to Regional Medical Officers

5 For 1935 the number of insurance practitioners in Great Britain was about 20,000 and the number of references to Regional Medical Officers was therefore on average approximately one every two weeks for each insurance practitioner. Further, in 30 per cent of the references the only report required of the practitioner is the entry on the form of the date on which he issued a final certificate to the patient (that is the date on which he certified that incapacity had ended).

Practice Expenses

6 The Ministers have no information by which to test the statement that practice expenses have increased. They submit that it is important to know the extent of the information on which this contention is based and how far it is typical of the average insurance practice.

Travelling Costs

7 It is not disputed that a motor car is necessary to the proper conduct of the normal general practice but the statement that the mileage involved in attendance on a given number of patients is increasing seems to call for comment in view of the increasing proportion of insurance doctors to insured persons particularly if the official statistics showing a decrease since 1924 in the number of

visits are accepted as correct. It appears important to know on what information this statement is based and to how many practices of what type, the information relates.

The information given by the Automobile Association is difficult to criticize in the absence of any statement as to precisely what the Association was asked to supply. The assumed cost of the car in each year is not given nor the method of estimating depreciation and neither of these items can be calculated without knowledge of the assumption as to annual mileage and the number of years for which the car is retained in use.

Certain of the figures supplied are, however, independent of such considerations, being directly proportionate to mileage covered, and of these the comparative costs for tyres for 1924 and 1936 seem open to objection. The cost of tyres has decreased and their useful life in miles has greatly increased. The Ministers' assumptions on this head are stated in their Memorandum. A paper in the March Journal of the Institution of Automobile Engineers by Mr. G. C. Williams, Director of Research to the Institution, discusses generally the effect of research on tyre life and states that mileages of 30,000 on private cars are now quite common and that there has been a tenfold improvement since before the war. The fall in tyre costs shown in the Ministers' Memorandum seems to be a very moderate claim.

The most serious criticism of the comparative figures given by the Insurance Acts Committee is, however, that they wholly omit any reference to the increased use of cars of lower nominal horse power, which is perhaps the most striking phenomenon in motoring in the period under review. Attention has already been called to the information on this point given by the Society of Motor Manufacturers and Traders. In 1924 cars of 10 h.p. or under formed less than a quarter of the total sales of British cars, in 1935 they were more than 60 per cent of the total. The Ministers submit that a contention that the motoring needs of the insurance practitioner differ so fundamentally from those of the average motorist that the same type of car can properly be taken for the two years is inadmissible without definite proof.

Further, such positive information as is available to the Department is inconsistent with the basis of the Insurance Acts Committee's comparison. At intervals of four years records of travelling (for purposes connected with the Mileage Fund mentioned in paragraph 18 of Part I of the Ministers' Memorandum) are kept by a number of doctors in rural and semi-urban practices. These doctors are typical of those who receive payment from the Mileage Fund and therefore, may be presumed to need cars of rather higher power than the average insurance practitioner but in 1936 out of about 400 cars used by these doctors 252 were of 12 h.p. or less and the three largest groups were 10 h.p., 12 h.p. and 14 h.p., there being 96, 92 and 52 respectively in those groups. The average horse power of the 400 cars was 12.

The comparable figures for 1924 are less complete since the horse power was less often given but out of the total of 318 there are 256 of which the horse power is indicated. Of the 256 115 were of 12 h.p. or under and 141 were of higher power. The average horse power of the 256 was 15. It may be mentioned also that in 1924 there was an appreciable proportion of American or Canadian cars of high horse power and that there are few such cars in the 1936 list. (The general importation of foreign cars has fallen since 1924 according to the diagram on page 44 of the publication of the Society of Motor Manufacturers and Traders mentioned in paragraph 12 of Part II of the Ministers' Memorandum.)

The Young Adolescent

8 It is suggested at the end of paragraph 21 of the Insurance Acts Committee's Memorandum that the absence of certification for this class is the only factor that need be

taken into account, but this contention is not explicitly put forward, nor is it accepted by the Ministers. It is of course true that this age, roughly from 14½ to 16, is a period important for future health. It does not follow that this age requires more treatment than another, or that in practice persons in this group will demand or receive more treatment. The Ministers have therefore confined their argument to the consideration of such facts as are available.

As a minor point it should be noted that an insurance practitioner would be entitled to charge for any certificate of incapacity required by the employer of a juvenile.

9 In regard to paragraph 22 of the Insurance Acts Committee's Memorandum, it will be apparent from what is said above and in their Memorandum that the Ministers do not accept the arguments leading to the figure of 11s 1d., or the assumptions of the Insurance Acts Committee as to the net effect of advances in medical science, but apart from those questions, the increase from the calculated figure of 11s 1d. to the claimed fee of 12s 6d., unsupported by any measurable facts, appears to be purely arbitrary.

10 In conclusion, therefore, the Ministers see no reason to depart from the submission in their Memorandum that, so far from there being ground for any increase in the capitation fee, a reduction from 9s to 8s would be justifiable.

General Council of Medical Education and Registration

SUMMER SESSION 1937

The one hundred and forty-fifth session of the General Medical Council was opened at Hallam Street, W, on Tuesday, May 25, Sir NORMAN WALKER presiding.

Mr Harold Collinson, F.R.C.S., appointed as representative of the University of Leeds for three years from August last, was introduced and took his seat.

PRESIDENT'S ADDRESS

Sir NORMAN WALKER then addressed the Council as follows:

Since last we met two former members of the Council have passed to their rest. John Theodore Cash represented the University of Aberdeen here from 1911 to 1919. His expert knowledge led to his early election as a member of the Pharmacopoeia Committee, to which he gave devoted service. Sir Grafton Elliot Smith was chosen by the Victoria University of Manchester as its representative in 1913 and resigned in 1919 on his appointment as Professor of Anatomy in the University of London. He was an active member of the Council on its educational side, and he and John McVail were prime movers in promoting the last revision of the curriculum. Sir William Hansell served as our much esteemed Legal Assessor from 1920 till 1927 when his promotion to judicial office compelled his resignation. He died on April 18, 1937.

A vacancy has been caused among the Crown nominees. We would have welcomed the news of his reappointment, but Sir Henry Dale found that his many other engagements would make it difficult for him to find the time which he felt the Chairmanship of the Pharmacopoeia Committee required. We cannot let him go without an expression of our gratitude to him for so successfully guiding the early steps of the Council in their close and cordial association with the British Pharmacopoeia Commission.

We offer our congratulations to Sir Kaye Le Fleming, on whom the honour of knighthood was conferred in the first Honours List of the new reign and trust he will be long spared to enjoy it.

Our Junior Treasurer Mr Eason who has represented the University of London here since 1924, has been chosen

by his University to be its Principal. We congratulate him on the distinction, and wish him success in the discharge of his honourable and arduous duty.

Business of the Council

It is enjoined by tradition upon those to whom it falls to prepare the business of the Council for consideration at their sessions to endeavour to arrange that the summer session shall be primarily devoted to the first object of the Council's existence, medical education, and that they shall deal with disciplinary cases, as a Council of Medical Registration, mainly at the session in November.

But in recent years, at any rate, it has seldom been possible to achieve this aim, because the Penal Cases Committee are not in a position to regulate the numbers of cases of convictions of registered medical practitioners reported, or of complaints made, to the Council, which in their judgement call for the holding of inquiries before the Council at the next ensuing session.

On this occasion, fortunately, circumstances seem more favourable than they sometimes are, and though a substantial number of disciplinary cases await your consideration, none appears likely to be exceptionally lengthy, and time should be available within the week for ample discussion of the reports of the three committees whose work lies in the sphere of medical education.

Medical Education

The report which will call for the fullest consideration is that of the Education Committee, who have been dealing with the concluding stages of the revision of the curriculum initiated in 1934.

There has been a little variation in method, though not in principle, in the procedure adopted on this occasion. Instead of leaving the matter to the Education Committee, as was usually done in the comparatively recent past, the Executive Committee recommended to the Council the appointment of a special Curriculum Committee composed of the chairmen of the three standing committees on education, examination, and public health, who were individually recognized as authorities on physiology, anatomy, and public health, with the addition of a physician, a surgeon, an obstetrician, and a member engaged in the general practice of medicine.

The Council adopted the recommendation on June 2, 1934. The Committee elected Dr Tidy as their chairman, and commenced work at once, reporting progress to the Council in November, 1934, and making interim reports in May and November, 1935.

Constant communication with the licensing bodies was maintained, and most of the deans manifested their interest in, and their criticism of, some of the proposals made. As time went on, and all who are familiar with the working of the Council know that in reform of the medical curriculum it is wisest to hasten gently, the true meaning of a reform of the curriculum was more and more understood.

This Council is a team composed in the first instance of a representative from each of the licensing bodies. To these are added five nominees by the Crown and seven practitioners elected by the direct vote of the profession in each of the three divisions of the United Kingdom.

To the Council is committed a general supervision of medical education, and in their early days perhaps the licensing bodies were the only persons actively interested. Admission to the Register was easy in 1858 but in process of time by general agreement among the bodies, the minimum curriculum was fixed at three winter and two summer sessions. Then came four years and in 1890 the Council unanimously approved an extension to five years afterwards modified to fifty-seven months, mainly because university years were usually of nine months.

On no previous occasion have the proposals of the Council been more thoroughly hammered out on the anvil.

of discussion and a large measure of agreement has apparently been reached. Thus with certain reservations there seems to be approval of the age of 18 for registration of students.

Chemistry, Physics, and Biology

The question of biology, chemistry, and physics has always been a problem, and I remind the Council that it was only in 1893 that the Council ordained that the first and last of these subjects *must* be contained in the medical curriculum. Chemistry was defined then as "including the principles of the science and the details which bear on the study of medicine." In 1893 in most parts of the country the teaching of chemistry and physics in schools was of an elementary character, and biology only appeared in the curriculum of one or two of them. Times have changed, and the chemistry and physics taught in the majority of the schools is of high standard, even if it does not include any "details which bear on the study of medicine." These must of course be learned in medical schools. The teaching of biology of a sufficient standard has not advanced so far as that of the other two subjects. Schools capable of undertaking it are not uniformly scattered over the British Isles, and there is a feeling in some quarters that the minds of some young people are perhaps too much devoted to the study of those three subjects to the detriment of their general education.

Here we are helped by the elasticity of our system. If we agree, in order to furnish the requisite knowledge and skill for the efficient practice of the profession that the medical curriculum proper requires to be extended to five years, the licensing bodies (all represented here) will frame their regulations accordingly. Already Birmingham, Bristol, Liverpool, Manchester, Oxford, Wales, and University College Galway, require six years, Cambridge, Leeds, London, and Sheffield five and a half, and it is common knowledge that others have in contemplation an extension of their curricula. This is the way in which medical education in this country progresses. The Council prescribe a minimum below which no body which wishes to retain its right of admission to the Register may drop, but has nothing but a Well done for those bodies which raise the standards for admission to their own degrees.

Statistics

I have to report that the number of medical students registered by the Branch Councils in 1936 was 2,544, 59 less than in 1935, this figure resulting from decreases of 82 in England and 9 in Ireland and from an increase of 32 in Scotland, and that the number of names added to the *Medical Register* by registration in 1936 was 1,905, 123 more than in 1935. The net increase in the number of registered medical practitioners at the end of the year after deducting the numbers of names removed from the Register by reason of death and on other accounts was 649, and 59,010 practitioners remained on the Register at the end of the year, not far short of 1,500 more than the average number at the end of the last five years.

Finally, I may note that the Chairman of the Finance Committee, in presenting to you the Committee's Report on the annual accounts for 1936, will have the satisfaction of stating that there was a surplus of income over expenditure for that year of more than £2,500.

With perhaps one forenoon session the prospect of concluding our business on Friday seems good.

Mr. HEN GROVES proposed and Dr. MOORHEAD seconded a vote of thanks to the President for his address, and this was carried.

On the motion of the President Sir Robert Bolam was re-elected Chairman of Business.

The Council then proceeded to consider certain charges against dentists on reports and findings of the Dental Board.

ANNUAL REPRESENTATIVE MEETING, BELFAST, 1937

The Annual Representative Meeting of the British Medical Association will be held in the Assembly Hall, Assembly Buildings, Fishers Place, Belfast, on Friday, Saturday, Monday, and Tuesday, July 16, 17, 19, and 20, 1937.

RESOLUTIONS BY DIVISIONS AND BRANCHES FOR THE REPRESENTATIVE BODY

DUTIES OF AND ETHICAL RULES FOR INDUSTRIAL MEDICAL OFFICERS

Motion BY COUNCIL (para. 89 of Annual Report of Council). That the statement of the duties of industrial medical officers and the ethical rules relating to such officers be approved. (See Appendix IV to Annual Report.)

Amendment BY NOTTINGHAM. That para. 1 (vi) of Section II (Ethical Rules) Appendix IV, be amended by the deletion of the words "after communication with the workers' medical attendant" and the insertion after "dangerous occupations" of the words "and shall communicate with the worker's own medical attendant at the earliest opportunity."

The paragraph as amended would read:

(vi) The industrial medical officer shall (a) examine and advise concerning those workers engaged in hazardous or arduous occupations, also those about to be transferred to heavy or dangerous occupations, and shall communicate with the workers' own medical attendant at the earliest opportunity, and (b) examine and report to the works management upon those workers who appear suitable for early pension or retirement or in regard to the continuance of invalidity payments.

MINISTRY OF HEALTH CIRCULAR 1550 ON CHILDREN UNDER SCHOOL AGE

Motion BY BLACKBURN. That, with reference to para. 105 of the Annual Report of Council, the duties of health visitors should be strictly defined and limited, and that legal opinion should be taken as to whether the giving of advice and/or treatment by health visitors without medical instruction or supervision constitutes unqualified practice.

LECTURES TO FINAL YEAR MEDICAL STUDENTS ON INTRA-PROFESSIONAL CUSTOMS AND OBLIGATIONS

Motion BY BIRMINGHAM CENTRAL. That the Council be requested to approach universities and other teaching bodies with the view to establishing lectures for final year medical students to instruct them in intra-professional customs and obligations, and that the lecturer be one who is well versed in the Association policy.

OFFICE SECRETARY FOR ANNUAL MEETINGS

Motion BY PLYMOUTH. That in view of the intricacy and amount of administrative work entailed in connexion with the organization of an Annual Meeting the services of a trained office secretary are desirable. He (or she) should be a whole-time official of the Association to take up duty in October of the year immediately preceding the Meeting and after a period of leave return to clear the outstanding matters and assist the honorary local general secretary in the preparation of his report. He (or she) will then proceed to the Branch or Division in whose area the Annual Meeting next following is to be held. The employment of such an official would result in an economy to the Association and to the local Division or Branch as much duplication of printing postages etc., would be obviated. If necessary, the grant from central funds towards the expenses of the Annual Meeting could be reduced proportionately.

Correspondence

DISPENSING CAPITATION FEE

SIR—If Dr H F Burt would look further into the matter of his letter (*Supplement* May 22, p 308) I think he will find he is losing a great deal more than the 5d he speaks of for while he gets a discount of at the most, 10 per cent on the price of his drugs, the "chemist" has not less than 33 per cent—I am etc.,

A. R. EATES

London W3 May 21

British Medical Association

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQUARE, WC1

Departments

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and Business Manager Telegrams Articulate Westcent, London)
MEDICAL SECRETARY (Telegrams Mediscera Westcent London)
EDITOR BRITISH MEDICAL JOURNAL (Telegrams Autiology Westcent, London)
Telephone numbers of British Medical Association and British Medical Journal Euston 2111 (internal exchange, five lines)
B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumsheugh Gardens Edinburgh (Telegrams Associate, Edinburgh Tel 24361 Edinburgh)
Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street, Dublin (Telegrams Bacillus Dublin. Tel 62550 Dublin)

Diary of Central Meetings

MAY

28 Fri. Science Committee, Library Subcommittee, 2.30 p.m.

JUNE

1 Tues Joint Subcommittee on Association Expulsion Machinery, 2 p.m.
Standing Ethical Subcommittee, 3 p.m.
2 Wed Council, 10 a.m.
4 Fri Subcommittee re Remuneration of Non professional Medical Teachers Laboratory and Research Workers 2.30 p.m.
11 Fri. Journal Committee Foods and Drugs (Advertisements) Subcommittee, 11.30 a.m.
Journal Board, 2 p.m.
Science Committee, Scholarships and Grants Subcommittee, 2.30 p.m.
18 Fri. Science Committee, 2 p.m.

Election of 22 Members of Council by Grouped Branches in the British Isles

The names of the members already declared elected to the Central Council for the session 1937-8 in respect of the groups of Home Branches (with the exception of Groups B and I, where contests occurred, and Groups D, K and N, where no nominations had been received) were published in the *Supplement* of May 8 (p 275). The following have been elected as a result of the voting in the groups indicated

Group B—East Yorks Yorkshire

Dr W N WEST-WATSON (Bradford)

Group I—Metropolitan Counties Branch

Dr L G GLOVER (Hampstead)
Dr H ROBINSON (Kensington)
Mr R SCOTT STEVENSON (London, W1)
Mr H M STRATFORD (Kensington)

G C ANDERSON

Medical Secretary

Proposed Alterations of Areas of Divisions of Suffolk Branch

Notice is hereby given by the Council of the Association to all concerned of the following proposed amended definitions of areas which have been approved by the Divisions and Branch concerned

North Suffolk Division To consist of the municipal boroughs of Beccles Eye Lowestoft, and Southwold urban districts of Bungay and Halesworth and the rural districts of Blith Hartismere Lotheringland and Wainford

South Suffolk Division To consist of the county borough of Ipswich municipal borough of Aldeburgh urban districts of Felixstowe Hadleigh (in West Suffolk County) Leiston-cum Sizewell Saxmundham Stow market and Woodbridge and the rural districts of Deben Gipping, and Samford

Naval, Military, and Air Force
Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Captain E Moxon Browne to the *Barham* as Fleet Medical Officer and as Specialist in Hygiene (on transfer of flag)
Surgeon Commanders R W Higgins to the *Warspite* R W Mussen to the *Malaya* (on recommissioning)

Surgeon Lieutenant Commanders F W Gayford to the *Malaya* (on recommissioning) L P Spero to the *Derbyshire* C H Egan to the *Shropshire*, E R P Williams to Royal Naval Barracks Chatham (June 5) and Royal Marine Infirmary Deal (June 22)

Surgeon Lieutenants M G Ross to the *Pembroke* for Royal Marine Infirmary Deal I C Macdonald to the *Pembroke* for Royal Naval Hospital Chatham P G Stanton to the *Enchantress*

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Commander R Hall to the *Ramillies*
Probationary Surgeon Lieutenant J K Sargentson to be Surgeon Lieutenant, with seniority July 29 1936
Probationary Surgeon Lieutenant L F Donnan to the *Revenge*
Surgeon Sublieutenants R F Hand and C P Nicholas to be Surgeon Lieutenants

ROYAL ARMY MEDICAL CORPS

Major J R S Mackay has retired on retired pay
Captain N H Lindsay has retired on account of ill health and received a gratuity

ROYAL AIR FORCE MEDICAL SERVICE

Squadron Leader D A Wilson to Princess Mary's R.A.F. Hospital Halton for duty as Medical Officer

Flying Officer J D Milne to R.A.F. Station Worthy Down
J H L Newham and P A Wilkinson have been granted short service commissions as Flying Officers for three years on the active list with effect from and with seniority of May 3 1937 and have been seconded for duty in the London Hospital and at the Derbyshire Royal Infirmary respectively

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Captain A T Ashcroft to be Major
H Mannington G B Ebbage and N C Oswald (late Officer Cadet Cambridge University Contingent Medical Unit Senior Division OTC) to be Lieutenants

INDIAN MEDICAL SERVICE

Major General D S Skelton CB DSO has been appointed officiating Director of Medical Services in India Army Head quarters, vide Major-General E A Walker CB on leave from March 7

Col H C Bucklev Inspector-General of Civil Hospitals United Provinces has been appointed Surgeon General with the Government of Bombay as from March 1

Lieut-Col A J Lee has retired from the Service
Lieut-Col I Blake MC has retired from the Service on account of ill health

Lieut-Col J P Canteenwalla has been appointed to officiate as Assistant Director-General Indian Medical Service (Stores) vice Lieut-Col W M Will granted leave

The services of Lieut-Col W Ross Stewart CIE have been placed temporarily at the disposal of the Government of the Punjab as from February 10

Major S N Makard S C Alagappan and B R Chaudhri to be Lieutenant-Colonels

The services of Major S C Alagappan have been placed temporarily at the disposal of the Government of Madras as from February 17

Captain M P Conroy to be Major

Captain M Jafar has been appointed temporarily as a supernumerary officer in the Port Health Department Calcutta as from May 1

Lieutenants (on probation) S C Colbeck J H Rowe W S Apper and A G Miller (with seniorities September 1 1916) and L H Wallace and J I Thomson to be Captains (on probation)

West Suffolk Division To consist of the area of the administrative county of West Suffolk—except the urban district of Hadleigh

Any member affected by these proposals and objecting thereto is requested to write to the Medical Secretary by June 29 1937, stating the objection and the ground therefor

May 29 1937

G C ANDERSON
Medical Secretary

Formation of Bihar Branch

With reference to the preliminary notice in the *Supplement* of February 27 (p 107), the Council hereby gives notice to all concerned of the formation of a Bihar Branch of area coterminous with the Provinces of Bihar and Orissa, the new Branch to come into existence as from the date of this notice

May 29, 1937

G C ANDERSON
Medical Secretary

Belfast Meeting Annual Dinner

On May 22 the tables available for the Annual Dinner were 10, 17, 46, 67, 70, 73, 76, 79, 80, 85, 94, 102, and 105 to 110, in addition there were a few odd seats at other tables. Members who contemplate attending this function and have not yet sent in their applications are urged to do so as soon as possible. A plan of the tables appeared in the *Supplement* of May 15 (p 287). Applications accompanied by a remittance for 10s 6d for each ticket, should be made to the Dinner Secretary, B.M.A. Office, Whitla Medical Institute, College Square North, Belfast

Branch and Division Meetings to be Held

DUNDEE BRANCH—At Dundee Corporation Central Baths Wednesday June 2 3.30 p.m. Summer meeting. Demonstration by Mr Barry Cuthill. Members may bring friends to the meeting.

ESSEX BRANCH—At Palace Hotel Southend-on-Sea, Thursday June 3 2.30 p.m. Annual general meeting. Election of officers. Address by Dr John Parkinson. Common Difficulties in Cardiac Diagnosis.

GLASGOW AND WEST OF SCOTLAND BRANCH LANARKSHIRE DIVISION—Wednesday, June 2 3.30 p.m. Visit to County Orthopaedic Hospital Stonehouse.

KENT BRANCH—A course of lectures on air raid precautions will be given by Major-General H. P. W. Barrow. Home Office Lecturer for the London Centre, on Wednesday June 2 at Kent and Sussex Hospital Tunbridge Wells. Thursday June 3 at South Suburban Gas Company Bexley Heath and Friday June 4 at Royal Victoria Hospital Folkestone at 3.15 p.m. and 8 p.m. each day. Members wishing to take the course should apply to the Honorary Secretary of the Branch Dr T. A. Clarke Erisham Lodge Canterbury.

KENT BRANCH EAST KENT DIVISION—At Grand Hotel Cliftonville Thursday June 3 8.45 p.m. Annual meeting. Preceded by dinner at 7.30 p.m.

LANCASHIRE AND CHESHIRE BRANCH—At Newton le-Willows Thursday June 24 Annual meeting.

LANCASHIRE AND CHESHIRE BRANCH BLACKBURN DIVISION—At Blackburn Town Hall Wednesday and Thursday June 2 and 3 8.45 p.m. Lectures on Air Raid Precautions by Dr L. T. Challenor. Home Office Lecturer for the Liverpool Centre.

LANCASHIRE AND CHESHIRE BRANCH SOUTHPORT DIVISION—At 52 Highton Street Southport Friday June 4 8.30 p.m. Annual meeting. Consideration of Annual Report of Council election of officers etc.

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital Kingsland Road E., Tuesday June 1 9.30 p.m. Mr R. Christie Brown. Difficult Labour.

METROPOLITAN COUNTIES BRANCH KENSINGTON DIVISION—At Kensington Town Hall Friday May 28 8.45 p.m. Dr A. F. Heald. Things a Panel Doctor Ought to Know. A course of six lectures and demonstrations on air raid precautions will be given on Wednesday June 9 and Mondays June 14 21 28 and July 5 and 12 at 8.30 p.m., by Colonel J. Mackenzie. Home Office Medical Instructor for the London Centre. The course is open to all members of the medical dental and veterinary professions and will be held at the British Post-Graduate Medical School Hammersmith Hospital Duane Road W.

METROPOLITAN COUNTIES BRANCH NORTH MIDDLESEX DIVISION—At Crews Hill Golf Course Enfield Thursday June 3 3.30 p.m. Annual Golf Meeting.

NORTHERN IRELAND BRANCH NORTH EAST ULSTER DIVISION—At the Café Coleraine Monday May 31 4 p.m. Annual meeting. Election of officers. Paper by Dr S. B. Boyd Campbell. High Blood Pressure.

SOUTHERN BRANCH—At Gloster Hotel West Cowes Isle of Wight Saturday June 12. A boat leaves Southampton at 11.40 a.m. and arrives at Cowes at 12.40 p.m. 1 p.m., council luncheon at the invitation of Dr Ivor L. Tuckett. 2.30 p.m. Branch Council meeting at Victoria Hall Osborne House East Cowes. 3 p.m. sixty-fifth annual meeting. 3.30 p.m. address by in-coming president Dr Tuckett. Faith and Suggestion. 4.15 p.m. tea at Osborne House. 6.45 p.m. annual Branch dinner at Shanklin Towers Hotel Shanklin. 8.15 p.m. visit to Summer Theatre Shanklin. Sunday June 13 2.30 p.m. Meet at Town Hall Newport for a coastal drive. All functions except the annual meeting are open to members ladies.

YORKSHIRE BRANCH HARROGATE DIVISION—At Café Imperial Harrogate Monday May 31 8 p.m. Annual general meeting. Election of officers consideration of adoption of resolutions under the ethical rules of the Division etc.

POST-GRADUATE COURSES AND LECTURES

JUNE AND JULY

The following post graduate courses and lectures to be held in London during June and July have been notified to the British Medical Association. Further particulars may be obtained direct from the hospitals concerned or in the case of arrangements made by the Fellowship of Medicine (F.M.) from the Secretary of the Fellowship 1 Wimpole Street W.1.

Subject	Date	Place of Meeting	Nature of Instruction
Breast Diseases	June 4 11 18	British Post graduate Medical School, Duane Rd., W. 12	Last 3 lectures of course of 6
Experimental Epi- dermology	June 2, 9 16	" "	Course of 3 lectures
Occupational Diseases	June 1 2 8 15 22, 29	" "	Last 3 lectures of course of 6
Psycho Physical Adaptation (cont.)	June 3 10 17 24 (2 lectures daily)	Th Tavistock Clinic, Malet Place W.C.1	Last 8 lectures of course of 20
Urology Advanced	May 31 to June 12	St. Peter's Hospital Henrietta Street Covent Garden W.C.2	F.M. Course of lectures and demonstrations

In addition to the above courses the following for the higher qualifications have been arranged

F.M. Course Diseases of Chest	June 7 to July 2	Brompton Hospital Fulham Road S.W.3	M.R.C.P.
F.M. Course Diseases of Chest and Heart	June 9 to July 2	City of London Hospital for Diseases of the Heart and Lungs Victoria Park, E.2	"
F.M. Demonstrations of Clinical Cases and Pathological Specimens	June 1 3 8 10 15 17	National Temperance Hospital Hampstead Road, N.W.1	"

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses: gynaecology at Chelsea Hospital for Women June 14 to 26; proctology at St. Mark's Hospital July 5 to 10; dermatology at Blackfriars Skin Hospital July 12 to 24; urology at All Saints Hospital July 12 to 31; obstetrics at City of London Maternity Hospital June 12 and 13; general surgery at Prince of Wales's General Hospital June 19 and 20; heart and lungs at Victoria Park Hospital July 3 and 4; medicine and surgery at Miller General Hospital July 10 and 11. Courses to be held in preparation for the M.R.C.P. examination are: clinical and pathological at National Temperance Hospital Tuesdays and Thursdays 8 p.m. June 1 to 17; chest diseases at Brompton Hospital twice weekly at 5 p.m. June 7 to July 13; heart and lungs at Victoria Park Hospital Wednesdays and Fridays 6 p.m. June 9 to July 3; neurology at West End Hospital for Nervous Diseases June 21 to July 3; fundus oculi demonstration July 6 8 10 p.m. pulmonary tuberculosis

demonstration at Preston Hall July 3 Full particulars of all courses and demonstrations can be obtained from the Fellowship of Medicine 1, Wimpole Street W

The Clinical Society of the Royal Eye Hospital will hold a clinical meeting on Wednesday June 2, at 5.30 p.m., at which a number of cases will be shown and discussed. All medical practitioners will be welcome. Further particulars may be obtained from the honorary secretary Mr J Minton

The following is the programme for the summer session of the South-West London Post Graduate Association June 2, Dr C. E. Lakin, demonstration of medical cases June 9, visit to Ford Motor Works Dagenham, leaving by m.s. New Dagenham from Westminster Pier at 11.30 a.m. June 16 Mr E. A. Lindsay, "Painful Feet" June 23 visit to Messrs. Parke Davis and Company Hounslow leaving by motor-coach from St James Hospital at 12.30 p.m. June 29, Mr J. P. Monkhouse, Hearing Aids July 7 Dr W. E. Lloyd, "Nephritis" July 13 Mr R. L. Dodds, "Version" All the meetings, with the exception of the two indicated will be held at St. James Hospital, Ouseley Road, Balham, S.W., and will begin at 4 p.m.

WEEKLY POST-GRADUATE DIARY

BRITISH POST GRADUATE MEDICAL SCHOOL, Ducane Road W—
Daily 10 a.m. to 4 p.m., Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations, Refresher Course for General Practitioners Tues 4.30 p.m. Dr D. Hunter Occupational Diseases Wed 12 noon Clinical and Pathological Conference (Medical) 2.30 p.m. Prof Major Greenwood, Experimental Epidemiology 3 p.m. Clinical and Pathological Conference (Surgical) Thurs 2.15 p.m. Dr Duncan White Radiological Demonstration 3 p.m. Operative Obstetrics 3.30 p.m. Mr A. K. Henry, Demonstrations of the Cadaver of Surgical Exposures Fri 2.30 p.m. Mr Russell Howard Diseases of the Breast 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology)

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION 1 Wimpole Street W—St. Peter's Hospital Hennessey Street Covent Garden W.C. All-day Advanced Course in Urology, Prince of Wales's General Hospital Tottenham N Sat and Sun Course in General Medicine

HOSPITAL FOR SICK CHILDREN, Great Ormond Street W.C.—
Thurs 2 p.m. Clinical Lecture Dr E. A. Cockayne Jaundice 3 p.m. Clinico-Pathological Lecture Mr Charles Donald Goitre in Children Out-patient Clinics mornings 10 a.m. to 12 noon Ward Visits afternoons 2 p.m. to 3.30 p.m.

INSTITUTE OF PATHOLOGY AND RESEARCH, St. Mary's Hospital W—
Tues 5 p.m. Mr F. T. Ridley Intra-ocular Pressure

LONDON SCHOOL OF DERMATOLOGY, 5 Lisle Street W.C.—Mon
5 p.m. Dr G. B. Dowling Occupational Dermatitis Tues 5 p.m. Dr H. W. Barber Lichen Planus Thurs 5 p.m. Dr Hugh Gordon Treatment of Acne Fri 5 p.m., Dr J. E. M. Wiles Napkin Area Eruptions

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, Keppel Street W.C.—Mon
8.30 p.m. Health Clark Lecture by Miss A. G. Shaw Time and Movement Study

SOUTH WEST LONDON POST-GRADUATE ASSOCIATION, St. James Hospital Ouseley Road S.W.—Wed
4 p.m. Dr C. E. Lakin Demonstration of Medical Cases

TAVISTOCK CLINIC, Malet Place W.C.—Thurs
3 p.m. Dr H. Crichton Miller Alcoholism and Drug Addictions 4.30 p.m., Dr Cedric Shaw Fatigue States

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE, Hammersmith W.—Daily
2 p.m. Operations Medical and Surgical Clinics Mon 10 a.m. Dr Post A. Ray Film Demonstration Skin Clinic 11 a.m., Surgical Wards 2 p.m., Surgical and Gynaecological Wards 1 p.m. and Gynaecological Clinics Tues 10 a.m. Medical Wards 11 a.m. Surgical Wards 2 p.m. Throat Clinic 4.15 p.m. Dr Coden Choice of Anaesthesia Wed 10 a.m. Children's Ward and Clinic 11 a.m., Medical Wards 2 p.m. Eye Clinic Gynaecological Operations 4.15 p.m. Dr Redvers Howie Subarachnoid Haemorrhage Thurs 10 a.m., Neurological and Gynaecological Clinics 12 noon Fracture Clinic 2 p.m. Eye and Genito-Urinary Clinics 4.15 p.m., Mr Sommonds Surgical Lecture Fri 10 a.m. Medical Wards Skin Clinic 12 noon Lecture on Treatment 2 p.m., Throat Clinic 4.15 p.m., Dr Owen Artificial Feeding in Infants Sat 10 a.m., Children's and Surgical Clinics 11 a.m., Medical Wards The lectures at 4.15 p.m. are open to all medical practitioners without fee

ABERDEEN MEDICAL SCHOOL—At Aberdeen Royal Infirmary, Tues
and Thurs 4.15 p.m., Prof. or J. R. Learmonth and others Medical and Administering Fluid and of Removing Body Fluids with Demonstration

ALFRED DODD RURAL INFIRMARY—Thurs
4.15 p.m. The lecture by Mr J. P. R. Miller has been cancelled Fri 4.15 p.m., Dr P. B. M. M. D. Demonstration of Skin Cases

DIARY OF SOCIETIES AND LECTURES

ROYAL COLLEGE OF PHYSICIANS, Pall Mall East, S.W.—Tues
5 p.m. Croonian Lecture by Dr Edwin Bramwell Clinical Reflections upon Muscles, Movements and the Motor Path

ROYAL SOCIETY OF MEDICINE

Section of Surgery—Wed
2.30 p.m. Summer Meeting at British Post-Graduate Medical School Ducane Road, W Operations and Demonstration

BIOCHEMICAL SOCIETY—At Institute of Pathology Glasgow University Fri
2.30 p.m. Communications and Demonstrations

VACANCIES

ABERDEEN ROYAL INFIRMARY—Senior C.O.
to the Out-patient Department Salary £200 p.a.

ALBERT DOCK HOSPITAL Connaught Road, E.—R.M.O. (male)
Salary £110 p.a.

ALTRINCHAM GENERAL HOSPITAL—(1) Senior H.S. (2) J.H.S.
Salaries £150 p.a. and £120 p.a. respectively

ASHFORD GROSVENOR SANATORIUM—R.H.P. (male)
Salary £100 p.a.

AYLESBURY ROYAL BUCKINGHAMSHIRE HOSPITAL—Senior R.M.O. (male)
Salary £200 p.a.

BATTERSEA GENERAL HOSPITAL Battersea Park S.W.—Hon Radiologist

BELFAST ROYAL MATERNITY HOSPITAL—R.M.O.
Salary £52 p.a. BIRMINGHAM CITY—J.M.O. (male) for Dudley Road Hospital Salary £200 p.a.

BIRMINGHAM EAR AND THROAT HOSPITAL—Second R.H.S.
Salary £150 p.a.

BLACKBURN COUNTY BOROUGH—Assistant School M.O. and Assistant M.O.H. (male)
Salary £600-£25 £700 p.a.

BLACKBURN ROYAL INFIRMARY—R.H.S. (male)
Salary £175 p.a.

BRADFORD ROYAL INFIRMARY—Hon Assistant P.

BRIDGE OF WEIR SANATORIUM—R.M.O.
Salary £200 p.a.

BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL—(1) Hon. N.O. (female)
to the Department for Treatment of Early Nervous Disorders (2) Casualty H.S. (male unmarried) Salary £120 p.a. (3) H.P. (male unmarried) Salary £150 p.a.

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road W—
Three H.S.s to the Surgical Unit Salaries £150 p.a. each

BURNLEY COUNTY BOROUGH—J.R.M.O. (male)
to the Municipal General Hospital Salary £160-£200 p.a.

BURY INFIRMARY—(1) Third H.S. (2) C.O. Males
Salary £150 p.a. each

BURY ST. EDMUNDS WEST SUFFOLK GENERAL HOSPITAL—H.P.
Salary £150 p.a.

CAMBRIDGE BOROUGH—Whole time Assistant M.O.H. and Assistant School M.O.
Salary £600-£50-£800 p.a.

CARDIFF KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION—A.R.M.O. for (a) Sully Hospital and (b) Glan Ely Hospital Males, unmarried
Salaries £200 p.a. each

CHILDREN'S HOSPITAL Hampstead N.W.—R.M.O.
Salary £150 p.a.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS Victoria Park E.—H.P. (male)
Salary £100 p.a.

CONNAUGHT HOSPITAL Orford Road E.—(1) H.P.
Salary £175 p.a. (2) C.O. (3) H.S. (4) Senior R.M.O. Males Salaries £110 p.a. each

COVENTRY CITY—A.M.O. (female)
Salary £500-£25 £700 p.a.

CRUDDEN COUNTY BOROUGH—A.M.O. (male unmarried)
for Craydon Mental Hospital Upper Warrington. Salary £400-£25 £500 p.a.

DERBYSHIRE HOSPITAL FOR SICK CHILDREN—R.H.S. (female)
Salary £130 p.a.

DEVON COUNTY COUNCIL—R.A.M.O. (male, unmarried)
for Hawkmoor Sanatorium Salary £250 p.a.

DORSET COUNTY—(1) Assistant County M.O. and M.O.H. to the Portland Urban District
Salary £800 p.a. (2) Assistant County M.O. Salary £500-£25 £700 p.a.

DREADNIGHT HOSPITAL Greenwich S.E.—(1) Non resident Receiving Room Officer (male)
Salary £200 p.a. (2) H.P. (3) H.S. Males unmarried Salaries £110 p.a. each

DUBLIN NATIONAL CHILDREN'S HOSPITAL—Intern and Extern H.S.s

DUDLEY GUEST HOSPITAL—Second H.S. (male)
Salary £120 p.a.

EDINBURGH ROYAL INFIRMARY—Junior Assistant Radiologist
Salary £350 p.a.

ENETER ROYAL DEVON AND ENETER HOSPITAL—H.S. (male)
to the Ear Nose and Throat Department Salary £150 p.a.

GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION—(1) H.S. (male)
Salary £150 p.a. (2) H.P. (male) Salary £150 p.a.

GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL W.—(1) House Anesthetist (2) H.S. (male)
Salaries £150 p.a. and £100 p.a. respectively

GUILDFORD ROYAL SURREY COUNTY HOSPITAL—H.S. (male)
Salary £150 p.a.

HALIFAX ROYAL HALIFAX INFIRMARY—Third H.S. (male unmarried)
Salary £150 p.a.

HAMPSHIRE GENERAL AND NORTH WEST LONDON HOSPITAL, Haverock Hill N.W.—Casualty Surgical Officer (female unmarried)
for the Out-patient Department Bayham Street Salary £100 p.a.

HOLLAND (LINCOLNSHIRE) COUNTY COUNCIL—Assistant M.O.H. (male)
Salary £600-£25 £700 p.a.

- HOSPITAL OF ST JOHN AND ST ELIZABETH Grove End Road NW—Ophthalmic S
- HOSPITAL FOR SICK CHILDREN—(1) R.H.P. (2) R.H.S. Males unmarried Salaries £100 p.a. each.
- HOSPITAL FOR TROPICAL DISEASES Gordon Street WC—H.P. (male) Salary £120 p.a.
- HOVE LADY CHICHESTER HOSPITAL FOR FUNCTIONAL NERVOUS DISEASES—(1) Senior H.P. (female) (2) J.H.P. Salaries £100 p.a. and £50 p.a. respectively
- Huddersfield County Borough—R.M.O. for St Luke's Hospital Salary £200 p.a.
- HULL ROYAL INFIRMARY—(1) Second H.P. (2) H.S. to the Ophthalmic and Ear Nose and Throat Departments (3) Second C.O. Males, unmarried Salaries £150 p.a. each
- INSTITUTE FOR THE SCIENTIFIC TREATMENT OF DELINQUENCY Portman Street, W.1—Part time Medical Registrar Salary £300
- IPSWICH EAST SUFFOLK AND IPSWICH HOSPITAL—(1) C.O. (2) H.S. to the Orthopaedic and Fracture Department (3) H.S. to the General S. and Genito-Urinary S. Males. Salaries £144 p.a. each
- ISLE OF WIGHT ROYAL ISLE OF WIGHT COUNTY HOSPITAL Ryde—Two Hon. P.s.
- JERSEY GENERAL HOSPITAL AND POOR LAW INFIRMARY—C.O. Salary £175 p.a.
- LEICESTER CITY—R.M.O. (male) for the City Isolation Hospital and Sanatorium Salary £300 p.a.
- LEICESTER ROYAL INFIRMARY—Resident Radiologist Salary £200 p.a.
- LINCOLN COUNTY COUNCIL—PARTS OF LINDSAY—R.M.O. for Bransdon Hall Sanatorium Salary £350 £25 £450 p.a.
- LIVERPOOL UNIVERSITY—Research Assistant in the Department of Medicine Salary £600 £700 p.a.
- LONDON COUNTY COUNCIL—(1) A.M.O.s (Grade I) for (a) New End Hospital Hampstead NW (b) Paddington Hospital W. (c) St. Alfege's Hospital Greenwich S.E. (d) St. Mary Abbots Hospital Marlow Road W. Salaries £350-£25-£425 p.a. each (2) A.M.O.s (Grade II) to (e) Archway Hospital N. (f) Hackney Hospital, E. (g) Highgate Hospital N., (h) Paddington Hospital, W. (i) St. Benedict's Hospital, Tooting S.W. (j) St. George in the East Hospital, Wapping E. (k) St. James Hospital, Balham S.W. (l) St. Nicholas Hospital Plumstead S.E. (m) St. Pancras Hospital N.W. Salaries £250 p.a. each Unmarried (a) (c) (d) (e) (f) (j) (k) (l) and (m) are male appointments only
- MANCHESTER ANCOATS HOSPITAL—(1) R.S.O. Salary £200 p.a. (2) H.S. for the Ear Nose and Throat Department Salary £100 p.a.
- MANCHESTER EAR HOSPITAL—R.H.S. Salary £120 p.a.
- MANCHESTER ST. MARY'S HOSPITALS—(1) Two H.S. for the Whitworth Street West Hospital (2) Three H.S. for the Whitworth Park Hospital Salaries £50 p.a. each
- MANSFIELD AND DISTRICT GENERAL HOSPITAL—H.S. (male) Salary £150 p.a.
- MARIE CURIE HOSPITAL Fitzjohn's Avenue NW—R.M.O. (female) MIDDLESBROUGH NORTH ORMESBY HOSPITAL—H.S. (male unmarried) Salary £135 p.a.
- MIDDLESEX COUNTY COUNCIL—(1) District M.O. for Heston and Hounslow Salary £250 p.a. (2) Visiting Ear Nose and Throat S. to Central Middlesex County Hospital Willesden Salary £3 3s per session (3) Two R.A.M.O.s and (4) Casualty R.M.O. for Central Middlesex County Hospital Willesden Salaries £400-£25-£475 p.a. each and £150 p.a. respectively
- MINISTRY OF HEALTH Whitehall S.W.—M.O.s Salaries £847 £30-£1161 p.a.
- NEWCASTLE UPON TYNE CITY AND COUNTY—Resident Medical Assistant to Barrasford Sanatorium Salary £250 p.a.
- NEWPORT ROYAL GWENT HOSPITAL—Two H.S. (males) Salaries £135 p.a. each
- NORTHAMPTON MANFIELD ORTHOPAEDIC HOSPITAL—J.R.M.O. (male) Salary £200 p.a.
- NORWICH JENNY LIND HOSPITAL FOR CHILDREN—R.M.O. Salary £120
- NORWICH NORFOLK AND NORWICH HOSPITAL—Two General H.S. (males unmarried) Salaries £120 p.a. each
- NOTTINGHAM CITY—H.S. (male unmarried) for the City Hospital Salary £250 p.a.
- NOTTINGHAM GENERAL HOSPITAL—H.S. to the Ear Nose and Throat Department Salary £140 p.a.
- OXFORD WINGFIELD-MORRIS ORTHOPAEDIC HOSPITAL Headington Orthopaedic S. (male) Salary £200 p.a.
- PLYMOUTH CITY—J.A.M.O. (male) for the City General Hospital Salary £250 p.a.
- PLYMOUTH PRINCE OF WALES'S HOSPITAL Greenbank Road—(1) H.P. Salary £120 p.a. (2) H.S. Salary £120 p.a.
- PRESTON COUNTY BOROUGH—Assistant School M.O. (female) Salary £500-£25-£700 p.a.
- PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—(1) H.S. (male unmarried) (2) R.H.S. to the Maternity Hospital Salaries £150 p.a. each
- PRESTON LANCASHIRE COUNTY COUNCIL—Assistant County M.O. for the School Medical and Child Welfare Department Salary £800-£50-£1000 p.a.
- PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN Shadwell E—(1) H.P. (2) C.O. (3) H.S. Salaries £125 p.a.
- PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St. Quintin Avenue W—H.S. (male) Salary £120-£150 p.a.
- QUEEN CHARLOTTE'S MATERNITY HOSPITAL, Marylebone Road N.W.—(1) Obstetric S. to In Patients (2) Hon. General S.
- QUEEN MARY'S HOSPITAL FOR THE EAST END Stratford E—Clinical Assistant to the Skin Department
- QUEEN'S HOSPITAL FOR CHILDREN Hackney Road E—(1) H.P. (2) C.O. Salaries £100 p.a. each
- READING ROYAL BERKSHIRE HOSPITAL—C.O. (male) Salary £140 p.a.
- ROCHESTER ST. BARTHOLOMEW'S HOSPITAL—C.O. (male unmarried) £120 p.a. (2) Casualty H.S. (male) Salary £150 p.a.
- ROTHERHAM HOSPITAL—(1) H.S. to the Ophthalmic and Ear Nose and Throat Departments and to administer anaesthetics Salary £120 p.a. (2) Casualty H.S. (male) Salary £150 p.a.
- ROYAL FREE HOSPITAL Gray's Inn Road WC—First H.P. (male) Salary £150 p.a.
- ROYAL LONDON OPHTHALMIC HOSPITAL City Road EC—Out Patient Officer Salary £100 p.a.
- ST. JOHN'S HOSPITAL Lewisham SE—Orthopaedic Registrar
- ST. MARK'S HOSPITAL FOR CANCER, FISTULA AND OTHER DISEASES OF THE RECTUM City Road EC—H.S. (male) Salary £65 p.a.
- ST. PETER'S HOSPITAL FOR STONE ETC., HENNETTA STREET WC—Clinical Assistants
- ST. THOMAS'S HOSPITAL S.E.—P
- SHEFFIELD JESSOP HOSPITAL FOR WOMEN—(1) Assistant in the Hospital Laboratories Salary £300-£340 p.a. (2) R.M.O. (3) Senior Resident Officer (male unmarried) Salaries £150 p.a. each (4) Three H.S. (male unmarried) Salaries £100 p.a. each
- SHEFFIELD ROYAL INFIRMARY—(1) Ophthalmic H.S. Salary £120 p.a. (2) H.S. (3) Aural H.S. Salaries £80-£100 p.a. each
- SOUTH LONDON HOSPITAL FOR WOMEN Clapham Common SW—(1) H.P. (2) H.S. Females Salaries £100 p.a. each
- SOUTH SHIELDS COUNTY BOROUGH—H.S. (male) to the General Hospital Salary £150-£200 p.a.
- SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL—(1) H.P. (2) C.O. (3) Resident Anaesthetist and H.S. to the Ear Nose and Throat Department Males unmarried Salary £150 p.a.
- STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS—J.A.M.O. (male) for Prestwood Sanatorium Salary £300 p.a.
- STOCKPORT COUNTY BOROUGH—R.A.M.O. (male) for Stepping Hill Hospital Salary £200 p.a.
- STOKE-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.
- STOKE-ON-TRENT LONGTON HOSPITAL—H.S. Salary £160
- STOKE-ON-TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY—H.S. to the Aural and Ophthalmic Departments Salary £150 p.a.
- SURREY COUNTY COUNCIL—(1) R.A.M.O. for Surrey County Hospital Redhill (2) J.A.R.M.O. for the County Sanatorium Milford Salaries £375 p.a. and £350 p.a. respectively (3) R.A.M.O. for Kingston and District Hospital Salary £375 p.a.
- SUTTON AND CHEAM HOSPITAL—(1) P. in Charge of the Physiotherapeutic Department (2) Second Ophthalmic S.
- SWANSEA GENERAL AND EYE HOSPITAL—H.S. (male unmarried) Salary £150 p.a.
- TAUNTON SOMERSET AND BATH MENTAL HOSPITAL—Second R.A.M.O. Salary £450 p.a.
- TILBURY HOSPITAL—H.S. (male) Salary £140 p.a.
- TORQUAY TORBAY HOSPITAL—H.P. (male unmarried) Salary £175 p.a.
- TUNBRIDGE WELLS KENT AND SUSSEX HOSPITAL—H.S. (male) to the Ear Nose and Throat Department Salary £150 p.a.
- WARRINGTON COUNTY BOROUGH—Visiting M.O. for the Borough General Hospital Salary £300 p.a.
- WEIR HOSPITAL Grove Road Balham SW—J.R.M.O. (male unmarried) Salary £150 p.a.
- WEST LONDON HOSPITAL Hammersmith Road W—(1) J.A.M.O. for the Venereal Diseases Department Salary £350 p.a. (2) H.P. (3) Two H.S.s Males Salaries £100 p.a. each
- WILLESDEN GENERAL HOSPITAL Harlesden Road NW—Hon. Clinical Assistants to the Out Patient Department
- WORASOP VICTORIA HOSPITAL—Junior Resident Salary £150 p.a.
- CERTIFYING FACTORY SURGEONS—The following vacant appointments are announced—(a) South Cave (Yorkshire) (b) East Riding (c) Newton le Willows (Lancashire) (d) Milborne Port (Somerset) (e) Holborn (London) Applications to the Chief Inspector of Factories Home Office Whitehall S.W.1 by June 8

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities, medical colleges and of vacant resident and other appointments at hospitals will be found at pages 44 46 47 48 49 51 52 53 57 and 59 of our advertisement columns and advertisements as to partner ships assistantships and locumtenencies at pages 54 and 55

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births, Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

DEATH

Goss—May 16 at Glenlee Bu Khursi Hill W. Ethard Goss 91 B Ch B

varying effects on voluntary movement. Comment on these results must be reserved until fuller particulars are published, but it is already clear that further experimental and clinical investigation of the subject may lead to conclusions of theoretical and practical importance.

ROCKEFELLER MILLIONS

"Giant, dwarf, symbol" is the subtitle of one of the many biographies of John D Rockefeller, who has died in Florida at the age of 97, and it expresses the astonishing contrasts in his personality and achievements or the public estimate of them. To an earlier generation, which saw the rise of the Standard Oil Trust, his was a sinister countenance brooding over American industrialism, signifying relentless business and the evils of monopoly. As time went on the countenance changed to one of wise benevolence, the name of Rockefeller came to stand for philanthropy on the heroic scale, and the man became a legend. His system of benefactions went far beyond his own country, to the extension of the Bodleian at Oxford, for example, the restoration of the cathedral at Rheims, the endowment of the Imperial Library at Tokyo. Every country of the British Empire has benefited largely from his gifts. It is nobody's business in particular to decide whether the credit of his later benevolence balances the debit of his "predatory capitalism," but no one can question that the Rockefeller millions have contributed vastly to human happiness and well being. It is estimated that the total amount bestowed by him on educational and philanthropic causes exceeds one hundred and fifty millions (pounds, not dollars). To Chicago University alone his gifts ran to seven millions.

Rockefeller planned his philanthropy with the same organizing skill as had given him control of the oil industry. He brought it mainly within four corporations managed by hard-headed business colleagues. The first was the Rockefeller Institute for Medical Research. This arose out of a gift of £40,000 made by him in 1901 not for the building of a research institution, but for the purpose of ascertaining what young men were available in the universities for pursuing medical research with a view to furnishing them with grants and fellowships. The information was acquired more quickly than had been anticipated, and in 1902 the idea of a research laboratory in New York took shape and in the following year Simon Flexner was persuaded from his university chair to become director of the enterprise—the first of many instances of the way in which Rockefeller cast a spell over the best brains available and

brought them into his service. Under Flexner's leadership the research institute came to exercise a profound influence on American medicine. It was fed by successive gifts from Rockefeller, amounting in all to eleven million pounds. The second great corporation was the General Education Board, subsidized from Rockefeller moneys to the extent of twenty-five millions, for the promotion of education in the United States, and the third was the Laura Spelman (Mrs Rockefeller) Memorial, which received fourteen millions, and chiefly concerned itself with child welfare and social science, this has now been consolidated with the Rockefeller Foundation.

The Rockefeller Foundation, the outstanding philanthropical body of this or any time, was established in 1909 as a great clearing house of humanitarian effort, with an initial gift of twenty million pounds, the largest single gift ever made, and since then nearly doubled. In the International Health Division of the Foundation from 1913 to the end of 1935 over eleven million pounds was expended. State and local health services in many countries, including public health administration, vital statistics, epidemiology, public health laboratories, sanitary engineering, and bureaux for the study and reform of public health activities, have absorbed much more than one million, and the control of tropical diseases, especially yellow fever, hookworm disease, and malaria three millions. On the building equipment, and endowment of schools and institutes of hygiene and public health three and a half million pounds has been spent, of which nearly half a million has found its way to this country. India has received princely gifts from the Foundation. Large allocations have been made to the health work of the League of Nations, without which many of its social activities, particularly in the Far East, could not have been initiated or carried on. From Fiji, where the central medical school at Suva has received £15,000, to the Caribbean Littoral and the Amazon Valley, where many thousands have been spent on the control of yellow fever alone, there is hardly a land which has not benefited. Rockefeller gifts to English universities have included large sums to Cambridge, London, and Bristol—but the recital of millions can become stupefying and monotonous.

John D Rockefeller multiplied his years as he had multiplied his fortune. At 90 he determined to live to 100 by careful conservation of his bodily resources and strict scrutiny of his meagre diet, but it is said that within the last year or two he abandoned this ambition feeling that a life of feebleness and inertia was not worth prolonging and he died a little more than two years short of his century. Had he lived in past ages his memory

would now be invested with all kinds of superstitions. How posterity will regard him no one can say, but his benefactions will continue and will be his memorial. He rests from his labours and his carefulness, and, in an arithmetical sense not conceived by the seer of Revelation, his works do follow him.

PREVENTION OF POLIOMYELITIS BY NASAL SPRAYING

The unpromising results of field trials in the serum prophylaxis of poliomyelitis have stimulated a search for effective measures along other lines. Experimental work leaves little doubt that the virus gains access to the body by the nasal cavity, invades the terminal processes of the olfactory nerves, passes up the axis cylinders to the brain and thence spreads to the anterior horn cells of the cord, where the chief lesions are produced. If the entrance of the virus to the olfactory hairs could be blocked it might be possible to protect the central nervous system from invasion. Armstrong Harrison and various other workers in the United States recently brought forward evidence to show that in monkeys the nasal instillation of such substances as alum and picric acid may protect the animals against subsequent inoculation with the viruses of poliomyelitis and encephalitis. The results were so satisfactory that it was thought justifiable to try this method on the human population. The outbreak of poliomyelitis in Alabama last summer afforded the opportunity to carry out a field trial on a fairly large scale. By enlisting the help of the local doctors and advising them how the treatment should be conducted widespread interest was created with the result that about two million persons were sprayed in the three States of Alabama, Mississippi and Tennessee. The solution used consisted of 0.5 per cent. picric acid and 0.5 per cent. sodium aluminium sulphate in 0.85 per cent. saline. The directions were that three or four puffs from an atomizer directed towards the top and not the back of the head should be blown up each nostril. Spraying every other day for a week and once a week subsequently for the duration of the epidemic was recommended. Collection of the results at the conclusion of the outbreak proved very difficult. It was clearly impossible to obtain data from the total sprayed and non-sprayed population. A sample therefore was selected for study in the Birmingham and Jefferson county area of Alabama. Of 5,097 white persons interviewed 69.7 per cent. had received spray treatment and of 2,996 coloured persons 48.9 per cent. had been treated. The length of time during which the treatment had been given was taken into account and the total number of weeks of exposure to risk of sprayed and non-sprayed persons was calculated. During the period July to September 1936 the actual number of sprayed cases developing poliomyelitis was fourteen in the sample of the white population examined and two in the sample of the coloured population. The calculated numbers that would have developed if the incidence in the sprayed had been the same as in the

non-sprayed portion of the population were 16.8 and 4.9 respectively. It will be seen that the advantage of the treated group was not great. This may to some extent have been due to the inadequate nature and duration of the spraying in a proportion of the subjects. Inquiry showed that the spray was not entirely innocuous and that about 20 per cent. of those treated suffered from headache, nausea or local irritation of the nose and throat. We recently¹ drew attention to the possible risk of permanent damage to the nasal mucous membrane and this perhaps has not received full enough consideration. Reviewing these results Armstrong whose report² is here quoted, concludes that the ideal solution and the most effective method of applying it have not yet been found. The experience hitherto gained seems, however, to justify further attempts to improve this method of prophylaxis.

NAEVUS SEBACEUS

Dr. Pautrier³ has recently drawn attention to a type of naevus which is probably much commoner than the infrequent references to it in dermatological literature would lead one to suppose. This is the naevus sebaceus and the reason it so often escapes notice is that as its name implies it is mostly found where sebaceous glands are especially numerous—that is on the scalp, where it is concealed by the hair. As it gives rise to no symptoms patients do not often complain of it to their medical advisers. It consists of a conglomeration of sebaceous glands increased in number and size but of normal structure; they unite to form a superficial lesion with an irregular surface. It must be distinguished from the well-known adenoma sebaceum of Pringle which is a symmetrical eruption extending across the nose and cheeks and always exhibiting a strong angiomatic element; it is not really an adenoma of the sebaceous glands at all. Apparently the first dermatologist in France to describe the naevus we are now discussing was Audry, but only since 1929 have many cases been described and these reports for the most part emanate from a small number of clinics. It is therefore highly probable that the lesion is less rare than is supposed and that if sought for it would be found much more frequently. Dr. Pautrier himself in the course of the last four years has collected six cases which he has described in detail. As a rule the development begins within a few weeks of birth but sometimes later. It is most often found on the scalp but occasionally on the face. It scarcely ever exceeds five centimetres in diameter and the edges are clean cut but sinuous. The surface he describes as "légèrement bosselée" perhaps best translated as resembling a mass of pins heads closely set together. Even when the naevus occurs on the scalp very few hairs are found upon it. Microscopically it consists of an enormous growth of sebaceous glands quite normal in character except for their size. A further point of interest in the study of the naevus sebaceus is the light it throws on the aetiology of a

¹ *British Medical Journal* 1936, 2, 1037.

² *Amer. J. pub. Hlth.* 1937, 27, 103.

³ *Ann. Derm. Syph.* Paris 1936, No. 10, 597.

more serious type of neoplasm, the epithelioma sebaceum. Only recently has it been admitted that an epithelioma can arise from a sebaceous gland. For many years Dr Darier, the leader of French dermatology, refused to acknowledge the possibility. At length, however, the weight of evidence proved too strong even for him, and the article by Favre on malignant tumours of the skin in the *Nouvelle Pratique Dermatologique* gives an adequate description of epithelioma sebaceum. Among the cases described by Dr Pautrier is one in which on a typical naevus sebaceus of the scalp, congenital in origin, appeared two small nodules about the size of a green pea with a slightly excoriated surface. A biopsy proved that one nodule was a basocellular epithelioma—in other words a rodent ulcer—while the other was a typical sebaceous epithelioma. The sections have been examined by Civatte, a faithful disciple of Darier, who was thereby convinced of the existence of a sebaceous epithelioma, and by Favre, who wrote that they provided the clearest possible demonstration that a basocellular epithelioma such as in this country is still commonly designated rodent ulcer may arise from a sebaceous gland.

HUGHLINGS JACKSON—OPHTHALMOLOGIST

When a physician declares that the luckiest thing in his medical life was the study of ophthalmology, modest ophthalmologists may feel that an excessive charity permeates that belief. When the same physician declares, too, in connexion with a certain ophthalmological problem that it "may be studied at once with too much intensity and too little breadth" it is apparent that his is a critical mind surveying not only the scope but also the limitations of ophthalmology. This critical appreciation of a struggling specialty was Hughlings Jackson's contribution to ophthalmology. Jackson's medical life began a few years after the introduction of the ophthalmoscope in 1852 and if nothing in particular can be named as being his special contribution to a developing clinical study, he must be given credit for what is perhaps greater than a single eponymal contribution—method and orderly application. The first flush of thrilled surprise that the ophthalmoscope must have brought to those who took the trouble to master the elaborate technique required in using the early models of this instrument and the appreciation of the wider possibilities that it opened up not only for the study of the interior of the eye but for general medicine were experiences that Jackson shared with many of his contemporaries. He was outstanding, however, in his steadfast loyalty to that early vision. His broad view, his detailed survey and his perseverance over well nigh half a century preaching a gospel that must have seemed an unbalanced enthusiasm in its early days and an unbalanced devotion later on, and which yet gained appreciation in a generation that has grown up since his time—such was his achievement. That he had a message for ophthalmologists not only in his own day is clear from the bibliography of nearly ninety papers on ophthalmology which Burton Chance has listed in a recent appreciation.¹ In season and out

Jackson chastised the ophthalmologist who only "dwells with exaggeration—hurtful to his own organization of medical knowledge—on amaurosis as a defect of a highly specialized part of universal sensation." His message to physicians was no less explicit, and is unfortunately almost as valid to day as it was in his own time. "I believe that physicians are sometimes guilty of overrating slight appearances, finding something extraordinary where there is nothing particular and this naturally provokes the scorn of ophthalmologists and brings a valuable means of research in medical cases into contempt." It was inevitable that Jackson's contributions should have dealt with things that must now be regarded as elementary knowledge. That he should have made mistakes was also inevitable, but the manner in which he made his mistakes exemplifies the saying that great men are admirable even in their blunders. Though he devoted much attention to papilloedema and put forward theoretical views on the subject, he did so with that real modesty which distinguishes between an hypothesis and a conclusion. "an hypothesis is not a conclusion, it is only a provisional conclusion, something to be proved or disproved." That his own hypothesis has proved fallacious is of less significance than the fact that, just because it was not dogmatic, his hypothesis was useful in the elucidation of further knowledge. His paper on eyesight and tabes, read before the Ophthalmological Society in 1881, recounted nearly all on the subject that is now everyday knowledge, as solid observations and as a unity they were new then. To give the ephemeral permanency to distinguish between the false and the true in what was new to act in the present with a sense of the future—all these Hughlings Jackson contributed not only to neurology but to medical ophthalmology also. His plaint that it took twenty-five years for a truth to penetrate medical practice was no *bon mot* but was a characteristic expression of his outlook. By precept, teaching and example he helped to lay the basis of medical ophthalmology. Some of his observations and interpretations may not have stood the test of time, what is timeless is his contribution of a method of clinical study enriching general medicine no less than ophthalmology.

INTERNATIONAL UNION AGAINST CANCER

Twenty one different countries sent delegates to a meeting of the General Committee of the International Union Against Cancer which took place in London over the week end. They were entertained to luncheon on Saturday by the Executive Committee of the British Empire Cancer Campaign and on Saturday evening they were invited by H.M. Government to a dinner at Lancaster House, at which Sir Kingsley Wood presided (see p. 1131). The chief business discussed by the delegates was the programme for the next International Cancer Congress which it was decided should be held at Atlantic City in September 1939. The two official British representatives on the General Committee are Dr W. Cramer and Mr Cecil Rowntree, from whom further information can be obtained.

¹ *Arch. Ophthalmol.* Chicago 1937, 17, 241

FOULING OF THE ATMOSPHERE

Dr G. M. B. Dobson, F.R.S., chairman of the Atmospheric Pollution Research Committee winds up his report for the twelve months ended March 31 1936¹ with a review of the state of the atmosphere during recent years. As he says the publication of a large mass of figures serves little useful purpose unless at the end of a number of years some definite conclusions can be drawn from them regarding the changes which are taking place in the purity of the air of the towns throughout the country. Account must be taken of the great industrial depression of 1930-3 in any attempt to discover whether propaganda and legislation designed to reduce fouling of the atmosphere have been effective. With returning industrial activity the amount of fuel burnt has increased, so that if the standard of efficiency remained constant an increase is to be expected. A small improvement in methods of combustion of coal may well be masked by an increase in the amount consumed. Though it is not possible to get very precise figures of coal consumption the results now available—at some stations going back to 1915—give ground for belief that the smoke abatement campaign has had a real effect. The outstanding feature of the curves is the large decrease in pollution observed at many stations before the depression began. The ratio of the amount of sunshine recorded at Kew Observatory and in Central London has been used as a rough measure of the amount of pollution in London. Analysis of these figures shows that since 1881 the percentage of winter sunshine in London compared with that at Kew has risen from 20 to 52—a very marked improvement. Reviewing the data as a whole Dr Dobson concludes that there has been a definite reduction in the extent of pollution of the atmosphere in Britain during the past twenty years.

THE MIDHURST REPORT

The thirtieth annual report from the King Edward VII Sanatorium Midhurst² provides material for reflection. The classification of patients has been modified but still appears to be unsatisfactory. The patients are divided on admission into three groups according to the Turban Gerhardt classification which is based on physical signs. How misleading this can be is seen from what follows. Each of the groups was further subdivided into patients with negative sputum and those with positive sputum. In group II the corresponding numbers admitted were then eighty-two and thirty-six respectively and even in group III as many as twelve out of thirty-eight had negative sputum on admission. Moreover in group II out of the eighty-two sputum negative patients forty-one were discharged "arrested" of the thirty-six sputum positive cases only one. It is justifiable to conclude that there must be something wrong either with the method of classification or with the methods of examining the sputum. As the latter is unlikely at Midhurst where the sputum is even cultured it is to be assumed that the condition of the sputum

"on admission" really means condition before admission. Incidentally the use of the term "arrested" is perhaps not happy for according to the definition given in the report what is really meant is "quiescent". It might be better to stick to the classification of the Ministry of Health since many of the patients when discharged from Midhurst return to tuberculosis officers who are compelled to use it. Attention may also be drawn to the fact that no fewer than sixty-one out of the 109 patients who on admission had tubercle bacilli in the sputum were still sputum positive on discharge. It would therefore be of interest to have amplified the statement that "during the three months after discharge most of the sputum positive cases (excluding those who are moved because of rapidly advancing disease) have entered the second category"—that is "their sputum has dried up or been three times negative to exhaustive tests". The most interesting parts of the report are those which concern special forms of treatment. Of the twenty-one patients who had an artificial pneumothorax induced at Midhurst seven were discharged with tubercle bacilli still in the sputum. Of forty-nine patients with positive sputum treated with sanocrysin the bacilli disappeared in no fewer than twenty-five. This may be considered as showing that sanocrysin "has a definite place in the treatment of pulmonary tuberculosis". The most marked results, however, are those obtained after operations on the phrenic nerve in suitable cases (which includes ineffective pneumothorax not lending itself to adhesion section) of fifteen patients with tubercle bacilli in the sputum only three remained sputum positive and this in spite of the fact that in half the patients only the "crush" operation was done. (Last year only three cases out of twenty-seven phrenic interruptions were submitted to the crush operation.)

THE CAPITATION FEE INQUIRY

The Court of Inquiry appointed by the Government to consider the Insurance Acts Committee's claim for an upward revision of the capitation fee began its investigation on Wednesday last, May 26, at the offices of the Ministry of Health the proceedings being open to the public. Statements of evidence prepared by the Insurance Acts Committee and the Minister of Health and the Secretary of State for Scotland and rejoinders thereto have been exchanged. These four documents are reproduced in our *Supplement* this week (p. 313). The Chairman of the Court is Lord Amulree who has presided over a large number of Government committees of inquiry and has acted as arbitrator and conciliator in industrial differences for the Board of Trade and the Ministry of Labour. The other members are Mr. Thomas Howorth, a chartered accountant and member of the firm of Price Waterhouse and Company, and Mr. D. H. Robinson, Reader in Economics in the University of Cambridge and a member of the Economic Advisory Council.

We publish this week at page 1134 an influentially signed letter inviting support for an endowment fund to establish a lectureship in pathology as a memorial to the late Professor E. H. Kettle M.D. F.R.S.

¹ Department of Scientific and Industrial Research. Twenty-second Report on the Investigation of Atmospheric Pollution. H.M. Stationery Office. (5s.)
² King Edward VII Sanatorium Midhurst Sussex (12s. 6s.) (free)

MEDICAL SICKNESS, ANNUITY AND LIFE ASSURANCE SOCIETY

The annual meeting of the Medical Sickness, Annuity and Life Assurance Society was held at the offices, 300, High Holborn, W.C., on May 10

The chairman of directors, Dr F C MARTLEY reported a very satisfactory result of the actuary's valuation of the society for the four and a half years ending on December 31, 1936. He said that the total surplus as shown in the report on the sickness and the life assurance funds amounted to £225,639 of which it was proposed to distribute £153,000 as bonus and to carry forward the remainder. A most detailed and stringent examination and valuation of the liabilities had been made in view of the financial and economic difficulties through which the whole world had been passing every known contingency had been provided for and having taken all wise precautions the Board found itself in the happy position of being able to recommend the payment of a higher rate of bonus all round by increasing it from 12s to 15s per annum on the main classes of sickness policies for each guinea per week insured and from 23s to 25s per annum on the life assurance side for each £100 insured, together with a bonus on all combined policies at the same rates as if separate policies had been effected for the two benefits. The directors congratulated the members on the excellent figures which had emerged from this most careful and cautious valuation.

Dealing with the results of the year under review Dr Martley said that on the life assurance side the new sums assured amounted to close upon half a million. The total premium income in this department was now £111,856. A large proportion of the total premiums was in respect of the deferred annuities under the scheme which the society was assisting in operating for members of the British Medical Association and national health insurance practitioners. The society's family provision policy was proving very popular. Its chief advantage was that at the age of 60 the premiums paid did not disappear without any return but a guaranteed sum was payable when that age was reached. There could be no doubt that the most useful life assurance policy for members of the medical profession was the ordinary endowment assurance under which the sum assured was payable at death or on attainment of a fixed age. It was not easy for the medical man faced with family and practice expenses, to save consistently by way of investment and even if it was it was not always sound unless he happened to be a financial expert but there was no danger of depreciation in a life assurance policy effected with a sound company and if it was a with profit policy the assured had the pleasure of receiving bonus notices every quinquennium adding to the value of his investment.

On the sickness fund the new annual premiums totalled £10,702, which constituted a record. The premium income on this fund amounted to £108,637. It was an astonishing thing to him that members of the medical profession still went outside the society to obtain permanent sickness insurance. Its rates were not only lower than were obtainable elsewhere but it paid a bonus at the normal termination of each contract. The expenses of management were just over 9 per cent of the premium income and represented a reduction on previous years. Dr Martley concluded with a special word of appreciation of the staff.

The meeting unanimously adopted the report of the directors, re-elected the directors who retired by rotation (Dr W Knowsley Sibley and Mr R J McNeill Love) adopted the recommendations as to payment of reversionary bonuses in accordance with the actuary's suggestions, and agreed to a resolution for the payment of an interim bonus on all with profit policies for permanent sickness and accident insurance and life assurance becoming claims during the year.

Sir William Willcox moved a vote of thanks to the chairman, and referred to the great amount of time and business knowledge which he placed at the disposal of the society. This was seconded by Dr G de Bec Turtle and carried with applause.

On November 11, 1936 the subscribers to the memorial to Sir Walter Morley Fletcher were invited by the Medical Research Council to view Miss Dora Clarke's posthumous portrait bust. The ceremony was held at the National Institute for Medical Research, Hampstead, in the library of which the bust is permanently placed. A full report of the proceedings (over which Lord Balfour of Burleigh chairman of the Medical Research Council, presided) with the text of the addresses by Professor G M Trevelyan and Sir Frederick Gowland Hopkins, has now been printed for the trustees of the memorial fund by the University Press Oxford and the list of subscribers appears as an appendix. This forty page pamphlet with its two photographs of the bust, will be welcomed by all Walter Fletcher's friends and admirers, and is an excellent piece of typography.

Reports of Societies

DISEASES OF THE COLON

At a meeting of the Subsection of Proctology of the Royal Society of Medicine on May 19, with Mr G GORDON-TAYLOR in the chair, Sir EDMUND I SPRIGGS of Ruthin Castle opened a discussion on the incidence and treatment of diseases of the colon.

Sir Edmund Spriggs proceeded to analyse from a very large number of consecutive cases of various diseases 1,574 cases in which there was some affection of the colon which might be described as a disease or disorder, and he also mentioned 1,520 other cases in which there was delay in the colon, proved radiologically. Of the cases of colonic disease or disorder 612 were cases of diverticulosis. 535 came in the general colitis group, including mucobranous, spastic, and catarrhal or mucous colitis and enterocolitis, and there were fifty-one cases of ulcerative colitis and colitis gravis, thirty-three of dysentery, seventeen of post dysenteric colitis and forty-four of other parasitic diseases. In this series there were sixty-four cases of growth, excluding growths in the rectum. The average age of the patients who had colitis or colonic delay was in the middle or late forties whereas the average age of those who had diverticulosis was 58, of those who had diverticulitis 62, and of those who had cancer it was also 62. The sex incidence was of some interest in colitis there were three women to one man, in constipation the numbers were equal—a rather surprising result—in diverticulosis there were two men to one woman, in diverticulitis nine men to one woman, and in growths three men to one woman.

In the diagnosis of diseases of the colon—which was not his subject on that occasion—he mentioned that although they had all been drilled by their teachers always to examine the anus and rectum cases still came forward in which the diagnosis had been missed owing to the neglect of such examination. The habit had grown up of making the diagnosis from the barium enema alone, but there were some things the barium enema did not show. It did not reveal the rate of passage, it did not indicate segmentation or spasm of the colon anything like so well as the meal, nor did it show well the faecal concretions which occurred in diverticula and were the beginning of diverticulitis.

Constipation

Flatulence was often mentioned in medical reports and documents without definition. It might mean that the patient was bringing up wind from the stomach or trying to, or passing wind from the bowel, or wanting to or that he was distended, or felt that he was distended without being so, or that he had gurglings with or without any of these things. A good many people were said to swallow air when they had some irritation in the stomach or some other organ. It should be found out to what the flatulence was due. With regard to distension of the abdomen, a comparatively slight distension of the small intestine produced an appreciable effect, whereas distension of the large intestine was well borne. In a series of 1,000 cases with a complaint of constipation no delay was shown radiologically in 10 per cent. The sexes were about equal though one would have expected women to be in the majority. It might be that women took aperients a great deal more than men. In 1,000 cases with radiological delay the delay was in the sigmoid and/or rectum in nearly half, and in the other half in the colon. Nearly a quarter of the 1,000 patients were unaware that there was any delay, they had come for investigation for other complaints and among these nine out of ten had no disorder referable to the colon. A reasonable delay was part of the colon—

function and remembering this, it might be well to revise some extreme views held in regard to constipation. It should be borne in mind that a purge emptied two or three days' faeces, so that it was hardly reasonable to give it at more frequent intervals. He believed that the caecum was not a "cesspool" as a rule though it might be made one by art, that a moderate constipation was not harmful, and that frequent purges were undesirable, causing loss of vigour of the intestine.

Mucous colitis was much less common in his experience than formerly. In the course of the last generation teaching as to purgatives had done something to decrease its incidence.

In 142 out of over 5,000 x-ray examinations a redundant sigmoid was observed. Was this congenital or in part congenital, or was it acquired? It was known from x-ray observation that when the bowel relaxed it became longer as well as wider. Supposing it did not contract again and that happened time after time one would expect to get these loops enlarging. He found a redundant sigmoid twice as common among people over 50 as among people under 30, taking equal numbers in each group. It would be interesting to elicit opinions as to the value of excision and sympathectomy. The latter was a valuable measure, no doubt, in Hirschsprung's disease. The bowel did not come down to the normal size, but it acquired a better tone.

Ulcerative Colitis

In ulcerative colitis whatever was done a proportion of patients—16 per cent in his series—died. Among the advances that had been made in his time was first of all, an increase in the diet. People with ulcerative colitis were now given any bland food that they could take. He had seen a patient get well on minced meat. He believed that gentle douching, not more often than on alternate days was a great help. It was important to deal with anal and rectal lesions. In his series of rather more than fifty patients up to about a year ago, when he published a paper on the subject, there had been five cases with entamoeba. Had a serum been found useful? Generally speaking bacteriological methods had been disappointing but some surgeons still reported good results. In this country the antidyenteric serum used was mostly Shiga, quite a sound one because it did contain the antitoxic body, but if the patient had not had Shiga dysentery and a Shiga serum was being given, that was non-specific protein therapy. Nevertheless some of the recoveries with serum had been in very ill patients. Antidiplococcal vaccines and sera had also been widely used. Sometimes after the fair hopes attending new methods of treatment had been dashed, there was an over-reaction. He was talking recently to an American physician, who said he had abandoned all treatment except rest, feeding and symptomatic medicines. That was going too far. Certainly as regards douching he believed it helped, and not only during the active stage, he had seen recurrence take place when it had been omitted, even during convalescence. He laid particular stress upon after treatment. It was a decisive factor in the large number of patients who recurred.

Ulcerative colitis however treated was a recurring disease and many lives were lost because that was not recognized. He had seen recurrence consequent upon overwork, emotional stress, the drinking of beer, the common cold, and pregnancy.

Diverticulosis and Diverticulitis

The incidence of these conditions was 10 or 11 per cent. He had suggested that the name diverticulosis be used when the pouches were present but had not caused inflammation of the wall of the bowel and that the term "diverticulitis" be reserved for cases in which there was induration or inflammation of the bowel wall. This definition had been accepted but it should be emphasized because it was of clinical importance. The incidence of diverticulitis in his series was 120 cases out of 612 people observed with diver-

ticulosis, in other words, 20 per cent went on to diverticulitis. Serial instantaneous photographs of diverticula contracting showed that the function of emptying was important. The muscular wall of the bowel must be kept in a good state if diverticula were to be kept healthy. A form of diverticulitis which he had described was that of swollen mucosal folds. This was most likely to cause acute obstruction.

The treatment of diverticulitis he recommended consisted of giving paraffin, administering a douche at periods of from two to seven days, varying according to the condition, avoiding rich food and too much alcohol, and generally living a hygienic life. When a man was subject to any complaint, if he abandoned discretion or was tired or worried, the complaint raised its head, and that was particularly true of diverticulitis. Purgatives should be avoided unless they were necessary.

Carcinoma of the Colon

Sir Edmund Spriggs then referred to the series of cases of growth of the colon analysed by Dr S W Patterson and himself and reported in the *Journal* of April 24 (p 882). In 64 cases, excluding growths of the rectum the youngest patient was 39 and the oldest 92, and the usual age period was between 50 and 70. Half of the growths were in the sigmoid. Diverticulitis combined with growth was seen in six cases only. Treatment depended on early recognition. In this series the length of history varied from one week to three years. There were fifty-five patients from whom a good history was obtainable, and among these the average time from the occurrence of the first symptom to the recognition of cancer of the colon was eleven months. Excision of cancer was nowhere more successful than in the colon if done early, and if it was generally recognized that there was on the average a gap of eleven months between the first symptom and the recognition of the true condition a step would be taken towards successful treatment. Of these sixty-four cases thirty-six had what might be called a bowel onset—either constipation or a colitic condition with irregularity, seventeen had pain as the first symptom usually referable to the growth or to the bowel above it, and eleven had what had been called a dyspeptic onset. Of course there was very generally dyspepsia in the late stages of obstruction, but he was now speaking of the very first symptom. Rectal bleeding was the first symptom noted in eleven cases, in seven there was neither blood nor pus detectable in the faeces. Thirty-eight of these cases underwent operation. Excision was carried out in thirteen cases, and in eight it was successful—two were alive after ten years. In excising carcinoma of the colon one should not be afraid of a big lump or a great dilatation of the bowel behind. The nature of the growth and the presence of secondaries were of more importance than the size or the degree of obstruction, provided the patient was not too ill.

One thing that emerged from the whole of this study was the amount of human suffering that might be avoided by fairly early adequate examination in doubtful cases. Finally, Sir Edmund touched upon the need for considering the mind of the patient as well as the body in this group of diseases.

Discussion

Mr J P LOCKHART-MUMMERY referred to the confusion between chronic dysentery and ulcerative colitis. Some times cases apparently of ulcerative colitis were treated indefinitely whereas if one could be sure they were cases of chronic dysentery they could be cleared up in a very short time. In a bad case of ulcerative colitis where there was a possibility of chronic dysentery he instituted emetine treatment. If it did not do good it did not do much harm. Ulcerative colitis was a disease which was continually recurring. He believed there was some hereditary disability. In certain people the colon was less resistant than in

others. In three cases he had treated both father and son or daughter for exactly the same condition, which was rather suggestive of a hereditary factor. In one case a septic tooth was the cause of recurrence. On the question of the treatment of chronic constipation by resection of the colon or by sympathectomy his own experience of sympathectomy was that while satisfactory in its way it was not permanent and recurrence took place. The same was also true of the megacolon cases. But there was a very great difference from the point of view of risk between resection of the colon and sympathectomy. It had to be a very bad case if colectomy was justifiable, but there were cases where it was.

Mr ERIC CROOK said that in mental patients the incidence of volvulus appeared to be much higher than in other patients. In surgery at a mental hospital volvulus was found to be a far more common emergency than appendicitis. He did not know whether this was due to any relative rarity of appendicitis among mental patients or was attributable to a back-pressure effect. Sir ROBERT ARMSTRONG-JONES said that his experience at Claybury over many years was that volvulus was exceedingly rare, appendicitis was equally rare. Dr G. VILVANDRÉ said that the older he got the more difficult he found it to diagnose carcinoma of the bowel from x-ray appearances and the more reliance he placed on the sigmoidoscope. Mr R. S. CORBETT referred to the prevalence of intussusception in connexion with growths in the colon. Mr E. T. C. MILLIGAN asked under what conditions the opener had come across flatulence in the small intestine, which was a very common complaint among many patients. Where did the air come from?

Mr GORDON TAYLOR associated himself with what had been said about the relatively slight value of sympathectomy in cases of chronic constipation. The almost miraculous results of sympathectomy in Hirschsprung's disease in children were well known, but when it came to chronic constipation in adults or even adolescents his experience of sympathectomy was that it had at most a temporary effect, and in every case he had had subsequently to perform a resection. He was not quite prepared to accept Mr Lockhart-Mummery's view as to the excessive risks of colectomy. He had been interested in the relative infrequency of the combination of diverticulitis and cancer. Did a patient ever get a perforated diverticulitis twice? He had operated in a large number of cases of perforation of diverticula of the colon but he had never known a second perforation in the same patient.

Sir EDMUND SPRIGGS replied that he too had not seen a patient with a second perforation of a diverticulum. He agreed with Dr Vilvandr  that the recto sigmoid junction was a part which in many patients could not be well seen radiologically, however the patient was rotated but it could be seen with the sigmoidoscope. With regard to a hereditary or familial factor in ulcerative colitis he had only come across one case out of the fifty in his series in which this presented but in that case four members of one family were affected.

E. Junghans (*Med. Welt* April 17, 1937 p. 530) draws attention to the dangers of the indiscriminate use of extracts of the posterior lobe of the pituitary during parturition. He reports four cases of rupture of the uterus following the administration of pituitary extracts and recommends the following rules. The intravenous injection of pituitary extracts during the stage of dilatation and expulsion is contraindicated. During the stage of dilatation only small doses of stimulating drugs are permissible. In cases of disproportion between head and pelvis and in the presence of weak uterine contractions pituitary extracts are permissible only when a thorough vaginal examination has shown that spontaneous delivery is possible. The dose to be injected must not exceed three Voegelin units.

Local News

ENGLAND AND WALES

Birmingham United Hospital

The Birmingham United Hospital, consisting of the General Hospital in Steelhouse Lane and the Queen's Hospital in Bath Row, has issued its second annual report covering the year 1936. Finance is dealt with as relating to the one organization, but each hospital retains its own list of subscriptions and donations, which in the case of the General Hospital amounts to over £10,000 and in the case of Queen's Hospital to little less. Apparently the arrangement reached in 1934 to unite these hospitals has not diminished the interest of their friends in one or other institution. On the united working there is a small surplus of £313, comparing with a deficit of £625 the previous year. Great assistance has been afforded by the Birmingham Hospital Contributory Association, whereby nearly £77,000 was received by the hospital during 1936, an increase of £3,000 on the previous figure. The hospital has again been fortunate in the receipt of free legacies amounting to £47,286, which has been placed to a separate legacy account. A table is given showing the expenditure per patient at each hospital during the last six years. The cost per in-patient at the General Hospital has gone down from £8 16s 1d in 1931 to £8 0s 10d in 1936, and at Queen's from £7 15s 11d to £7 3s 1d. The cost per out-patient has remained fairly constant at the General Hospital at 6s 7d, and at Queen's it is now at that same figure, to which it has progressively risen from 4s 3d in 1931. It is mentioned that Lord Austin, the chairman of governors, undertook to defray the cost of one gramme of radium for use in a bomb, and this has now been installed at the General Hospital. The number of in-patients at the General Hospital during the year was 8,562, and at Queen's 6,856. A neurological department has been inaugurated at the former hospital. It is expected that the opening of the new hospital at the Centre will take place in 1938.

International Union Against Cancer

The Minister of Health, Sir Kingsley Wood, presiding on May 22 at a dinner given by His Majesty's Government at Lancaster House, London, S.W. to the International Union against Cancer, said the fight against disease knew no political barriers and no national frontiers. Cancer research was proceeding unceasingly. Devoted workers in almost every country in the world to day were working steadily and quietly in the attack on cancer which was still one of the most deadly enemies of the human race. This work went into the common stock for the welfare not of one country nor of one continent but of humanity. Although the cure of cancer had not been discovered, nevertheless if the disease was caught in its early stages—and treated by surgery, by deep x-rays, or by radium—it had shown a high recovery rate. It was simply untrue, as too many people thought, that a diagnosis of cancer was necessarily a death sentence. In Great Britain for instance, it was true that over 60,000 people died every year from cancer. When however the increased longevity of the population and the more accurate diagnosis of the disease were taken into account, it was probably fallacious to assume that these figures connoted a greater prevalence of whatever factors were concerned in its causation. So far as treatment was concerned the position generally was more hopeful than at any time and thousands of people were being cured to-day. This fact could not be too widely known, for perhaps an even more deadly enemy than cancer was the nameless fear which caused a man or woman to destroy

until it was already too late. M. Justin Godart, formerly Minister of Health in France, who said in reply that he shared the optimism of Sir Kingsley Wood, emphasized that means and methods had been worked out which had brought relief to thousands of sufferers. The most hopeful outlook lay in the fact that people, more and more, were losing the terror which the name of the dreaded sickness had been causing for centuries, and were, therefore, seeking early treatment. M. Godart, in the name of all nations represented on the Union, paid tribute to the work done in England since the end of the eighteenth century.

Maternity and Child Welfare Conference

The full programme has now been issued for the seventh English speaking Conference of Maternity and Child Welfare, which (as announced in the *Journal* of February 27 p. 468) will be held in the Great Hall of British Medical Association House, Tavistock Square, W.C., on Tuesday, Wednesday, and Thursday, June 1, 2, and 3, under the presidency of the Minister of Health, Sir Kingsley Wood. Discussions will take place on 'The Promotion of Maternity and Child Welfare in Backward and Rural Areas' (chairman, Sir George Sill), 'Progressive Legislation in Connexion with Maternity and Child Welfare', 'The Education of Parents in the Care of their Children' (chairman, Dame Enid Lyons, wife of the Prime Minister of Australia), 'Nutritional Problems in Relation to Mother and Child' (chairman, Dr R. E. Wodehouse, Deputy Minister of the Department of Pensions and National Health, Canada), 'The Future of Preventive Psychology in Relation to Parent and Child', and 'Preventive Work for Cripples and Invalid Children'. The Minister of Health of Tasmania, the Hon. G. F. Gaha, is also attending the conference. There will be a reception by the Minister of Health on behalf of the British Government at Lancaster House at 9 p.m. on June 1, and a reception at the College of Nursing on June 2 at 8 p.m. The Child Welfare Travelling Exhibition of the National Council for Maternity and Child Welfare will be displayed at Woburn House, Upper Woburn Place, W.C. (opposite B.M.A. House) throughout the three days. Arrangements have been made for tours and visits to institutions all of which start from B.M.A. House. Particulars of the conference may be obtained from the honorary secretary, Miss J. Halford, Carnegie House, 117, Piccadilly, W.1.

SCOTLAND

Lord High Commissioner and Hospitals

Lord Kinnaird, as Lord High Commissioner to the annual Assembly of the Church of Scotland and Lady Kinnaird, following the usual custom, paid a round of visits last week to the hospitals in Edinburgh. At the Royal Infirmary on May 18 Lord Kinnaird presented the prizes gained by nurses in examinations, and visited two surgical wards and one medical ward. Lady Kinnaird also paid a visit to the Scottish Branch of the Queen's Institute of District Nursing where she was received by Lady Nairn who reminded her that this was the jubilee year of the Queen's Institute the Institute having been founded in 1887 following the decision of Queen Victoria that the money presented to her then in memory of her fifty years reign should be spent in providing nurses for the sick poor in their own homes. The first of these nurses had been pioneers of a wonderful movement which had greatly increased so that in Scotland there were now over 1000 of these nurses. On May 19 at the Deaconess Hospital of the Church of Scotland the Rev. Dr. Fiddes in an address of welcome said that this was the first visit of the King's representative since the hospital had been reconstructed and reopened last year by the present King and Queen as Duke and Duchess of

York. The reconstruction had cost £42,000, and this had been subscribed with the exception of some £3,500. The Royal Maternity and Simpson Memorial Hospital was visited by Lady Kinnaird, where she saw six infants that had been born on the forenoon of the day when the visit was paid. On May 21 both Lord and Lady Kinnaird visited the Edinburgh Foot Clinic. Sir John Fraser, who presided, said that this clinic was in some respects a unique institution. It had a record of some 21,000 cases annually, all of them presenting disabilities of the feet which caused great distress to the sufferer and were sometimes so crippling as to make walking impossible. Miss Gertrude Herzfeld said she had been interested in the clinic since it began with four treatment chairs; now there were forty chairs. The clinic had taken thirteen years to develop, and the work now being done among children was of great importance, because it was not only preventive but educational. This school turned out a large number of competent chiropodists, and it was to be hoped that some day it might be endowed. Lord Kinnaird said that the public ought to appreciate this work, and should not allow such a clinic to go short of funds.

Presentation to Portobello Doctor

Dr. John H. Balfour, who has retired from practice in Portobello, Edinburgh, after fifty-five years was presented recently with a wallet of money on behalf of a large number of patients and citizens. Councillor James Edward, in making the presentation said that Dr. Balfour began his professional career in Portobello at the age of 21 as assistant to his father. He had not only been one of the best known practitioners in the city of Edinburgh, but had thrown himself with energy into many forms of work for the benefit of the community. For fifty years he had rendered valuable service to the Portobello Destitute and Sick Society. Dr. Balfour, in returning thanks, said that he had always considered his patients as his friends, an attitude which he thought every medical man ought to adopt with the object not only of benefiting the health of the patients but of helping them in every way possible.

Royal Victoria Hospital Tuberculosis Trust

The annual report of the Royal Victoria Hospital Tuberculosis Trust by Sir Robert W. Philip, president of the Trust, for the year to June 20, 1936, states that deaths from tuberculosis in Scotland now number only about one quarter of what they were fifty years ago. It is pointed out that beyond the immense saving of life such figures afford convincing evidence of the improvement that has taken place in methods of detection and in the advances made in prevention and treatment. Nevertheless the death rate in the age group of children under 5 years was 299 per 100,000, a figure which affords testimony to the fact that infection with tuberculosis is to be expected in infancy and childhood. The seeds of tuberculosis as manifested in adolescent and early adult life may therefore be regarded as having been sown in infancy. The disease may kill the patient at the beginning through the virulence of infection and the low resistance offered, or it may merely cripple, or may remain latent until some time when the individual's resistance falls. Attention is directed to the value of recognizing infection at the earliest possible moment by the tuberculin test. Thereafter ideal physiological conditions of existence should be provided for the children and for this purpose the Southfield Sanatorium Colony of the Trust has been found most suitable. The research laboratory of the Trust has undertaken a considerable amount of work. Dr. Christopher Clayton has investigated the seasonal variation in the manifestations of tuberculosis and has come to the conclusion that these are referable chiefly to two factors: fluctuation in the resistance of the individual and variations in the virulence of the infecting organism, the former being the more important. Dr. Iain Macdonald has con-

ducted observations to ascertain if the healing of tuberculous lesions by means of calcium might be accelerated by the addition of tuberculin, vitamin D, or cholesterol in varying combination. Cases treated with tuberculin have been found to show a definitely increased deposition of calcium. Dr J. M. Matheson, from the clinical aspect, has made a study of the circulatory and respiratory functions in tuberculosis, paying particular attention to arterial pressure and respiratory capacity. At the sanatorium an open-air school has been successfully conducted, and it has been observed that under the conditions of this school the child's mental processes are amazingly quickened. Much attention has been paid by the Trust to education in the prevention of tuberculosis, short courses of intensive training in tuberculosis work have been provided for nurses, and leaflets, cards, and posters have been distributed among the public. The tubercle-free dairy herd of cows at Gracemount farm in the neighbourhood of the sanatorium now numbers 111 cows. It is further noted that the number of cows in attested herds throughout Scotland in July, 1936, was 11,826, approximately five times as many as in July, 1935. The financial statement of the Trust shows that the ordinary income for the year was £4,802, while the expenditure was £5,922. The invested funds amounted to £36,036.

FRANCE

[FROM OUR CORRESPONDENT IN PARIS]

The Reorganization of the Public Health Service

Monsieur Henri Sellier, Minister of Public Health, continues to issue notes and memoranda on the reorganization of the public health service. It will be remembered that the Decree of October 30, 1936, provided for the appointment in each department of an inspector of hygiene responsible to the Minister of Public Health. In April of this year the Ministry of Public Health issued particulars concerning the duties of this medical officer of health. He is to act as the secretary of the Departmental Hygiene Council and of those departmental bodies called into being to assure the proper co-ordination of health activities. The medical officers on the staff of an inspector of hygiene must be French doctors of medicine holding a university diploma of hygiene and a certificate showing that they have spent three months in the study of departmental inspection or in the municipal health service of a town with at least 100,000 inhabitants. The appointment of such officers is to be by examination, and the board of examiners is to be composed of medical experts in public health. The directors of public health services are to be selected by this board instead of being nominated as heretofore by the municipal authorities. The age limit is 60 years, and private practice is not allowed except in towns with less than 50,000 inhabitants. What is perhaps the most striking feature of this reorganization is the emphasis laid on technical skill and experience throughout the new hierarchy and the corresponding weakening of lay and local bonds. Monsieur Sellier is evidently bent on gradually eliminating the layman's usurpation of functions which can properly be discharged only by fully qualified medical officers of health.

"Le Sou Médical"

The medical defence union "Le Sou Médical," now some forty years old, is a most prosperous body with nearly 8,000 members and a big financial reserve. Members whose clinical and therapeutic activities bring them into the law courts are guaranteed a support of 100,000 francs which is raised to 500,000 for those who are also subscribers to the weekly journal, *Concours Medical*. In 1936 the letters received by this organiza-

tion numbered more than 11,000, and 537 new cases were handled. In as many as 151 of these cases the trouble concerned the payment of fees. In twenty-one first-aid on the highways had led to differences of opinion between doctor and patient. There were also fifty-nine cases concerned with occupational accidents, nine with slander, nine with difficulties over rent, eight with difficulties between colleagues and as many as eighty-four with the tax collector. In the same year 667 cases were wound up, only sixty-four, or 10 per cent, being lost. In all the other legal cases "Le Sou Médical" scored a victory for its members. Its staff includes six legal experts. All this for 100 francs a year, with the *Concours Medical* thrown in for an additional 60 francs.

The Tercentenary of Descartes

It was in 1637 that René Descartes published his famous *Discours de la Méthode* and some time this year an appropriate ceremony will presumably celebrate this event. At the end of his *Discours* Descartes asserted bluntly that his was the ambition to improve the art of healing, and he intimated that by pursuing a study of nature he might extract therefrom rules for the conduct of medicine more reliable than those then in force. He ventured on a description of the action of the heart and blood vessels, not a bad essay considering the date on which it was written. His advocacy of observation and experiment may not have been given place of honour in his scheme of reform, but it is remarkable that they were given any place at all. It was in 1649 that Descartes came to Stockholm on the invitation of Queen Christina of Sweden and he died there in 1650. His remains, minus the skull and a bone of the hand which had written the *Discours*, were taken to France in 1667, and now rest in Saint-Germain-des-Prés in Paris. But the retentive Swedes were long in parting with the skull, and it was not until 1878 that it was acquired by the French Museum of Natural History, where it now réside after having been bought for 37½ gold francs.

State Employees and Tuberculosis

Dr E. Rist has lately drawn attention to the injustices of the law of 1929 concerning sickness benefit for State employees who develop tuberculosis. According to Article 51 of this law the servant of the State may, on developing tuberculosis, take five years' leave of absence in which to recover, the first three years on full pay and the next two on half-pay. To repair the generosity of this gift the State has become most evigent in its health standards for applicants for the service. They have to be examined by a specialist, who must employ radiological as well as clinical means for discovering traces of tuberculosis. He has to testify to the absence of any tuberculous affection, so when he finds a radiological shadow in the lungs, however insignificant, he is involved in a conflict between clinical common sense and the letter of the law. Certain examiners whose logic has outrun their common sense have most unjustifiably wrecked the prospects of the persons examined. Dr Rist suggests, tongue in cheek, that the examination for State service should include a tuberculin skin test, the positive reaction of which would disqualify some 75 to 80 per cent of all the healthy applicants between the ages of 18 and 25 for State service. Dr Rist's serious remedy is to give highly qualified medical examiners more latitude and to let them pass into the service of the State a certain number of ex-tuberculous patients, even when their health records have been tarnished by artificial pneumothorax or sanatorium treatment. But such persons should be put on probation for a certain period during which the State should not be liable to give them tuberculosis benefits if they broke down from this disease. The mere fact of their being on such probation as well as being under close, skilled medical supervision should keep such persons in the narrow path of healthy living.

Correspondence

Memorial to Professor E H Kettle

SIR—By the death of Edgar Hartley Kettle in December last pathology, in this country, lost one of its most distinguished exponents, and all who knew him were deprived of a personal friend. We feel sure that those who were associated with him, as colleagues or students in his professional work, or in any other of the activities in which he took part, would desire that his memory should be perpetuated in some suitable form.

Kettle's devotion to his subject, and to all that concerned it, including particularly the interests of his students and younger colleagues, was evidenced throughout his professional career. As an original worker, as a director who stimulated the work of others, as a teacher as a senior member and treasurer of the Pathological Society, and as an active member of numerous committees he played a part that will not be forgotten. In each of the four University schools in which he directed the teaching of pathology—St Mary's, Welsh National School of Medicine, St Bartholomew's and the British Post-Graduate Medical School—he won the admiration and affection of his colleagues and his students. We feel that a fitting tribute to his memory would be the foundation of a Kettle Memorial Lectureship in Pathology, and that this lecture might appropriately be given annually, in each of these schools in turn.

An endowment fund is being collected for this purpose, and we are sure that his colleagues and friends, including many who though not pathologists, were associated with him in connexion with his pioneer work on silicosis or in other ways would wish to be given the opportunity of contributing. It is suggested that individual contributions should not in most cases be more than two guineas and smaller sums will be welcomed.

Contributions should be sent to the Treasurer, Kettle Memorial Fund, British Post Graduate Medical School, Ducane Road, W12. Cheques should be drawn in favour of the 'Kettle Memorial Fund and crossed Barclay and Co.—We are etc.,

BALFOUR OF BURLEIGH
W GIRLING BALL
A E BOYCOTT
S LYLE CUMMINS
DAWSON OF PENN
H R DEAN
J HENRY DIBLE
J B DUGUID
HERBERT L EASON
FRANCIS R FRASER
G E GASK
M H GORDON
W E GYE
May 21

G HADFIELD
JAMES MCINTOSH
ROBERT MUIR
J A MURRAY
A J ORENSTEIN
A H PROCTOR
JOHN A RYLE
A W SHEEN
BERNARD SPILSBURY
SQUIRE SPRIGGE
M J STEWART
W C C TOPLEY
C M WILSON

Prevention of Constipation

SIR—Correspondents in the *Journal* have recently urged the importance of establishing a bureau of geographical medicine. Such statements as "Chinese of the upper classes do not suffer from high blood pressure" would come under its investigations. Dr E. M. Dimock in his article on the prevention of constipation (*Journal* May 1 p 906) states that constipation is practically unknown among savage tribes. Dr Dimock's article contains much sage medicine and also much sage psychology which is as he points out, of great importance in the treatment of constipation. I am not criticizing his article, but as

a rider to it may I point out certain lessons which can be deduced from the sentence quoted?

Is it correct that savage tribes do not suffer from constipation? Messrs Parkc Davis and Co first discovered cascara sagrada by hearing of a drug in use for constipation among the North American Indians. But it may be reasonably correct to say that in warmer climates savage tribes do not often come to medical officers for treatment for constipation. Is it possible that they find that much of what we call constipation can conveniently be left alone? The lay members of a civilized population label as constipation any habit of the bowels which does not involve at least one daily motion. Some healthy persons have two motions daily. In general they tend to be proud of this cycle. It appears to give them a sense of superiority, and few would think of taking medicine to reduce this frequency. But some individuals have their maximum of health with four or five motions a week and no aperients.

Such persons in war time would largely be classified as B or possibly C, but in civilian life they are efficient members of the State. As such individuals pass into adult life they begin to flog their alimentary tract with aperients to attain the intestinal activity which they believe will in itself give them perfect health. They are at their worst when they take an aperient which fails to act and at their next worst when they force their bowels into two or three loose motions daily. They are at their best with no aperients even if they pass only four or five motions a week. But the psychological aspect must be borne in mind and the inferiority complex associated with their so-called constipation must be allayed.

Bran meets both the necessary conditions. It dispenses with aperients and soothes the mental anxiety. Personally I prefer physical exercises for most cases, and there are also other varieties of treatment which can be applied to individual conditions but the principle that a reasonable degree of 'constipation' gives such persons the maximum comfort and health is the same.

I have found on several occasions that when these persons have attained a satisfactory routine and are rejoicing in the sensation of good health they are under the impression that the bowels are being opened daily whereas a careful record shows about five motions a week. They can usually be persuaded to leave well alone—I am, etc.

London W 1 May 20

H LETHBRIDGE TIDY

SIR—No one who has been in active general practice for as many years as I have can fail to have come to certain conclusions about constipation: its cause, prevention, and rational treatment. My own experience has led me to agree much more wholeheartedly with the old-fashioned doctors who regarded the prompt evacuation of the bowels as nine times out of ten one of the first therapeutic measures to be taken in treating illness of almost every kind than with the apostles of the newer school who pooch pooch constipation either as entirely normal and desirable or as of no particular importance.

Dr Dimock's article in your issue of May 1 (p 906) interested me and to a large extent my experience confirms his conclusions. But some of his remarks seem to me to betray a good deal either of prejudice or of unawareness. Dr Dimock says that as constipation is practically unknown among savage tribes it would appear that a method is required which will overcome the disadvantages of our civilized diets and sedentary occupations. We can all overcome the disadvantages of our civilized diets to some extent by including in them 2

much larger proportion of uncooked salad, fresh fruits, and 'processed' bran in our daily menu. When we have done that, and have established the practice of drinking three or four pints of water daily between our meals, we shall have done nearly all we can in the matter of diet. Dr Robert Hutchison, in his *Elements of Medical Treatment* wrote

"In spite of the general belief not very much can be done by diet in the treatment of constipation—at least in cases bad enough to come to a doctor at all. In the great majority of cases drugs cannot be dispensed with, and the patient's mind should be disabused of the idea that there is any particular harm in taking a regular aperient provided it is of the right kind."

What is the right kind of aperient? As a result of my own experience I have come to the conclusion that nearly every aperient in the *Pharmacopoeia* has its appropriate occasion, but that in the overwhelming majority of cases of mild constipation a laxative that is not absorbed, that stimulates peristalsis by increasing the internal tension of the alimentary canal by mere bulk and not by chemically irritating the sensitive nerve endings of the intestines is to be preferred. This is particularly important when we are dealing not with acute but with chronic constipation, however mild. That is where Dr Dimock seems to me sound, and he specially recommends for the prevention, but not for the cure, of constipation bran, because 'by virtue of its power to retain moisture it is a mechanical laxative'.

That brings me to the sentence in Dr Dimock's article that struck me as based on inadequate reflection or knowledge. Under the term purgative I include aperients, salines, and all laxatives that are not purely mechanical. Not one of these medicines is physiological in action. In what essential I would ask, does the aperient action of a saline such as a seditiz powder or a dose of fruit salts differ from that of those substances which Dr Dimock rightly regards as desirable, because they act merely 'by virtue of their power to retain moisture'? Fibre agar, psyllium seeds, bassorin, and certain other vegetable products absorb and retain fluid as a colloidal property, salines such as those mentioned achieve precisely the same result through the physical process or principle known as osmosis. These salines act as painless aperients merely by their power of retaining within the intestine a large part of the fluid taken with or after them. They do not irritate the lining membrane of the intestine, and they pass from the body without any direct chemical interaction at all. They have the further merit of never causing obstruction, as bran occasionally—though rarely—does. This is acknowledged by Dr Dimock, who also admits that fibre is useless for the relief of established constipation.

When some artificial encouragement to bowel action seems called for it seems to me that we should in the first place endeavour to bring about the desired result by prescribing an increased amount of active outdoor exercise, a greatly increased consumption of water, and a larger daily intake of green vegetables, salads and fruit. These measures may be supplemented—usually for a time they must be supplemented—by the regular taking with abundance of fluid of one or other of those substances which have the capacity of retaining within the body a sufficiency of that fluid to form a colonic bolus bulky, soft loose and non-irritant. Among such substances the so-called fruit salines—that is, the tartrates and citrates—stand out as among the most agreeable to the palate and the least disturbing to gastric digestion—I am, etc.,

London E 1, May 19

HARRY ROBERTS

SIR,—With reference to the suggestion that bran may be given in cases of colitis (*Journal* May 8, p 996) I should like, from personal experience, to utter a warning against the indiscriminate administration of anything that is at all likely to cause further irritation to the bowel in this condition, particularly in the more acute types. Whatever the primary cause of "non specific colitis" the bowel is undoubtedly very much inflamed, and surely the first rule of treatment in any inflammatory condition is rest as far as possible. Most certainly nothing further should be given, either by the mouth or bowel, that is likely further to disturb the bowel. The futility and harm done by bowel wash outs is being recognized, and this form of treatment is gradually being discarded, a tendency probably accelerated by the refusal of patients to accept the associated pain and distress. It is equally possible and very much easier to aggravate colitis by irritants given orally. When what almost amounts to a policy of despair has been reached in the treatment of this difficult condition, and little headway seems to be made on the "no residue" diet, the opposite extreme—a "roughage" diet, has been advocated, with some idea of producing a more formed motion. Absorbents like isogel have also been suggested for the same purpose. The effects have to be experienced to be realized.

In this connexion I should like to add a word of caution on the administration of iron for anaemia in colitis. It does not appear to be as widely recognized as it should how acutely irritative to the mucous membrane of the lower bowel iron can be. When the mass dosage of iron for the treatment of anaemia was first introduced I was struck by the frequency of patients' complaints of resultant looseness of the bowels. The probability of this occurring in cases of colitis has been recognized by some enthusiastic iron prescribers, and they agree that there may be a preliminary aggravation of the condition before any improvement manifests itself. My experience suggests that if the administration of the iron is persisted in, with evidence of susceptibility, the primary aggravation may so far develop that the secondary beneficial stage may never be reached—I am, etc.,

London, May 17

"M B"

Reform of Medical Curriculum

SIR—I was greatly interested in the debate in Edinburgh on the reform of the medical curriculum as reported in the *Journal* of May 15 (p 1040), and I should like to make some comments which I hope will be helpful. The resolutions of the General Medical Council, to come into force in 1938, were, I gather, generally received with favour, but Sir Francis Fremantle criticized the tardy acceptance by the GMC of reforms which had been suggested as long ago as 1922. Now it ought to be clear to those with a practical interest in medical education that it is not incumbent on medical schools to wait for a lead from the GMC before undertaking reforms in the curriculum. The function of the GMC in this respect is rather to consolidate into resolutions those reforms which medical schools have already instituted, in the same way that Parliament passes laws when public opinion has been sufficiently educated to demand them. The GMC resolutions ought to be necessary merely to coerce the laggards and not to lead a reform, were it otherwise medical schools would be in danger of losing their individuality. Thus Sir Francis Fremantle's indictment of the GMC should really be an indictment of all medical schools who failed to appreciate the importance of the 1922 suggestions which have inspired the recent resolutions of the

G M C It ought to be more widely known, I think, that the reforms outlined in 1922 and given publicity in the medical press at that time were put forward by my predecessor, Professor J B Leathes, F.R.S., and almost immediately carried into effect in the Sheffield Medical School, with the loyal co-operation of all members of the staff. Further improvements were introduced in 1930, when the curriculum was lengthened by six months. The result of this far-seeing enlightened policy is that the curriculum of the Sheffield Medical School needs no adjustment to satisfy the new requirements of the G M C. It is true we shall need additional accommodation at our teaching hospitals so that students may spend a whole month in residence, but we have had for many years facilities for students living in hospital for shorter periods.

It is gratifying to gather from your report and from the *Edinburgh University Magazine* of April 27 that Edinburgh is stimulating herself to become a pioneer in reform of the medical curriculum but I hope you will appreciate how the thought passed through my mind—quite irrelevantly, I suppose—of the pioneer Vikings smiling indulgently in Valhalla at the 'pioneer' claims of discoverers of America in subsequent centuries—I am, etc,

G A CLARK

Dean of the Faculty of Medicine,
Sheffield University

May 15

The Maternal Mortality Report

SIR—Dr John J Buchan's comments (*Journal* May 22, p 1090) would be more useful if they were more accurate. In the first place he has confused the recommendation of the Ministry of Health Report, that

'the local supervising authority in consultation with the local medical profession should in future be empowered to take steps to ensure that the best local obstetrical skill is made available in all cases in which midwives are required under the Rules of the Central Midwives Board to call in a doctor' with the proposal in which it is stated that the Ministry of Health and the Central Midwives Board have under consideration "that a midwife should be allowed to call to her assistance such practitioners only as are selected by the local authority for this purpose."

In the second place Dr Buchan shows woeful ignorance of national health insurance. His analogy disappears when it is realized that the "panel" is open to every doctor who wishes to have his name placed upon it. Nor is it correct that doctors on the panel are paid for their services to insured persons when sick. Has Dr Buchan, in the seclusion of his town hall, never heard of the capitation fee? We are all agreed that the best local obstetrical skill should be made available. Some would seek to do this by restricting all maternity work to obstetrical specialists; others of whom Dr Buchan is apparently one prefer semi-specialists. Well Sir do the results to date of these two methods suggest that either of them is the best? Have ante-natal clinics staffed by whole-time medical officers been so brilliantly successful? If they have then what is all the fuss about? Is the hospital the domain *par excellence* of the specialists the safest place for a normal confinement?

On the other hand the policy of the British Medical Association is to make available to every pregnant woman the services of her own doctor—on the sole condition that he is willing to offer them—backed up when necessary by the help of a consultant. This is the method which works in other fields of medical practice which have not excited the same criticism as maternity work. It is not customary for every cold in the nose to be treated by a rhinologist.

Moreover, the Association policy does not overlook the cardinal fact that a woman, even though her uterus be pregnant is a human being only to be thoroughly understood by long acquaintance, and not merely by measurements of her pelvic diameters and blood pressure. Are women who have been literally terrified by their treatment at ante-natal centres, as I have seen them, in the best condition to undergo labour? Some of us see patients others read reports about them!

A further point in favour of the Association's policy is that it looks to the future. In the past circumstances have militated against the midwife in private practice sending for a doctor unless a serious emergency has arisen. A midwife who often summoned a doctor for apparently minor conditions would have incurred, most unjustly, a reputation for incompetence. In future under the guidance of the local authority, the midwife will be encouraged to send for the doctor at the first indication of trouble. He will therefore have to deal with a larger number of less serious conditions, and in his turn will be encouraged to call in a consultant whenever necessary. I am aware of the criticisms levelled at general practitioner midwifery, but these have been dealt with so ably by Dr H A Nathan (*Supplement* May 15, p 297) that I will not repeat his words. I notice, however, that there has been no hurry amongst medical officers of health to reply to Dr Nathan's letter. Is it because they have no reply available?

Finally, Sir, the Association's proposals envisage the participation in maternity work of a much larger number of doctors than the other schemes. We believe that this will give a better service, but admittedly the greater the numbers of doctors the greater the difficulties of control. Do medical officers of health want the best obstetric service or the one which they can most easily control?—I am, etc,

London, S W 18, May 24

F GRAY

Maternity Services

SIR—From a study of the maternal mortality report it would seem that our three principal defects are (a) insufficient attention is given to ante-natal care, (b) forceps delivery is too frequent, and (c) midwifery is carried out in unsuitable homes.

(a) Attention is called to a large number of cases in which ante-natal care was deficient, and there are various causes for this. In many areas a maternity officer is appointed who sees midwives cases before they go into labour, but this officer takes no responsibility for the actual confinement and when anything goes wrong the patient's own doctor is called in. He has had no opportunity of seeing the patient beforehand. He has had no chance of saying whether he will accept responsibility for the confinement in the existing surroundings and circumstances, and yet though working at the gravest disadvantage he must obtain satisfactory results. If ante-natal work is to be successful one practitioner should be responsible for each patient before, during and after her confinement. The situation and construction of the ante-natal clinics and the days of attendance require consideration because some women very much resent the long queues and the lack of privacy which might be avoided. The report notes that the patient's personal circumstances do not always receive sufficient attention. This is true and is worthy of further consideration.

(b) Forceps delivery was unsuccessful in 19.3 per cent of those patients who died after instrumental intervention. The time has surely come when failed forceps cases should be a thing of the past. The most frequent cause of failed forceps is premature attempts at delivery due usually to the insistence of the patient that she shall be relieved of her pain. Therefore if we are going to have satisfactory maternity services more attention must be given to the organiza-

tion required to enable all women to be relieved of their pain by means of gas and air analgesia

(c) We read that the reduction in the group of deaths following an abnormal labour will be effected only when general practitioners realize that they must not except in cases of emergency, attempt in the patient's home difficult obstetric operations. "This is a very excellent recommendation, but how is it to be carried out? As long as women are allowed to have babies in unsuitable homes we shall have obstetric operations undertaken in unsuitable surroundings. We should realize that the small house—occupied so often by two families—is not a suitable place in which to conduct a confinement

In order to enable us to work out the details of a national maternity service it would be of the greatest possible value if in every county and in every great city a conference could be held of all those interested in midwifery so that a district or county scheme could be approved. From districts or county schemes a national service could then be built up.

Since the introduction of the National Health Insurance Act the demands made on the time of the general practitioner have been so great that as a general rule he is not able to give adequate time to midwifery, and, as this report suggests, only those practitioners who are actually interested in this branch of work should be required to undertake it. There is one more point which needs the attention of the Ministry of Health: the report says that where women are engaged in gainful occupations the maternal mortality tends to rise, and it is evident that women should not be required to work right up to the time of their confinement.

A Ministry of Health circular calls the attention of practitioners to the fact that under the National Health Insurance Regulations pregnancy does not constitute incapacity for work. It is surely high time that this ruling was altered, and that women should of right receive sickness benefit for two months before their confinement is due—I am, etc.,

New Barnet May 20

JOHN ELAM

The Average Size of Families

SIR—In connexion with your leading article of May 22 on Mr Rowntree's book, *The Human Needs of Labour* and your incidental references to the average size of families, the following contribution may perhaps be of some small interest.

In the year 1932 for my own personal interest I worked out the average size of the families, both parents being still alive, from which a consecutive series of 500 boy and girl provincial candidates for service in the Post Office had come. They were assembled from all parts of the country and Northern Ireland and, including only living children, the average worked out at 3.2. Of the 500 mothers concerned 251 were 45 years of age or over, 111 of them having had no children for ten or more years, and 17 of them no children for fifteen or more years—I am, etc.,

H H BASHFORD M.D., M.R.C.P.

General Post Office E.C.1 May 21

"Constructive Conscious Control"

SIR—In a review of Mr F. Matthias Alexander's book *Constructive Conscious Control of the Individual* which appeared in your columns on May 24, 1924, your reviewer wrote: "He [Alexander] would certainly appear to have something of value to communicate to the medical profession."

We the signatories to this letter are at one with your reviewer in this belief. As the medical men concerned we

have observed the beneficial changes in use and functioning which have been brought about by the employment of Alexander's technique in the patients we have sent to him for help—even in cases of so-called "chronic disease"—whilst those of us who have been his pupils have personally experienced equally beneficial results. We are convinced that Alexander is justified in contending that "an unsatisfactory manner of use, by interfering with general functioning, constitutes a predisposing cause of disorder and disease," and that diagnosis of a patient's troubles must remain incomplete unless the medical man when making the diagnosis takes into consideration the influence of use upon functioning.

Unfortunately those responsible for the selection of subjects to be studied by medical students have not yet investigated the new field of knowledge and experience which has been opened up through Alexander's work, otherwise we believe that ere now the training necessary for acquiring this knowledge would have been included in the medical curriculum. To this end we beg to urge that as soon as possible steps should be taken for an investigation of Alexander's work and technique, he on his side having given us an assurance that he is ready and willing to give us the benefit of his experience for the carrying out of any plan which those concerned may suggest, provided that in his opinion the plan is one that would make it possible for him to help us to the desired end.—We are, etc.,

BRUCE BRUCE PORTER.
J. R. CALDWELL.
J. H. DICK.
MUNGO DOUGLAS.
H. DUFFETT.
C. A. ENSOR.
W. J. GRAHAM.
A. RUGG GUNN.
PERCY JAKINS.
J. KERR.

D. LIGAT.
J. E. R. McDONAGH.
PETER MACDONALD.
R. G. MCGOWAN.
ADAM MOSS.
A. MURDOCH.
F. J. THORNE.
HAROLD WEBB.
A. H. WINCHESTER.

What is Osteopathy?

SIR—Careful perusal of the minutes of evidence given before the Select Committee of the House of Lords appointed to consider the Registration of Osteopaths Bill demonstrates, I submit, that one of the principal reasons for the precipitate withdrawal of the Bill by those responsible for promoting it was the devastating exposure of the British School of Osteopathy. The committee found that

"the only existing establishment in this country for the education and examination of osteopaths was exposed, in the course of evidence before us, as being of negligible importance inefficient for its purpose and above all in thoroughly dishonest hands." But the promoters of the Bill had accepted that school as completely satisfactory, and this fact renders suspect the testimony to the character and value of the training given by the "six colleges approved by the American Osteopathic Association," which are declared to require a course for graduation as Doctor of Osteopathy of four years and nine months each.

It is common form for irregular practitioners of every complexion to parade what looks on paper a formidable curriculum of study. I have drawn attention in your pages to similar pretensions made by the herbalists, naturopaths and other organizations of the kind. When examined the alleged duration of the training is almost invariably found to be fictitious. But more important than duration is the question of quality of training and here the osteopathic colleges in the United States have been again and again shown up as offering wholly inadequate education in every branch of the sciences which

go to the study of medicine. The American Medical Association which largely takes the place of our General Medical Council in the absence of any body of the same nature in the United States, rendered the most valuable service some years ago in grading the schools in America which profess to give a medical education. These were divided into categories A, B, and C. At the last examination of this association of which I have record it was reported that "none of the osteopathic schools was able to meet the standards of even Class C medical schools" and that standard is below anything which we know of in this country. I am personally interested in this aspect of the question because I believe that the authoritative speech by Mr. Neville Chamberlain (the then Minister of Health) in the debate in the House of Commons on February 9, 1926, on my motion for the regulation of unqualified practice laid down two principles, defiance of which wrecked the recent Bill. These were (1) that it was impossible to accept diplomas from another country, into the value of which we really could not pretend to examine and over the qualifications for which we have no control", (2) "that if the osteopaths want to set up a register in this country the first thing for them to do is to start colleges of their own," colleges which would be inspected by competent statutory bodies like the GMC, and the "curriculum of which would gradually have to conform to something very nearly approaching the normal [medical] curriculum of this country."

A well-documented report produced under the auspices of the Committee on the Costs of Medical Care in the United States and published in 1932 by Louis S. Reed, Ph.D., gives a rather different picture of the present position of osteopathy in the United States from that painted by Dr. Kelman Macdonald. Reed's figures show osteopathy as a declining cult—for example, the chiropractors (16,000) were more than twice as numerous as the osteopaths (7,650). Chiropractic, "discovered" by Palmer, is an obvious imitation of osteopathy. To quote Reed: "In osteopathy all disease is due to obstructed circulation of the blood, in chiropractic it is due to obstructed passage of nerve force. But while the osteopaths have largely forsaken their formula, the chiropractors, wise in their generation, have stuck to their shibboleth in all its appealing simplicity, and have consequently beaten their competitors out of the field. It is this very inconvenient and successful rivalry which may explain the present desire of American osteopaths to find new fields for exploitation. Indeed the recent Bill has been described as 'an artless effort to establish a monopoly in this country for the American osteopathic colleges and hitherto there has been no marked enthusiasm on the part of osteopaths to fulfil Mr. Chamberlain's requirement of a properly constituted British school enforcing a curriculum comparable to that demanded of the registered medical practitioner. They have had ten years in which to put their house in order and they have not begun to do so."

I may say that I have quite recently been in communication with two members of Parliament who have been protagonists in promoting registration for osteopaths in this country, and who have declared to me their resolve to proceed no further with this effort until such a school is operating. Can Dr. Kelman Macdonald give further information regarding the steps which he declares that "qualified osteopaths in this country" (practically all of whom are diplomates of American schools) have taken in this respect?—I am, etc.,

E. GRAHAM LITTLE.

London W 1 May 17

SIR—In Dr. Kelman Macdonald's letter in the *Journal* of May 15 (p. 1046) he quotes a statement of mine that "to maintain a tissue in a healthy state regular normal fulfilment of the functions of the arterial, venous and lymphatic circulations is essential, and this is even more so when a joint has been injured" and then he asks if such a statement is so far removed from the definition which he gives of osteopathy. May I point out that this comparison is valueless unless at the same time I agree that lesions as described in osteopathic pathology exist and are capable of interfering with the blood supply of the tissues. Dr. Kelman Macdonald is fully aware that he and I are not in agreement on this material point.

It is regrettable that much of the controversy on osteopathy is complicated and confused both by the general public and by certain enthusiastic medical men who advocate it as the result of loose comparisons of this type which wittingly or unwittingly imply a meaning obviously never intended—I am, etc.,

London, W 1 May 24

MORTON SMART

Angina Innocens

SIR—The last paragraph in Dr. Albert Fitzgerald Peel's letter (*Journal* May 22, p. 1088) in which he objects to the term 'angina innocens', reads as follows: "It is rarely, if ever, necessary to give a name to the syndrome in talking to a patient—all that is required is to explain the mechanism of the pain that it is not due to heart disease, and that recovery will occur. I heartily agree with this and submit that it is a complete and logical reply to his main objection to the use of the term 'angina innocens'. A patient is not told 'you have aortic regurgitation' or 'nodal rhythm'. A medical term is for the use of medical men. Medical men do not shrink from the scientific use of words like pernicious malignant, terminal or progressive. But a doctor needs an accurate descriptive label to express his mental concept."

The term 'angina' itself largely derives its sinister significance from the loose use of words. We now realize that coronary thrombosis was the cause of the painfully fatal cases described in the old textbooks. In view of this connotation there is some sentimental and even scientific justification for the abolition of the use of the vague label 'angina' altogether. But are we to talk of 'coronary' cardalgia of effort, spasmodic coronary cardalgia innocens? The word 'angina' has become too deeply rooted for eradication, and the best that we can do is to add accurate qualifying phrases or words. It is essential that the different types of cardiac pain be accurately labelled and accurately pictured mentally in order that their individual clinical characteristics be recognized for the treatment and prognosis differ with each type.

I frequently see patients with 'angina innocens' who have been vaguely labelled 'angina' and in whom the clinical picture of the innocent syndrome is perfectly distinct and characteristic. The reason for these common mistakes in diagnosis is largely that since the label 'pseudo angina' has quite rightly fallen into disuse no other useful descriptive term has arisen: the result is that the clinical characteristics of the innocent variety of cardiac pain are not clearly remembered.

Without a definite label a condition ceases in the minds of most individuals to possess a definite clinical entity. Accurate definition, mental or verbal, is a necessity for accurate thought or expression. 'Angina' is the traditional term for a pain which is felt in the precordium, radiates to the arm and is related in one way or another

to exertion. The qualification of this label by the terms "spasmodic," "of effort," and "innocens" appears to me to yield the simplest solution to what is admittedly a difficult problem—I am, etc.,

London W 1, May 21

GEOFFREY BOURNE

Intra-epidermic Vaccination

SIR—I am afraid that as a result of the efforts which nowadays we are so much encouraged to make in an endeavour to minimize the ill effects of vaccination some of us may be in danger of losing sight of the object for which we perform this operation. Considered in relation to the protection of a subject against small pox the act of vaccination, however performed, in itself signifies next to nothing—it is the immediately subsequent course of events which is all important.

Dr Peirce, in his interesting contribution to this subject (*Journal* May 22, p 1066) well illustrates my point when he states: "In the event of a case of small pox occurring in a large passenger liner it is imperative that the method [of vaccination] adopted should be simple, speedy, efficient, economical, and above all leave as few ill effects as possible." (My italics.) Now I maintain that in such circumstances the efficiency of the vaccination is the thing which really matters, and that the ill effect most to be dreaded is an attack of small pox in one of the contacts. In the presence of small pox any procedure which may reduce the chances of an undoubted take in a susceptible subject or of an easily recognizable specific reaction in a partially immune is surely unjustifiable, and for this reason, for example, it is inadvisable, when the establishment of an immunity is an urgent necessity, that the number of insertions of vaccine lymph should be less than two. It may be that in the hands of those who are skilled in the art of performing intra-epidermic vaccination and in interpreting the immediately subsequent happenings the method described by Dr Peirce gives results which are satisfactory as regards the immunization of contacts (we have not been given any data on this all important point), and it may be that my small experience of the method—in circumstances almost identical with those postulated by Dr Peirce—was an exceptionally unfortunate one, but I do urge that, at least in the presence of small pox, our aim should be the production of a successful vaccination in the shortest possible time, and by a method which admits of the least possible chance of failure.

In parenthesis, it may be added that Dr Peirce's reference to the freedom from post-vaccinal encephalitis enjoyed by many hundreds on whom intra-epidermic vaccination has been performed in the Port of Liverpool is of small value—for, so far as I am aware, no substantial evidence has ever been brought forward to support the suggestion that the method or type of vaccination, or even the number of insertions, used has any bearing on the incidence of acute perivascular myelinolysis in the central nervous system—I am, etc.,

Dartford May 23

J PICKFORD MARSDEN

Cancer of the Breast

SIR—I have read with interest Dr John E. Ryan's letter on cancer of the breast in the *Journal* of May 15 (p 1045). I agree with him that there is need for more concentration on the problem of prevention of metastases.

It is of course very true that metastases do all the killing and it is when they occur that surgery and irradiation (by x rays and gamma rays) alone are alike

powerless to effect a cure, though irradiation is very useful as a palliative and a means of prolonging life. It was largely for these reasons that the selenide treatment of cancer, as set forth by Todd, appealed to me. It appeared to offer some prospect of dealing effectively with the disease when it had spread beyond the primary focus—in certain cases at any rate. The treatment is definitely an attempt to get at the root of the trouble and to render assistance to the body in a natural process of cure. As such it should make an appeal to all of us, and it may, I think, supply a partial answer to Dr Ryan's statement that "there is no known means of prevention" of metastases. No doubt it is very imperfect, and much revision may be required, but at any rate it is a step in the right direction, and has unquestionably produced some good results.

The dread of cancer in the public mind—and in the professional mind too—is a very serious thing when it comes to the question of treatment of an individual who is suffering from the disease. The main cause of this dread has been our inability to deal with the spread of cancer through the body. It would be an enormous gain if we were able to restore hope by assuring sufferers and their friends that cancer even when well advanced, is not necessarily an incurable disease, and there would then be little need to practise that deception of the patient about the nature of his malady which is so trying and, in my opinion, often unconvincing and ill advised—I am, etc.,

Brighton, May 17

W BARRINGTON PROWSE

Contralateral Artificial Pneumothorax

SIR—In an annotation in your issue of May 15 on contralateral artificial pneumothorax there appears the following extraordinary statement "since it is unlikely that any breathing occurs in the diseased area even before the pneumothorax is induced." The matter under discussion being pulmonary tuberculosis, we are at a loss to reconcile this with the modern teaching on the subject. The only conditions in which we can imagine air failing to enter the diseased area are massive collapse and pneumonia. Both of these are complications of the disease but of sufficient rarity to render invalid any generalizations therefrom. Adventitious sounds being evidence of air entry, we feel that if the statement quoted is accepted the presence of moist sounds must be taken as conclusive proof of the absence of underlying disease. Hence we are to believe that one of the most important signs clinically of tuberculosis is valueless. Experience goes to prove that this is not the case.

Later there appears the statement "It is essential that the mediastinum be mobile and that the pneumothorax be kept at a negative pressure, so that the respiration in the 'collapsed' lung is little reduced." The intrapleural pressures are so dependent on adhesions that in some cases a positive pressure might be achieved with a minimum of air, and the respiration be still little reduced. On the other hand, if the pleura is entirely free almost complete deflation of a lung may be achieved without ever raising the pressure to atmospheric level. Needless to say the respiration in a lung deflated to such an extent would be very greatly reduced.

After inferring from experimental work that the benefits of this type of pneumothorax accrue from the increased vascularity of the other more diseased lung your commentator deduces that the ideal indication for a contralateral pneumothorax appears to be a large or recurrent haemoptysis from an adherent lung. The unexpected is

constantly happening in medicine but it seems probable that the increased vascularity created in the diseased lung will result in increased haemoptysis.

The method of treatment under discussion has not received much encouragement in this country although there would appear to be some considerable foreign literature on the subject. In reading this article we are forced to the conclusion that though the treatment may be good the logic is bad—We are, etc.

G. S. ERWIN
C. A. LILLCRAP

Brompton Hospital, May 21

Hermaphroditism

SIR,—Mr Chapple, in his article on hermaphroditism did not state the gonadotropic hormones found in the urine and blood before and after operation. Would not these findings indicate the quantity and type of gonad tissue left in the body? Are not the causes of homosexuality both psychological and physiological? Thus the male homosexual may be a man who, deeply admiring his father, loves masculinity, or who, loving his mother rejects all women as falling short of the mother ideal and so turns to men, or who, loving his mother, feels incestuous guilt in marrying the maternal woman and so turns to men, or who (as Freud might tell us) has a fear that woman will suck the life from him and from his bank balance in retribution for his sucking of the breast. Surely these abnormal people would make unhappy homes, and it would not be wise for us to encourage them to marry. There cannot be much danger of these influencing normal people to follow their practices except in those circles where homosexuality is 'fashionable'. So we need hardly fear that their mode of living will lower the birth rate. Regarding the physiological causes, did not Steinach and Voronoff cure male homosexuals (altering their emotional attitude) by grafting normal testicular tissue?—I am etc.,

H. M. DENHOLM YOUNG, M.A., M.B., Ch.B.
Edinburgh May 14

Intraperitoneal Haemorrhage from a Graafian Follicle

SIR,—I am indebted to Mr J. C. Leedham Green (*Journal* May 15, p. 1045) for pointing out that both his cases were proved histologically to be cases of haemorrhage from lutein cysts. My artless assertion "as he is pleased to call it that my case was one of haemorrhage from a Graafian follicle" was based on the fact that the haemorrhage occurred exactly mid-menstrually. Would Mr Leedham Green venture to suggest in the absence of any irregularity of menstruation such as would be caused by the persistence of a luteal body that the haemorrhage was in fact from a corpus luteum? Unfortunately material is sometimes mislaid between theatre and pathologist but I think the time of occurrence is definite enough to justify my artless assertion.

The cases reported by M. J. Bennet Jones (*Journal* March 13, p. 585) were also haemorrhages from Graafian follicles. I reported my case because it added another to a growing list and seemed to suggest that haemorrhage can apparently occur (1) from lutein cysts either during or immediately after a period as in Leedham Green's first case or immediately before a period as in Leedham Green's second case and (2) from a Graafian follicle when it must be mid-menstrually since the time of ovulation seems to be generally agreed upon in at least 80 per

cent of cases. The other correspondents unfortunately do not give the time of the cycle at which haemorrhage occurred, which is the real point now at issue.

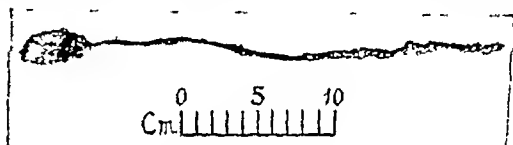
On re-reading the correspondence I was impressed by the following points: (a) there was usually a history of dysmenorrhoea; (b) pain radiated to the epigastrium; (c) luteal haemorrhages were more severe when they occurred; (d) there was dysuria, even in the absence of gross haemorrhage, which I tentatively (this time!) suggest may be accounted for by the innervation of ovary and bladder from the hypogastric plexus. Does not classification assist more than destructive criticism?—I am etc.,

Highbridge, Somerset, May 17

CRESSWELL DAVIS

Accidental Avulsion of Flexor Tendon

SIR,—On February 5 the left hand of an able scaman aged 59 years, was dragged into a pulley connected by



a steel rope to an electrically driven winch. The terminal phalanx of the middle finger was torn off and the attached superficial flexor tendon was avulsed from its muscular attachment and hung as a strand eleven inches long from the phalanx. I enclose a photograph of the specimen.

The patient was seen again on April 22. There was slight power of flexion in the finger, so that the attachment of the deep flexor tendon appears to be intact.—I am etc.,

London E.C.3 May 8

PHILIP SIMON

Trachoma from Spain?

SIR,—Lord Lloyd in the House of Lords last night performed a public service by asking a question as to the incidence of trachoma among the refugee children from Spain who have arrived in this country. It is known that in many of the provinces of Spain the disease is practically universal. Lord Lloyd was informed that a voluntary body called the National Joint Committee on Spanish Relief had sent some doctors out to examine the children before they left Bilbao. It is not reported that any of these gentlemen had any experience of trachoma, or even any special knowledge of ophthalmology.

The examination of the eyes of 4,000 children by the port medical officers on arrival at Southampton was an absolute impossibility. It is therefore still unknown what proportion of the children if any is trachomatous. The difficulty in making a diagnosis in the early stage of the disease, its contagious nature, the long period required for treatment, and its devastating effects on visual acuity make it important to decide the matter.

However if the children are to be kept segregated in camps or in Salvation Army homes no danger will accrue. If on the other hand a few of them are trachomatous and are placed temporarily in homes in contact with others whether children or adults there is every expectation of a recrudescence of the disease in this country. In this matter the responsibility of the Ministry of Health is very great.—I am etc.,

A. F. MACCALLAN
President of the International Organization
against Trachoma

London W.1 May 26

Obituary

FREDERICK EDGE, MD, FRCS

Late Surgeon, Wolverhampton Women's Hospital, and Birmingham and Midland Hospital for Women

The death occurred in a Wolverhampton nursing home on May 17 of Dr Frederick Edge at the age of 73. He had been in failing health for the past few weeks.

Born at Goos, in Russia, on August 3, 1863, son of Frederick Edge of Halliwell, he came to England when a boy of 10. His early education was at Owens College, Manchester. From there he passed on to St Thomas's Hospital, London, and also studied in the medical schools of Munich, Vienna, Dresden, and Birmingham. He obtained the degree of BSc Lond in 1884, BS in 1886, and the MD in 1890. He obtained the FRCS(Eng) in 1889, and was also a member of the Royal College of Physicians of London. In 1891 he came to Wolverhampton, and was shortly afterwards appointed an honorary surgeon at the Women's Hospital. He took an active part in the development of this hospital, and during his period of service there it expanded from being located in a private house to its present large premises overlooking the West Park. In 1897 he was appointed an honorary surgeon to the Birmingham and Midland Hospital for Women, and retired as its senior surgeon in 1933 after thirty-six years' service. He was also an honorary surgeon to the Birmingham Maternity Hospital and for many years an examiner to the Central Midwives Board. Among other offices which he held were those of president of the Staffordshire Branch of the British Medical Association, president of the Midland Obstetrical and Gynaecological Society, and president of the Midland Medical Society. He made numerous contributions to the medical press on gynaecological and obstetrical subjects, and was also a co-translator of *Dührssen's Manual of Gynaecological Practice and Midwifery*. When the British Medical Association held its Annual Meeting at Birmingham in 1911 he was vice-president of the Section of Obstetrics and Gynaecology. In addition to his professional activities Dr Edge took a considerable interest in the public life of Wolverhampton and served on the Town Council from 1897 to 1904.

With the passing of Dr Edge the Midlands has lost a surgeon whose skill and clinical acumen will be long remembered by those who had the good fortune to be associated with him in his work. His energy was untiring and enabled him to carry on a busy consulting practice in Birmingham in addition to one in Wolverhampton. His kindly nature endeared him to a very great number of grateful patients and his equable temper remained unruffled through the busiest days. He possessed a very subtle sense of humour which made him an attractive companion and gave a peculiar charm to his character. A man of wide literary sympathies, he was well informed on a great number of subjects both professional and otherwise. He had a special gift for languages due no doubt to his early upbringing, which led to his enjoyment of travel in foreign countries. He is survived by a widow, two sons, and a daughter, to whom we would convey our deepest sympathy.

H N L

J H S writes: In the week that Frederick Edge died there appeared in the *Journal* an article on *Perspective and Poise in Practice*. These words epitomize the whole

personality of Dr Edge, for he possessed these qualities in relation not only to practice but to the art of living itself. Endowed with an unusual facility for friendship, which found no difficulty in bridging a disparity of years amounting often to half a lifetime, the love and veneration in which he was held is no matter for surprise. His passing touches many of us deeply. To these qualities was added a certain flavour of individuality—both in point of view and its expression—which derived perhaps from the mixture of Slav and Saxon temperament in his veins, and added point to his personality, marking him off from the mean of the normal man. His professional life was spent in Birmingham and Wolverhampton. To the latter town (from which these notes are written) his services were immense. To mention but one point from the many that spring at once to mind, the fusion of two hospitals is rarely accomplished without friction between the numerous personalities involved, but the amalgamation between the Royal Hospital and the Women's Hospital at Wolverhampton was saved from this very largely through the presence of Dr Edge in our midst. He was made the first chairman of the Medical Committee of the new hospital, and so rare a power did he show of smoothing difficulties, and of keeping us all not only happy and agreeable, but—so rare in such committees—to the point as well, that what had invariably been a yearly tenure was in his case by unanimous desire made into a triennium. Whether in practice, at the bridge table, at the deciding putt on the eighteenth green, or in the presence of some administrative or other difficulty, Frederick Edge was a connoisseur of life with a zest—and a sagacity—all his own. We shall not easily see his like again.

A H FIRTH, M.A., MD

Late Medical Superintendent Worcester County Mental Hospital

Dr Arthur Marcus Firth died on May 17 following, an illness lasting on and off for four years, but which culminated with startling suddenness during a period of convalescence. He was born in Edinburgh 62 years ago, of an old Orkney family, and was educated in Daniel Stewart's College, Edinburgh. He then entered Edinburgh University, where he graduated M.A., and took the M.B., Ch.B. in 1901. He proceeded M.D. in 1913, his thesis being 'The Pupil and its Reflexes in Insanity'. Following qualification he held posts as house-surgeon and house-physician in the Edinburgh Royal Infirmary and later joined the staff of the South Yorkshire Mental Hospital, Wadsley, near Sheffield, in 1904, and worked there as assistant medical officer until 1914. He was then appointed deputy medical superintendent of the Worcestershire Mental Hospital, Barnsley Hall, Bromsgrove, and held that post until his promotion to medical superintendent in 1933. From January 1918, until May, 1919, Dr Firth held a commission as captain in the R.A.M.C., and gave valuable service at the Lord Derby War Hospital at Warrington. In April, 1937, he tendered his resignation to the Visiting Committee owing to continued ill health and in accepting this with deep regret the committee passed a resolution, 'That the cause of Dr Firth's resignation had been a source of extreme regret and sorrow to them and that they felt that the loss of Dr Firth's efficient and valuable services first as deputy medical superintendent and later as medical superintendent for nearly twenty-three years was a severe blow to the hospital. He was buried in the Comeby Bank Cemetery, Edinburgh, on May 21, and simultaneously a memorial service was held in the hospital church, attended by many friends. He was a member of the British Medical Association for thirty-three years, of

the Royal Medico Psychological Association, and of the Midland Medical Institute, Birmingham

"A S" writes Dr Firth was extremely conscientious in all he attempted, never stinting himself in his endeavours, quiet and reserved in disposition, generous and sympathetic, always making the interests of the staff and patients his own. He was intensely loyal, painstaking, far-seeing and enthusiastic, a most competent and successful administrator, a great scholar, a prolific reader of medical books particularly those dealing with psychiatry. He was always a keen believer in the out-patient work of a mental hospital, and he helped to establish and later personally supervised the out-patient psychological clinics held at the Corbett Hospital, Stourbridge, and at the General Hospital, Birmingham. Outside his work he had few interests, he was fond of music and photography, and loved to spend his odd hours, which were all too few, wandering about the lesser-known roads of Worcestershire and district exploring and later passing on his "finds" to his friends. His death has left a gap in the school of British psychiatrists and in the hearts of those who knew him.

Medical Notes in Parliament

In the House of Lords on May 25 the Coal Mines (Employment of Boys) Bill and the Children and Young Persons (Scotland) Bill were read the third time, and passed. On the same day the Lords agreed to the Commons amendments in the Diseases of Fish Bill, and read the Widows, Orphans, and Old Age Contributory Pensions (Voluntary Contributors) Bill a second time.

The House of Commons has this week discussed the Civil List and the Board of Trade Estimates. The Government arranged to give time on May 28 for the concluding stages in the Commons of the Marriage Bill. It was expected that about the same date Mr Neville Chamberlain would succeed Mr Baldwin as Prime Minister, and that the personnel of the reconstituted Government would be announced.

The text of the Finance Bill was issued on May 24. Clause 16 provides that professions are not liable to the National Defence Contribution tax.

A Standing Committee of the House of Commons continued its consideration of the Factories Bill on May 25. Major Proctor moved an amendment to bring film actors and actresses within the scope of the Bill, but Mr Geoffrey Lloyd opposed this. He promised however to report the matter to the Home Secretary, who would consider whether there should be an inquiry into the question of protection for film actors or actresses. The Committee completed consideration of all but the new clauses of the Bill. Discussion of these was to begin on May 27.

Committee on Abortion

On May 24 Mrs TATE asked the Minister of Health if he was in a position to give the terms of reference and the personnel of the Interdepartmental Committee on Abortion the decision to appoint which by the Home Secretary and himself was announced when the recent report on maternal mortality was issued.

SIR KINGSLEY WOOD said that the terms of reference to the Committee were "To inquire into the prevalence of abortion and the present law relating thereto and to consider what steps could be taken by more effective enforcement of the law or otherwise to secure the reduction of maternal mortality and

morbidity arising from this cause. The members of the Committee would be Mr Norman Birkett K.C. (chairman), Mrs Stanley Baldwin, Lady Ruth Balfour, Sir Comyns Berkeley, Mr H. A. de Montmorency, Dr T. Watts Eden, Lady Forber, Sir Rollo Graham-Campbell, Dr G. C. M. McGonigle, Sir Ewen Maclean, Captain M. P. Pugh, Mr W. Bentley Purchase, Mr C. D. C. Robinson, Mrs Thurtle, and Lady Williams. Communications relating to the work of the Committee should be addressed to the Secretary, Committee on Abortion, Ministry of Health, Whitehall, S.W.1.

Spanish Refugee Children and Trachoma

In the House of Lords on May 25 LORD LLOYD asked the Government what if any arrangements were being made for the segregation of refugee children from Spain. He said that his solicitude in this matter resulted from correspondence he had had with Mr A. F. MacCallan, an ophthalmic surgeon who had done much to relieve blindness through the Nile Valley. Mr MacCallan and the President of the Royal Society of Medicine had written to the Minister of Health pointing out how grave was the danger of introducing these Spanish children unless careful examination and segregation were carried out. The fear was that these children might introduce trachoma, a contagious eye disease which was obstinate to treat and led ultimately to blindness. The United Kingdom only rid itself of this scourge of trachoma by a rigid application of the Aliens Act of 1920. In its early stages the disease was hard to detect, except by experts and it was a disease which was known to ravage the whole of Northern Spain. He saw it reported that the Basque children were not to be kept in one camp but were to be distributed about the country. Owing to our comparative immunity from this disease it was doubtful whether there were many oculists in this country capable of detecting trachoma in its early stages. Since the necessary examination was long and difficult he asked if the Government was satisfied that the necessary precautions had been taken.

THE MARQUESS OF DUFFERIN AND AVA, replying for the Home Office, said that all the arrangements for bringing these children to England were made not by the Government but by the National Joint Committee on Spanish Relief, a voluntary body which had accepted all financial responsibility for the children. The Committee sent out doctors to examine the children before they left Bilbao. Trachoma in its opinion was uncommon in the Basque country. The only cases discovered were in children from other parts of Spain. Among those who were selected to be evacuated the doctors found only two cases of this admittedly dangerous contagious disease. Those two cases were excluded from the ship. The Committee had made every effort to make sure that no child should be admitted to England suffering from any contagious or infectious disease. It had also taken full responsibility for the care and maintenance of the children in this country and it was fully understood by the Committee and all responsible for this evacuation that the presence of these children here would be of short duration. The interest of the Government in the matter was limited to securing that practical plans had been made by the Committee for the maintenance of the children in institutions and homes and to making sure that on arrival they were medically examined.

For the moment the children had been placed in a temporary camp at Southampton which was not accessible to the general public. Nobody could get in without a special pass. The children were not allowed out without special permission and when the latter left the camp it would be on the advice of the medical officers in charge and the local health authorities. When that permission had been obtained the children would go in fairly large units to various places where they would be supervised by Basque priests and teachers. On arrival at Southampton the children were submitted to a medical examination more searching than would have been the examination if they had arrived individually. The medical officers in charge were surprised to find how little their experiences in a beleaguered city had affected their health.

The Services

ARMY MEDICAL SERVICES

The War Office announces the following appointments

Colonel R W D Leslie OBE., Officer Commanding the Queen Alexandra Military Hospital Millbank SW has been selected for promotion to the rank of major general from August 10 1937 and to be Deputy Director of Medical Services Northern Command York in succession to Major General G G Tabuteau DSO who is taking up the appointment of Director of Medical Services in India

Colonel A D Fraser, DSO MC., who commands the R A M C Depot and Training Establishment at Aldershot, has been selected for promotion to the rank of major general from October 13, 1937 and to be a Deputy-Director of Medical Services in India in succession to Major General D S Skelton, CB DSO Honorary Physician to the King who will vacate the appointment on completion of four years service as a major general.

DEATHS IN THE SERVICES

Brevet Colonel EDGAR JENNINGS Bengal Medical Service (ret.) died in London on May 12, aged 72. He was born at Outakamand on August 3 1864 the son of Lieutenant C J Jennings of the Madras Staff Corps and was educated at King's College London taking the MRCS and L.S.A. in 1886. He subsequently took the DPH at Cambridge in 1909. He entered the IMS as surgeon on March 30 1889 became lieutenant-colonel after twenty years service and received a brevet colonelcy on January 1 1916 for war service. He retired on February 5 1920. He served in the war of 1914-18 and was mentioned in dispatches in the *London Gazette* of April 5 1916.

Universities and Colleges

UNIVERSITY OF OXFORD

In a Congregation held on May 18 the following appointment made by the Board of the Faculty of Medicine and approved by the General Board of the Faculties was approved. B G Macgrath B.S. M.A. DPhil. Fellow of Exeter College as University Demonstrator in Pathology from May 1, 1937, to September 30 1941.

Notice is given that the Readership in Bacteriology is vacant, and that Electors will meet to elect a Reader on Tuesday June 1.

UNIVERSITY OF LONDON

At a meeting of the Senate held on May 19 with the Vice-Chancellor Mr H L Eason M.D. M.S., in the chair Mr John Kirk M.B. F.R.C.S.E. was appointed as from October 1 to the S A Courtauld Chair of Anatomy tenable at the Middlesex Hospital Medical School.

The title of Professor of Morbid Anatomy in the University was conferred on Dr W D Newcomb in respect of the post held by him at St. Mary's Hospital Medical School.

The Dunn Exhibitions in Anatomy and Physiology for 1937 were awarded to Mr J W Paulley Middlesex Hospital Medical School and Mr Philip Harvey Guy's Hospital Medical School respectively.

Mr W G Spencer has been reappointed by Convocation as representative of Medicine in the Senate for the period 1937-41.

LONDON HOSPITAL MEDICAL COLLEGE

The prizes for 1937 will be distributed to students of the London Hospital Medical College by the Minister of Health Sir Kingsley Wood on Tuesday July 6 at 3 p.m. in the College Library.

GUY'S HOSPITAL MEDICAL SCHOOL

An Entrance Scholarship in Science of the value of £100 has been awarded for 1937 to P L Masters, Alleyn's School Dulwich.

Medical News

To commemorate the founding and planning of the City of Adelaide in 1837 a meeting will be held in the Assembly Hall of the Royal Empire Society, Northumberland Avenue, WC2, on Monday, May 31, at 4.30 p.m., when Dr Thomas Adams will give a lecture, followed by an address by Sir William Sowden of Adelaide.

A meeting of the Kensington Medical Society will be held at St Mary Abbots Hospital Marloes Road, W., on Tuesday, June 8, at 8.30 p.m. when Mr V B Green-Armytage will speak on 'The Value of Hysterosalpingography in General Practice'.

A meeting of the International Faculty of Sciences will be held in conjunction with the Institution of Electronics and the Institute of Chemist-Analysts at the Gaumont-British Theatre, Film House, Wardour Street, W., on Monday, May 31, at 7.30 p.m., when Dr S Monckton Copeman, F.R.S., will give a lecture on 'Experimental Work Bearing on the Treatment of Cancer'. A discussion will follow.

The annual provincial meeting of the Tuberculosis Association will be held as a joint meeting with the North-Western Tuberculosis Society at the Central Library, Manchester, on Thursday, Friday, and Saturday, June 10, 11, and 12. The following papers will be read: 'How Long Should Collapse Therapy be Delayed?' Dr Geoffrey Marshall and Mr H Morrison Davies; 'Bronchiectasis in Pulmonary Tuberculosis,' Mr J E H Roberts; 'Pleural Effusions after Thoracoscopy,' Dr O M Mistal; 'Treatment of Unilateral Pulmonary Tuberculosis,' Dr P J L. De Blocme; 'Difficulties in Dealing with the Tuberculosis Problem,' Professor A Ramsbottom and others; 'Use of the Tomograph,' Dr J B McDougall; 'Artificial Pneumothorax in Children,' Dr C D S Agassiz. The annual meeting will be held at 6.20 p.m. on June 10, and the annual dinner at 7.30 p.m. at the Midland Hotel on June 11. A visit to the Manchester Sanatorium has been arranged for Friday afternoon, and to other sanatoria on Saturday. Further information may be obtained from the honorary secretary, Tuberculosis Association, 26, Portland Place London, W1.

The sixteenth congress of the Journées Médicales de Bruxelles will be held in that city from June 19 to 23, under the presidency of Professor Albert Dustin, rector of the university. It will be opened by Dr G Duhamel of the Académie Française and among the subsequent speakers will be Sir Joseph Barcroft and Drs Danielopolu, Jeanneney, Castellani, Sorel, Rathery, Veraguth, Brull, Lépinay, Pautrier and Olenick. The excursions will include a visit to the Albert Canal, and there will be receptions, banquets, and theatrical performances. A detailed programme is being prepared. The fee for membership of the congress is 100 francs (Belgian), and further information may be obtained from Dr R Beckers, the general secretary, 114, Rue Belliard, Brussels.

Among the recipients of King George VI's Coronation Medal are the following members of the Metropolitan Police Medical Service: Chief medical officer, Dr Isaac Jones, consulting surgeon, Mr Max Page, assistant physician, Dr H B Russell, dental surgeons, Mr Lloyd Williams and Mr O'Donnell, divisional surgeons, Drs F J Lawson, W G Johnston, A R Moore and P B Spurgin.

The *Indian Medical Gazette* for April is a special tuberculosis number and contains five articles on various aspects of collapse therapy for pulmonary tuberculosis.

The centenary of the foundation of the German Association of National Science was celebrated in Posen on May 9.

An outbreak of psittacosis has recently occurred in Buenos Aires and the city of Tandil.

Letters, Notes, and Answers

LETTERS, NOTES, ETC

Short wave Therapy

Dr P P DALTON (London W1) writes. In the *British Medical Journal* of May 8 (p 1008) Dr H J Taylor of the St John Clinic draws your readers attention to quotations from a report recently issued by the American Council of Physical Therapy regarding its work of the past year in which it states "The Council felt that the general practitioner should understand that when he buys a short wave diathermy machine he is simply purchasing an apparatus capable of producing heat. In the light of available evidence it has absolutely no specific action. This quotation is presumably issued by Dr H J Taylor as a counterblast to my article published in the April number of the *British Journal of Physical Medicine* entitled 'Low Intensity Short waves (113 metres) Preliminary Observations Concerning their Effects on Living Tissues' in which I demonstrated the effects of a practically non-heating short wave apparatus on frog nerve-muscle preparations in article which has attracted much attention both at home and abroad. As Dr Taylor has published this throughout the medical press it is only right that the observations appended to his letter by Dr King Brown the medical editor of the *British Journal of Physical Medicine* in the May number of his journal be equally brought to the notice of your readers. We think our readers will probably suspend judgement on this knotty question of the specific action of short waves in view of recent investigation by authors both here and on the Continent. It should at least be noted that the Council of Physical Therapy gives its judgement on the present available evidence and we would venture to suggest that new evidence is coming to hand as indicated by the interesting communication from Dr Dalton in our last (April) issue which will have to be taken into account in any future discussion on the effects of short wave treatment. Also I suggest that the term 'short wave diathermy' should be confined strictly to powerful machines producing heat. The proper term for the low intensity treatment should surely be short wave therapy. The word diathermy implies that heat is produced in the tissues.

An Orthopaedic Nursing Certificate

Hitherto the orthopaedic hospitals of this country of which there are over thirty have issued certificates of proficiency to their probationer nurses on completion of training, based on their practical work and on examinations held at the various institutions. This system has provided no criterion by which the standard of training provided in the various hospitals can be compared. In an attempt to secure greater uniformity and standardization a subcommittee of the Central Council for the Care of Cripples has after investigation and deliberation decided with the approval of the council to establish an orthopaedic nursing certificate based on a uniform syllabus acceptable to the majority of orthopaedic hospitals. The certificate is not intended necessarily to replace that issued by any individual hospital but to provide a supplementary means of assessment of training received. No attempt to change the methods of treatment of patients or training of nurses is being made, nor is it suggested that the recruitment of the more senior members of the nursing staffs of orthopaedic hospitals should be amended in view of the establishment of this certificate.

A Warning

Dr C C H CHAYASSE (London W9) writes. I was visited recently by a man giving an address in Watford. He said he had recently come out of gaol and was starving. He claimed contemporary studentship with many famous men at Bart's and said also that he was an Oxford graduate and an ex naval surgeon. He was a well spoken man of about 70 with slight left facial paralysis and tattoo mark at the back of the right hand and arm. It seems that he is not a qualified medical practitioner.

Pink Disease

In an annotation on this subject (*Journal* May 22 p 1077) reference to an original article by A J Wood and I Wood is given as *British Medical Journal* 1935 1 105. This should be *British Medical Journal* 1935 2 527.

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QUERIES AND ANSWERS

Iodine Albuminate

Dr J JACKSON (Dublin) writes. Would any reader kindly let me know (1) if there is any advantage in an albuminate of iodine over simple tincture of iodine for internal use (2) how albuminate of iodine is generally prepared and (3) whether colourless iodine is of less therapeutic value than ordinary iodine for external use in, for example, an oily preparation for rheumatic and pulmonary affections.

Splitting Finger-nails

'STUMPED' writes. Would some reader kindly inform me of the cause and treatment of splitting of the finger nails. My wife while resident in London and Manchester has suffered for some time from splitting and flaking off of the ends of the finger nails. She does ordinary housework and wearing rubber gloves does not seem to have made much difference.

Nascent Iodine Treatment of Tuberculosis

Dr J PIRIE (Leamington Spa) writes with reference to his note published on May 15 (p 1056). I have had so many letters from doctors in Scotland, Ireland and England asking for details that it may be some time before I can answer all their questions but I wish to assure all who have written to me that I shall answer them as soon as possible.

Income Tax

Subscriptions by Panel Committee

'Y' explains that a Panel Committee pays £50 a year to medical charities and has an income from investments which more than covers that amount. Can the committee arrange to make covenanted payments deducting tax therefrom and leaving the recipients to claim the tax back?

.. There would seem to be no great difficulty in the course suggested provided that the constitution of the committee is such that some persons are legally competent to bind the committee for seven years. It is, of course, essential that the payments should be legally eligible throughout the period.

Sickness Insurance Premiums

'J S' pays an annual premium of £19 per annum on a policy to secure payments to cover the cost of a locum tenent during sickness. Is an income tax allowance due?

.. No. There is no relief in respect of premiums for sickness benefit and of course any receipts under the policy are not taxable.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

419

Intestinal Tuberculosis

G. HERTZBERG (*Nord med. Tidskr.* March 5 1937, p. 373) reports from the Grefsen Sanatorium in Norway his observations on tuberculosis of the intestines, which he believes to be the most common complication of pulmonary tuberculosis. He found it at necropsy in seventy-one out of eighty-four cases of pulmonary tuberculosis. Comparing the clinical with the radiological and post-mortem findings, he notes that in pulmonary tuberculosis the only significant clinical sequence of events indicative of intestinal tuberculosis is regular action of the bowels, then constipation, and finally diarrhoea, which is continuous till the patient's death. This syndrome does not occur in cases of pulmonary tuberculosis in the absence of intestinal tuberculosis but its diagnostic value is minimized by its comparatively late appearance for it is a more or less constant phenomenon only in patients with widespread intestinal involvement. Even when the condition proved to be most extensive a quarter of such cases had shown no clinical signs other than constipation, and in the early stage of this disease it was the exception rather than the rule for clinical signs of it to be demonstrable. Diarrhoea was absent in four-fifths of the early cases and in about a quarter of the most advanced cases. Abdominal pain was absent in seven out of every eight early cases and in one out of every three advanced cases. Even emaciation was lacking in about a half of the cases. The author concludes that the clinical diagnosis of intestinal tuberculosis is difficult, because in about every third case there is absolutely no clinical sign of it, and because its general manifestations are identical with those of such common ailments as colitis and appendicitis to which patients suffering from pulmonary tuberculosis are just as subject as other persons. Some of the symptoms of intestinal tuberculosis are also identical with those of gastritis from which the subjects of pulmonary tuberculosis suffer more often than other persons.

420

Suprarenal Cortex Insufficiency

S. THADDEA (*Zbl. inn. Med.* March 20 and 27 1937, pp. 220 and 257 resp.) points out that the cardinal function of cortin the hormone from the suprarenal cortex, is still unknown. The physiology of the cortex is important (1) It is essential to life. Animals with only a suprarenal medulla die. (2) Cortical insufficiency results in adynamic muscles increased viscosity of the blood, lowered resistance to infection and changes in the circulatory system, with lowered heart action and stimulation of the sympathetic nervous system a fall of high blood pressure and changes in the electrocardiogram. (3) The cortical hormone regulates growth and development body temperature fluid output, and general metabolism especially that of proteins carbohydrates cholesterol and creatinine. Suprarenal cortex insufficiency is best seen clinically in Addison's disease the treatment of which condition is restoration of cortical function by (1) high daily doses (50 to 100 ccm) of cortical hormone (2) avoidance of physical and psychical fatigue (3) a diet rich in carbohydrates and vitamins especially C A and B and also rich in salts sodium chloride 5 to 10 grammes daily being given but poor in proteins and fats (4) the institution of alkaline treatment (sodium bicarbonate 10 to 20 grammes rectally) to avoid acidosis and (5) the administration of cytochrome 0.2 gramme daily intramuscularly. Cytochrome prevents inactivation of the cortical hormone through oxidizing and fermentative processes. The possibility of a functional lesion of the suprarenal cortex existing in such conditions as Addisonism general wasting of endocrine origin pluriglandular disturbances,

acute infections, especially diphtheria, and chronic infections, notably tuberculosis, must be borne in mind. Thaddeus has used cortical hormone combined with vitamin C therapy with great benefit in a number of such conditions.

421 Cardiovascular Changes in Avitaminosis

S. WEISS and R. W. WILKINS (*Trans. Assoc. Amer. Physicians* 1936, 51, 341) discuss the nature of the cardiovascular changes in avitaminosis-B in man, the relationship of alcoholic polyneuritis to these conditions, and the clinical effects of administration of vitamin B. Of 912 cases of nutritional deficiency ninety-seven showed cardiovascular disturbances such as abnormal heart rates and rhythms, fatigability, dyspnoea, oedema, etc. In patients who died, the fibres of the myocardium and conducting bundles showed various degrees of hydropic degeneration. There was also intercellular oedema and collagen formation, but there was no relationship between the degree of histological change and the clinical symptoms. In some patients parenteral administration of crystalline vitamin B₁ was followed by improvement, while in patients with no nutritional deficiency the same treatment had no effect on the cardiovascular system. The type of cardiovascular disturbances observed was due to changes in both the myocardium and the vagi, the alteration in the nerves being functional in nature. When associated with alcoholism, polyneuritis and cardiovascular disturbances appeared to be due rather to the associated nutritional disturbance (principally vitamin B deficiency) than to the alcohol itself. In general, the cardiovascular manifestations may depend on certain metabolic factors associated with vitamin deficiency rather than directly on the vitamin deficiency itself. In another study P. M. ZOLL and S. WEISS (*Proc. Soc. exp. Biol. N.Y.* 1936, 35, 259) showed that rats with vitamin B deficiency exhibit bradycardia and electrocardiographic changes which may be abolished by parenteral administration of crystalline vitamin B₁.

Surgery

422

Bilateral Hydronephrosis

H. SMAGGHE (*J. Urol.* January 1937, p. 5), in discussing cases of bilateral hydronephrosis, states that the condition is not uncommon and is usually revealed by intravenous urography. Bilateral hydronephrosis is met with in cases of congenital malformation in lesions of the lower urinary tract causing obstruction in the bladder, prostate, or urethra, or in inflammatory lesions or tumours in the adjacent pelvic organs. These latter conditions bring about uretero-pelvic dilatation, but congenital lesions, of which the most common are abnormal vessels, cause a dilatation of the pelvis alone. Pelvic lesions which may cause bilateral dilatation of the ureters, are most often found in women and include prolapse of the uterus, uterine fibromata, ovarian cysts, and pregnancy. Certain cases of bilateral hydronephrosis show few symptoms, particularly those cases of congenital uretero-pelvic dilatation of primary origin. In other instances the dilatation causes indefinite feelings of heaviness in the lumbar region in pregnancy this symptom is hard to distinguish from muscular fatigue. In typical cases pain may be persistent or intermittent with crises similar to attacks of renal colic, affecting most severely the side on which the kidney is most damaged. The increase in size of the kidneys being bilateral may suggest polycystic disease but the diagnosis can be settled by pyelography. Prognosis in cases of bilateral hydronephrosis is grave, as progressive renal insufficiency leads inevitably to uraemia. In pregnancy, if symptoms occur before the fourth month,

the pregnancy should be interrupted. At a later stage drainage by ureteric catheters may be carried out or in severe cases nephrostomy may be necessary. Nephropexy is indicated in all cases of simple pelvic dilatation after division of the abnormal vessel or adhesions, and also when the dilatation is of uretero-pelvic origin. In cases of infective dilatation nephrostomy should be carried out and the kidney allowed to drain for several months. Twelve cases of hydronephrosis are reported.

423

Wounds of the Face

L. DUFOURMENTEL (*Presse méd.*, March 13, 1937, p. 387) in describing the treatment necessary in wounds of the face, points out that although primary attention should be directed at preventing the spread of infection, this is often not possible as facial wounds are more prone to infection than lesions in any other part of the body, owing to the buccal, nasal, pharyngeal, and other discharges. On the other hand, any such infection is of little moment, as it is seldom grave and does not lead to any complications such as fever, abscess formation, or erysipelas. This is accounted for by the fact that the natural cavities of the face act as drains and the healthy mucosa is well equipped to overcome any source of infection. Early treatment of facial wounds should avoid the removal of any fragments of bone which may be of use for reconstruction unless these fragments are detached. Cautious and restrained treatment is of the utmost importance. Reduction of fractures of the lower and upper jaw should be carried out by a dentist rather than by a surgeon, and should be undertaken as soon as possible. Reduction of fractures of the nasal bones should also be carried out at once as fragments soon become immobilized in a bad position. Emphasis is laid on the care needed to secure accurate apposition of the skin edges in superficial wounds, and the technique of suture is fully described.

424

Prophylaxis of Peritoneal Adhesions

CH. KAPLAN (*J. méd. Ukraine* 1936, 6, 4, p. 1085) maintains that every suture applied to the parietal or visceral peritoneum ultimately adheres to the omentum. These adhesions may necessitate further surgical intervention. Experiments on animals have proved that small fragments of omentum implanted over the sutures prevent the appearance of adhesions when the following rules are observed: (1) the fragment of omentum must not contain any vessels visible to the naked eye; (2) it must be larger than the lesion it covers; (3) the sutures must be completely covered by it; (4) all bleeding must be carefully controlled during the operation; (5) only the part of the omentum near to its fixed border must be used; (6) all the resulting defects in the omentum itself must be covered by peritoneum.

425

Biopsy in Bone Tumours

G. CORYN (*Scalpel*, Liège, March 27, 1937, p. 388) advises that in cases in which the diagnosis of malignant disease can be satisfactorily confirmed by clinical means or radiography biopsy should not be carried out on account of the danger of disseminating the tumour. But in certain cases radiography may be misleading and in two instances tumours reported benign showed microscopical characteristics of malignancy. In one of these cases amputation was carried out by a surgeon who was opposed to biopsy. Certain malignant tumours such as myelomata, hypernephromata, and some osteogenic sarcomata only show localized decalcification in the early stages without any malignant characteristics. Radiology is of very little value in differentiating between an osteochondroma, an osteo-chondro-sarcoma, and a calcified fibro-chondro-sarcoma. Opponents of biopsy advocate watching the development of the tumour until a diagnosis is certain. The author believes it more dangerous to wait until a malignant tumour shows unmistakable signs as it may already have invaded the neighbouring tissues than to

make an early diagnosis by biopsy. It is important that a sufficiently large section of the growth shall be removed and in order to reduce the risk of dissemination of the neoplasm irradiation should be carried out immediately before biopsy and amputation performed as soon as the result is known. Four cases are reported which confirmed the opinion that when clinical and radiographic evidence are sufficient to establish a correct diagnosis biopsy should be avoided but occasionally it is the only certain method of arriving at such a diagnosis.

Therapeutics

426

Treatment of Lupus

H. HAXTHAUSEN (*Ugeskr. Laeg*, April 8, 1937, p. 383) reports from the University Dermatological Hospital in Copenhagen his experiences with diathermy in lupus. This treatment has hitherto enjoyed no great vogue and has been given in the form of massive electro-coagulation of the tissues as in malignant disease. The sequel has been slow healing with extensive and cosmetically objectionable scar formation. Haxthausen has followed Olesen who a few years ago, modified the hitherto conventional diathermy treatment of lupus by a much more conservative technique which entailed less wholesale destruction of tissues. After-treatment with warm rays (solux) and a special dietary regime were also introduced by Olesen with a view to improving the ultimate results. Haxthausen has dispensed with such warm wave after-treatment and only a few of his patients were given a special diet resembling in some respects Gerson's diet. In most cases the treatment required no general anaesthetic and only in some cases was a novocain-adrenaline local anaesthesia employed. In four of the twelve cases recorded a clinically symptom-free cure was effected, and in another four cases the improvement was so marked that a complete recovery might be anticipated. In the remaining four there was little change for better or for worse. As a rule the cosmetic results were surprisingly good. Yet Finsen treatment remains the most reliable form of therapy and should be preferred under favourable circumstances. It is however comparatively costly on account of the time it takes and diathermy may therefore be preferable when the patient can only afford to undergo a brief course of treatment or take ambulant treatment so many times a year. Diathermy is also indicated in those cases of lupus which have resisted the Finsen treatment.

427 H. L. BANBERG and P. KRONER (*Münch. med. Wschr.*, April 9, 1937, p. 569) have used a combination of red light, ectebin, and Grenz rays in the treatment of lupus vulgaris. The red light was obtained from an incandescent electric bulb and a red glass filter. The ectebin was rubbed into the affected skin and the Grenz rays were given in doses of 1,000 to 1,500 r at each sitting. This combined therapy causes an intense reaction in the lupotic foci, resulting in a more thorough destruction of the diseased tissues while at the same time the cutaneous connective tissue is preserved. This improves the cosmetic results. Another advantage is the shortening of the length of time taken for treatment. The authors have been using this therapy for ten years and have never observed any damage from the Grenz rays.

428

Indications for a Sea Climate

H. CURSCHMANN (*Deutsch. med. Wschr.*, April 16, 1937, p. 620) of the University Hospital in Rostock discusses the indications for a sojourn by the sea in the light of recent clinical and experimental investigations which suggest that a sea climate promotes the tone of the sympathetic and lowers the tone of the parasympathetic. The pulse rate, blood pressure, and sugar content of the blood are raised by cold sea baths—signs indicative of increased tone of the sympathetic. On the other hand prolonged

sun baths lower the blood pressure and sugar content of the blood—signs indicative of increased vagus activity. Professor Curschmann considers more fit for hospital and psychotherapeutic institutions than for a seaside resort that ever-dwindling class of patients who suffer from *grosse hystérie* with its confusional states paralyse self-inflicted injuries, etc. A larger group of patients suffering from minor hysterical manifestations referable to the vegetative nervous system however is well suited for treatment by the sea. The two extremes of neurasthenia, the very excitable and the very flaccid should not go to the sea but the vast army between these extremes should profit greatly from it. Clinical experience and recent experimental research agree as to the benefits of the sea-side in general and short sea baths in particular for the subjects of high blood pressure. It is also usually very beneficial for that infinitely varied group of 'sexual neurasthenics'. Cases of nervous dyspepsia, provided that they do not need special dietetic supervision also benefit from a sea climate. Migraine is notoriously amenable to changes in climate and often reacts satisfactorily to a sea climate. Professor Curschmann's general impression is that the therapeutic properties of the seaside in connexion with the ailments discussed are now more generally appreciated than they were.

Diseases of Children

429 Jaundice in Children

MORRIS ASTRACHAN (*Amer J Dis Child* February, 1937, p. 541) reports six cases of icterus gravis neonatorum of which two proved fatal. The condition may occur in the familial or sporadic form in which pregnancy is normal and the infant is delivered normally at term. Jaundice is the most striking feature and it is noted early—it may even be seen at birth. Jaundice occurs in each successive infant with fatal results unless treated early with blood serum. In addition to the jaundice there is pallor, drowsiness and enlargement of the liver and spleen. The stools and urine contain much bile. An increase in the nucleated red blood cell count is always found and is far beyond the physiological limits. The responsibility for making a prompt diagnosis is great for in icterus gravis the immediate transfusion of blood or the administration of blood serum intramuscularly is efficacious and life saving. The mortality of untreated cases is at least 80 per cent. Every child born in a family in which there has been a previous death from icterus gravis should be treated as a potential patient and blood should be given promptly. A summary of recent work on jaundice is given and theories regarding icterus gravis are discussed.

410 Hepatic Disease in Childhood

S. WOLFF (*Klin Wschr* April 17 1937 p. 560) points out that although the pathology of the liver has received much attention in recent years hepatic disease in childhood has been neglected. Latent forms of hepatic disease may be found in children complaining of lassitude, anorexia, nausea and flatulence. They are often extremely emaciated. On examination the liver is found to be slightly enlarged (especially if the child is laid on the left side) tender and it may be hard. Bilirubin and urobilin may be found in minute amounts in the urine sometimes Millon's test is positive. The correct treatment is a diet rich in carbohydrates combined with the administration of dextrose. In rare cases 3 to 5 units of insulin twice daily are necessary. In children bile may be found in the urine and be absent in the stools without the occurrence of jaundice. Such cases may be aborted by the above treatment. According to Wolff catarrhal jaundice in children is nearly always ushered in by persistent vomiting resulting in rapid loss of weight. The specific treatment of this condition consists in the subcutaneous injection of 5 units of insulin and the intra-

venous injections of 20 to 50 c cm of 50 per cent dextrose. The result is dramatic in one case a moribund girl was able to return to school eight days after the first injection. Wolff states that catarrhal jaundice may appear, although rarely, in infants. It must be differentiated from icterus neonatorum by Gmelin's test which is negative in the latter condition. Treatment is exactly similar to that for the older child, the dosage being modified to the age. Wolff believes that the active treatment of these children prevents the occurrence of serious hepatic disease in adult life.

431 Diaphragmatic Paralysis in the Newborn

A. M. A. PERRAULT (*Thèse Paris* 1937, No 208) who records sixteen illustrative cases, states that in addition to the well-known obstetrical paralysis of the brachial plexus there is an obstetrical paralysis of the phrenic nerve. The right nerve is more often affected (eleven cases) than the left (five cases) and in the majority of cases (fourteen) there is an associated paralysis of the brachial plexus on the same side. On the other hand, paralysis of other muscles of the cervical plexus is very rare (two cases). Diaphragmatic paralysis in the newborn appears to be due to several factors, whether traumatic (elongation of the nerve roots or compression of the nerve due to obstetrical procedures) or congenital. The symptoms comprise dyspnoea, cyanosis and digestive disturbances in paralysis confined to the left side. The physical signs can only be detected by radiological examination. The course of these paralysees varies. Death is rare and may be due to pulmonary complications (two cases), or the paralysis may last indefinitely (seven cases) or end in recovery (seven cases). There is no effective treatment.

432 Gastric Acidity in Infants

ALICE STEWART (*Brit J Child Dis* January-March, 1937 p. 1) states that the literature on gastric acidity shows the following facts: (1) there is no evidence of congenital achlorhydria, nor is it present in healthy children, (2) gastric acidity may be lowered by any parenteral infection but is especially affected in chronic gastro intestinal disease, (3) the acidity is lower in infants than in older children. The author's own investigations were carried out in young children divided into the following four groups: (a) iron-deficiency anaemias, (b) previously anaemic children now in good health, (c) other illnesses, (d) healthy children. She concludes that the deficiency anaemias of infancy appear to be caused by pure iron deficiency and are not primarily caused by a failure of gastric secretion. The impairment of gastric secretion found in the anaemic cases seems to be the result not the cause, of the condition. This low acidity however decreases still further the amount of available iron, thus aggravating the anaemia and preventing spontaneous cure. It is possible though not proved that infective states particularly enteritis play a part in the aetiology of the iron-deficiency anaemia of childhood by causing chronic gastritis with suppression of acid secretion.

433 Upper Lobe Atelectasis in Children

M. DE BRUIN (*Nederl Tijdschr Geneesk* March 13, 1937 p. 1124) who records five illustrative cases, maintains that atelectasis of the lung in children mainly occurs in the lower lobe the most frequent causes being foreign bodies accumulation of secretion and glandular swellings. The first two causes almost always give rise to atelectasis of the lower lobe and it is only large glands that cause atelectasis of the upper lobe. The right lung is more frequently affected than the left. In uncomplicated cases the symptoms are few or none, dyspnoea and fever do not occur. The condition is probably often mistaken for pneumonia or interlobar pleurisy. As regards the prognosis atelectasis is often serious because bronchiectasis may develop rapidly unless there is spontaneous reventilation of the affected lung.

Obstetrics and Gynaecology

434 Rupture of the Membranes in Eclampsia

According to B STROGANOFF and O DAVIDOVITCH (*Gynec et Obstét* March, 1937 p 220) the main principles of the treatment of eclampsia have been established, and consist in (1) suppression of the crises according to the first-named author's methods—rest, supervision, narcotization and anti-toxaemic measures, (2) acceleration of termination or induction of labour by measures from which *accouchement forcé* or Caesarean section are rigorously excluded. They state that they attach very considerable value to wide rupture of the membranes and now report a total series of 179 cases in which this was done nine out of ten were in primiparae and in one in five the os was closed, labour not having started. So far from the trauma provoking convulsions, it was found that in 60 per cent no fit occurred between artificial rupture of the membranes and delivery. In general, rupture, which is really a tearing of the membranes, is done (by removal of as much as possible of them by means of a vulsellum after dilatation to Hegar 20 or 22) when the general condition is grave (as in persistent albuminuria hypertension, or amaurosis), when the anti-toxaemic and narcotic measures have failed in the less severe cases or in recurrences. It is contraindicated and should if possible be replaced by Caesarean section when there is an abnormal presentation or prolapse of the cord. Its further adoption is said to be likely to improve greatly the prognosis in eclampsia.

435 Carcinoma of the Cervix

R SCHRÖDER (*Zbl Gynak* March 6, 1937, p 546) gives an account of treatment of carcinoma of the cervix and its results in a series of 604 cases (1922-30) in which a five year supervision was subsequently possible. Absolute cure in the sense of a five year survival in good health was obtained in 171 or 28 per cent. Increasingly good judgement in selection in the mode of treatment for particular cases together with increasing experience in all treatments, seemed to bring about an improvement in the results for the last three years (1928-30) 327 cases had 34 per cent of five year cures. For the whole period the operability rate was 58 per cent. The cases actually operated on totalled 50 per cent. Wertheim's operation was usually done in the first and Schauta's vaginal wide hysterectomy in the second half of the period under review. The primary mortality of the 178 Wertheim cases was 13 per cent., of the 124 Schauta cases 15 per cent. The Schauta cases had also a superior percentage of lasting cures—51 per cent., as compared with 36 per cent for the Wertheim cases. Radium treatment was given in 253 cases including fifty-one which were operable the mean dose was 2000 mg radium-element hours in fractional doses. In the operable cases this treatment led to a single death and lasting cures amounting to 42 per cent. In the inoperable cases (202) there was an 85 per cent primary mortality and 16.5 per cent of five-year survivals. (The recent radium mortality has been 4 per cent.) Considerable value in prevention of recurrences is ascribed to persistence with post-operative x-radiations in small dosage.

436 Ureteral Stricture in Dysmenorrhoea

NGAI MAN LEUNG (*Chin med J* March 1937 p 365) describes a case of stricture of the ureters in which the chief symptom was severe dysmenorrhoea. The case was treated by dilatation of the ureters once every two weeks for two months, and then on two other occasions. A complete cure was obtained. The author believes that this is a fairly common cause of dysmenorrhoea. The pain at the time of the menses is due to the premenstrual congestion superadded to the existing stricture. Cases of

dysmenorrhoea without obvious cause should be examined for signs of ureteral stricture.

Pathology

437 Iodine tolerance Test in Hyperthyroidism

H J PERKIN and F H LAHEY (*New Engl J Med* March 25, 1937 p 501) describe the results of 108 iodine tolerance tests. In a fasting state patients were given 6 minims of Lugol's solution by mouth, and 2 ccm of blood were taken for iodine analysis at periods of half an hour, one hour, one and a half hours and two and a half hours. Values of blood iodine in microgrammes per cent were plotted on a graph. Curves rising above 100 microgrammes per cent were regarded as normal. In general the blood iodine curve of a hyperthyroid patient did not rise to so high a level as in the normal individual. The authors believe that since hyperplastic thyroid tissue has an affinity for iodine, the differentiating principle of the test is dependent upon the presence or absence of hyperplasia. The test is of diagnostic value only in so far as hyperplasia of thyroid tissue is associated with clinical hyperthyroidism. Hyperplasia however, may be associated with myxoedema or found in patients without symptoms of hyperthyroidism. Conversely hyperthyroidism may exist without histopathological evidence of hyperplasia. Although not a specifically absolute test (in their cases the authors had a 20 per cent margin of error) estimation of the iodine tolerance is an aid to diagnosis when evaluated together with the clinical evidence.

438 Xanthoproteic Acid

F M CHIANCONE (*Biochim Terap Sper* February 28 1937, p 41) carried out experiments on white rats to determine the effect of pregnancy, age fasting and light on the formation of xanthoproteic acid and found that these conditions did not visibly modify its elimination. Oral administration of tryptophane was followed by the appearance of xanthoproteic acid in the urine as in the control animals. In all the cases relatively large quantities of tryptophane were needed before the xanthoproteic acid appeared in the urine.

439 Magnesium Tetany

S W HOOBLER, H D KRUSE and E V MCCOLLUM (*Amer J Hyg* January, 1937 p 86) have studied the changes in the total and ultrafilterable serum calcium and magnesium in magnesium tetany induced in four young dogs by feeding them on a magnesium-deficient diet. They found a moderate lowering of the total calcium level, to a mean value of 7.58 mg per 100 ccm with a disproportionately lesser decline (to a mean of 4.74 mg per 100 ccm) in the absolute values for the ultrafilterable fraction so that there was a slight increase in the proportion of the ultrafilterable calcium, together with a marked fall in the serum magnesium values (to mean values of 0.47 mg per 100 ccm for total and 0.35 mg per 100 ccm for ultrafilterable magnesium affecting both forms of magnesium alike so that their relation was unchanged. In addition there was a slight rise in the serum inorganic phosphorus. In the periods marked by convulsions the diffusible calcium levels in the serum were neither the lowest obtained nor so low as is usually associated with calcium tetany. On the other hand the values for diffusible magnesium were in or near what may be regarded as the critical range for magnesium tetany—that is below 0.4 mg per 100 ccm. The authors conclude therefore that not only by its symptomatology but also by its blood chemistry magnesium tetany may be differentiated from calcium tetany for changes in the serum calcium ion concentration appears to be unconnected with magnesium tetany which is however closely associated with extremely low concentrations of magnesium ions in the serum.

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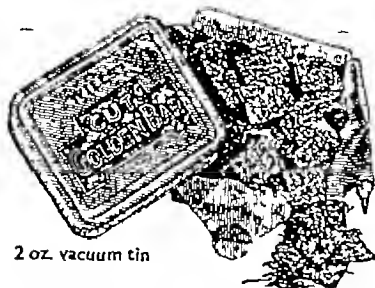
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Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit and vegetables are supplied to the Hospital from the farm gardens and orchards of Moulton Park. Occupation Therapy is a feature of this branch, and patients are given every facility for occupying themselves in farming, gardening and fruit growing.

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The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres. Llanfairfechan, amidst the finest scenery in North Wales. On the North West side of the Estate a mile of sea coast forms the boundary. Patients may visit this Branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

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For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton) who can be seen in London by appointment.

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HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Occupational Therapy. Voluntary and Temporary Patients received.

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Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens, in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms prospectus etc., apply MEDICAL SUPERINTENDENT.

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A REGISTERED HOSPITAL for the CARE and TREATMENT OF LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated at the foot of the Cotswold Hills and stands in its own grounds of over 300 acres. Voluntary Patients of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Patients is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the Main Hospital.

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10 Medical Supr
Barnwood

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Examinations for Part I (Physics) will be held in February and July 1938 and for Part II (Radiology, Electrology and Pathology) in July and October 1938.

The University has decided that the Diploma shall cease to be granted after 1941. The last course for the Diploma will start in October, 1940 and the last examination will be held in October 1941.

The Course is open to men and women whose medical education is approved by the General Medical Council for purposes of registration and who satisfy the Committee that they have had sufficient practical experience.

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OF ENGLAND

Notice is hereby given that the following Examinations will commence on the dates stated below

Pre Medical Examination
(Chemistry, Physics and Biology)
Monday June 21st

First Examination
(Anatomy, Physiology and Pharmacology)
Thursday June 24th

Final Examination
(Pathology, Medicine, Surgery and Midwifery)
Monday July 5th

Candidates who have fulfilled the necessary conditions and who desire to present themselves for Examination must give notice in writing to the Secretary, Examination Hall, 8, 11, Queen Square, London W.C.1 at least twenty-one days before the date of the Examination or submitting at the same time such certificates as may be required by the Regulations of the Board.

HORACE H. REW, Secretary

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for the year 1937 will be delivered at the Barnes Hall of the
ROYAL SOCIETY OF MEDICINE, 1, WIMPOLE STREET, W1,

by
DR. CH. LAUBRY

Professor of Cardiology University of Paris Physician to the Broussais Hospital Paris

on
THURSDAY, 10th JUNE at 5 p.m.

Subject "CONSIDERATIONS PATHOGENIQUES ET CLINIQUES SUR LES RYTHMES DE C4LOP"

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BRASENOSE COLLEGE, OXFORD HULME LECTURER IN PHYSIOLOGY

Applications are invited for the HULME LECTURESHIP IN PHYSIOLOGY. The appointment will be for three years and may be extended for two further years at an initial salary of £350 per annum with annual increments of £25. The duties will be to undertake original work to supervise the medical students in the College and instruct them in physiology for the University examinations. Further details may be obtained from the Principal Brasenose College Oxford to whom applications should be made before June 16.

BRITISH ASSOCIATION OF RADIOLOGISTS

Dr F. HERNAMAN JOHNSON will deliver the first SKINNER LECTURE on FRIDAY JUNE 11th at 2 p.m. in the Reid-Knox Hall of the British Institute of Radiology 37 Welbeck Street London W.1

Subject: *The After-Care of Patients Suffering from Cancer of the Breast*
The Lecture is open to all members of the medical profession who are cordially invited.

INSTITUTE FOR THE SCIENTIFIC TREATMENT OF DELINQUENCY (PSYCHOPATHIC CLINIC)

8 Portman Street London W.1

Applications are invited for the post of part-time MEDICAL REGISTRAR at the above Institute. Candidates should have experience in psychiatry, psychotherapy and neurology and must be engaged exclusively in the practice of psychological medicine. The duties will include three evening sessions per week. A private consulting practice will be allowed. Salary £300. Date of commencement by arrangement.

Applications should reach the undersigned (from whom forms with full particulars may be obtained) on or before June 21st.

I. M. JAMES
General Secretary

BRITISH POSTGRADUATE MEDICAL SCHOOL

There are three vacancies for HOUSE SURGEONS to the SURGICAL UNIT British Postgraduate Medical School Hammersmith Hospital

The appointments are for six months in the first instance and the holder may apply for a further period of six months. Salary at the rate of £105 per annum with board lodging and laundry. Duties to commence on July 1st 1937.

Duties are mainly in General Surgery but one appointment is to the Department of Traumatic and Orthopaedic Surgery. It is desirable that applicants should have held a previous House appointment.

Applications, with copies of testimonials should be sent to the Dean of the School not later than June 14th 1937.

REQUIRED ADDITIONAL TUTORS FOR ORAL AND POSTAL COACHING IN HYGIE AND PUBLIC HEALTH, MENTAL DISEASES AND OPHTHALMOLOGY—Write giving full detail of qualifications to the SECRETARY Medical Correspondence College 19 Welbeck Street W.1

SANATORIUM BRIDGE OF WEIR

RESIDENT MEDICAL OFFICER wanted. Must be a Practising Medical Superintendent, standing and experienced and holding a first class diploma. Apply to the Secretary at £100 per annum tentatively by initial agreement at £100 per annum.

THE UNIVERSITY OF LIVERPOOL RESEARCH ASSISTANT IN THE DEPARTMENT OF MEDICINE

The Council invite application for this post. The appointment will be for a period of three years as from October 1 1937 at a salary of £600 rising to £700 per annum. The person appointed will be required to comply with the conditions of the Federated Superannuation System for Universities. Further particulars may be obtained on application to the undersigned by whom application must be received not later than June 9th 1937 the names of three referees should be given.

EDWARD CARLY

May 1937 Registrar

COUNTY BOROUGH OF CROYDON Croydon Mental Hospital Upper Warlingham Surrey

APPOINTMENT OF ASSISTANT MEDICAL OFFICER

The Visiting Committee of the Croydon Mental Hospital are prepared to receive application from Medical Men for the appointment of Assistant Medical Officer at the Croydon Mental Hospital. No married quarters are provided.

The salary will be at the rate of £400 per annum rising by annual increments of £25 each to a maximum of £500 per annum and the age of the candidates should not exceed 35. A further £50 per annum will be paid if in possession of the D.P.M.

Furnished apartments will be provided with board and washing and for the purpose of superannuation will be valued at £10 per annum.

Candidates must be registered under the Medical Act and preference will be given to those candidates who have held the post of House Surgeon or House Physician at a General Hospital. Previous experience in a Mental Hospital is not essential.

The appointment will be subject to the provisions of the Asylums Officers Superannuation Act 1909.

Applications to be made on forms to be obtained by sending a stamped addressed foolscap envelope to the undersigned with copies (not originals) of not more than two testimonials of recent date not later than 10 o'clock in the forenoon of Thursday June 10th 1937 endorsed "Croydon Mental Hospital Assistant Medical Officer".

Canvassing, in any form is prohibited.

JOHN M. NEWHAM

Clark to the Visiting Committee
Town Hall Croydon
May 2nd 1937

THE KING EDWARD VII. WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners (male singles) for the post of ASSISTANT RESIDENT MEDICAL OFFICER twelve months appointment in each case at the following institutions—

(1) ST. JULY HOSPITAL, Sully, Glam. (In need for the treatment of pulmonary tuberculosis) a service between Penarth and Barry.

(2) GLAN ELY HOSPITAL (18 beds for pulmonary and non-pulmonary tuberculosis in adults and children) Llanwrhaeadr near Cardf.

Salary at the rate of £100 per annum with maintenance.

Applications should be sent to the Secretary of the Association, 10, St. James's Place, London W.1, by the 10th inst. of the month of June 1937.

D. A. POWELL

Principal Med. Officer

Memorial Office
Westgate Street CARDIFF

HIS MAJESTY'S COLONIAL SERVICE

COLONIAL MEDICAL SERVICE

The Secretary of State for the Colonies proposes to select within the next few months not less than 10 Medical Officers to fill vacancies the majority of which will occur in Tropical Africa or in Malaya

QUALIFICATIONS Candidates must be British subjects of European parentage, under 35 years of age and must possess a medical qualification registrable in the United Kingdom. Preference will be given to candidates who have held Hospital or Public Health appointments or who have special knowledge of anaesthetics, radiology, surgery, medicine, ophthalmology, gynaecology and midwifery, diseases of the ear, nose and throat, venereal diseases etc.

SALARY. Initial salaries vary from £600 to £700 and rise by increments to a maximum of between £1000 and £1200

PRIVATE PRACTICE Private practice is not allowed as of right, but in the case of some appointments it is permitted on certain conditions

QUARTERS In Tropical Africa free quarters, or an allowance in lieu are provided. In Malaya, quarters are provided at an annual rental not exceeding 6% of the officer's salary

PASSAGES Free first class passages are provided on first appointment and when proceeding on and returning from leave. Assistance is also given towards family passages

TERMS OF APPOINTMENT The appointments are pensionable subject to a probationary period which varies from two to three years

COURSES OF INSTRUCTION IN TROPICAL MEDICINE AND HYGIENE. Selected candidates will normally be required to attend a course of instruction leading to the Diploma in Tropical Medicine and Hygiene before proceeding overseas

DUTIES Although Medical Officers are appointed in the first instance for general service there are opportunities for work in special branches of medicine and surgery, in public health and in medical research

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service), 2, Richmond Terrace, Whitehall, London, S W 1

ROYAL NAVAL MEDICAL SERVICE.

A number of vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in July, 1937

Candidates must not be above the age of 28 years and must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate Study

Copies of the regulations for entry and conditions of Service including rates of pay and allowances may be obtained from the Medical Director General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than May 31st, 1937

COUNTY OF DORSET

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER and MEDICAL OFFICER OF HEALTH FOR THE PORTLAND URBAN DISTRICT

The Dorset County Council invite applications from Registered Medical Practitioners with at least three years experience since qualification and not exceeding 40 years of age for the joint appointment of Male Assistant Medical Officer for the Administrative County of Dorset and Medical Officer of Health for the Portland Urban District (population 12,000).

The salary for the combined appointment will be £500 per annum together with a travelling allowance of £50 per annum and necessary out-of-pocket expenses according to the scales now in force.

Experience in the treatment of venereal diseases as required by the Local Government (Qualifications of Medical Officers) Regulations 1930 and the possession of the Diploma in Public Health will be considered important additional qualifications.

The candidate appointed will as regards his duties as Assistant County Medical Officer act under the direction of the County Medical Officer of Health and will be required to perform such duties as may be from time to time prescribed. As regards his duties as Medical Officer of Health for Portland he will be subject to the control and direction of the Urban District Council.

The post will be designated under the Local Government and Other Officers Superannuation Act, 1922 and the successful candidate will be required to pass a medical examination. He will also be required to reside either in or in the vicinity of Portland.

Candidates must apply in their own hand writing on the prescribed form to be obtained on receipt of a stamped addressed foolscap envelope from the undersigned to whom applications, accompanied by copies of not more than three recent testimonials, must be received not later than Saturday June 26th 1937.

Canvassing in any form will be a disqualification. County Offices, C P BRUTTON, Dorchester, Clerk of the County Council, May 21st 1937.

MINISTRY OF HEALTH

The Minister of Health invites applications from registered medical practitioners (men and women) for vacant appointments as MEDICAL OFFICERS on the STAFF OF THE MINISTRY.

The salary commences at £847 per annum and rises by annual increments of £30 to a maximum of £1,161 per annum.

The appointments will be subject to the usual Civil Service conditions as to pension holidays etc.

Candidates must be registered medical practitioners of not less than five years standing and have experience in Public Health or Hospital services.

Generally preference will be given to candidates possessing a University degree in Medicine and a Diploma of Public Health but for one of the appointments special surgical experience of the treatment of Cancer by modern methods would be taken into consideration.

Medical Officers are required to devote their whole time to the Public Service and must be prepared to work in any part of England or Wales if required to do so.

Canvassing through Members of Parliament or in other ways will render a candidate liable to disqualification.

Forms of application with further particulars of the appointments may be obtained from — THE DIRECTOR OF ESTABLISHMENTS, Ministry of Health.

Whitehall S.W.1. No application can be considered unless received on the prescribed form not later than June 8th 1937.

COUNTY BOROUGH OF BLACKBURN

Applications are invited from registered medical practitioners for the post of ASSISTANT SCHOOL MEDICAL OFFICER and ASSISTANT MEDICAL OFFICER OF HEALTH (Male) to act under the supervision of the Medical Officer of Health who is also the School Medical Officer.

The person appointed must devote the whole of his time to the service of the Corporation.

The duties of the office will consist largely but not exclusively of work in the School Medical Department and a knowledge of such duties is essential. Preference will be given to candidates with a Diploma in Public Health and having experience in infectious diseases.

The salary will be at the rate of £600 per annum (increasing by annual increments of £25 to a maximum of £700 per annum).

Forms of application and further particulars of the duties and conditions of the appointment may be obtained from the Medical Officer of Health, Victoria Street, Blackburn.

Canvassed by a copy of the three recent testimonials, must reach me by FRIDAY, June 18th and should be endorsed on the envelope "A vacant School Medical Officer". Can anyone will disqualify.

Town Hall, CHAS S ROBINSON, Blackburn, J. A. BROWN, J. A. BROWN, J. A. BROWN.

COUNTY OF DORSET

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER

The Dorset County Council invite applications from registered medical practitioners with at least three years experience since qualification not exceeding 40 years of age for the appointment of Male Assistant County Medical Officer.

Salary £500 per annum rising (subject to satisfactory service) to £700 by annual increments of £25 together with travelling and out-of-pocket expenses according to the County Scale.

Experience in the treatment of venereal diseases, as required by the Local Government (Qualifications of Medical Officers) Regulations 1930 and the possession of the Diploma in Public Health will be considered important additional qualifications.

The candidate appointed will be required to reside at Dorchester to devote his whole time to the service of the County to act under the direction of the County Medical Officer and to perform such duties in connection with the County Council's Health Services as may be allotted to him.

The post is designated under the Local Government and Other Officers Superannuation Act, 1922 and the successful candidate will be required to pass a medical examination.

Candidates must apply in their own handwriting on the prescribed form to be obtained on receipt of a stamped addressed foolscap envelope from the undersigned to whom applications accompanied by copies of not more than three recent testimonials must be received not later than Saturday June 26th 1937.

Canvassing in any form will be a disqualification. County Offices, C P BRUTTON, Dorchester, Clerk of the County Council, May 13th 1937.

CITY OF COVENTRY

ASSISTANT MEDICAL OFFICER (woman)

Applications are invited from duly qualified and registered women medical practitioners under 40 years of age for the post of Assistant Medical Officer in the City of Coventry Public Health Department. The duties will be mainly in connection with the maternity and child welfare scheme. Preference will be given to candidates possessing a Diploma in Public Health.

The salary will be £500 per annum rising by annual increments of £25 to a maximum of £700. The officer appointed will be required to devote her whole time to the duties of the post.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass the necessary medical examination as to fitness and to contribute to the Superannuation Fund.

Applications, together with copies of three recent testimonials must be made on the prescribed form (which may be obtained on request) and must reach the undersigned on or before June 2nd 1937. The Council House, A MASSEY, Coventry, Medical Officer of Health, May 14th 1937.

DEVON COUNTY COUNCIL

(Medical Department)

HAWKMOOR SANATORIUM NEAR BOVEY TRACEY

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Male Medical Practitioners for the above appointment. Candidates must be unmarried and preference will be given to applicants who have held resident hospital appointments and who have had experience in the treatment of tuberculosis. Salary will be at the rate of £450 per annum with board residence and laundry.

The appointment will be made in the first instance for a period of six months and renewable for a further six months. Forms of application may be obtained from the undersigned and must be returned accompanied with copies of not more than three recent testimonials not later than the first post on Saturday June 5th 1937.

L MEREDITH DAVIES, County Medical Officer.

4 Barnfield Crescent, Exeter, Devon.

COUNTY BOROUGH OF SOUTH SHIELDS

THE GENERAL HOSPITAL (400 Bed)

Applications are invited for the appointment of HOUSE SURGEON (male). Salary at the rate of £1,000 per annum for the first six months and at the rate of £1,100 per annum for the second six months, together with board residence and laundry. The appointment is for one year.

Forms of application may be obtained from the undersigned and should be returned accompanied by three recent testimonials not later than the first post on Saturday June 10th 1937 and enclosed in a House Surgeon's envelope.

W CAMPBELL LYONS, Medical Officer of Health.

Town Hall, South Shields.

LANCASHIRE COUNTY COUNCIL

SCHOOL MEDICAL AND CHILD WELFARE DEPARTMENT

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER

The Lancashire County Council invite applications from registered Medical Practitioners for the post of Assistant County Medical Officer.

Applicants must not be over 40 years of age and must possess the Diploma in Public Health.

The duties of the post include the Medical Inspection of school children, work under the Maternity and Child Welfare Act, general Public Health work and such other duties as may from time to time be imposed by the County Council.

The person appointed will be required to devote whole time to the service of the County Council. The salary will be £500 a year rising subject to satisfactory service by annual increments of £50 to a maximum of £1,000 a year together with travelling expenses.

The person appointed will be required to pass a medical examination and to contribute to the Council's Superannuation Fund.

Applications must be made upon a form which can be obtained together with further particulars, from the County Medical Officer of Health, School Medical and Child Welfare Department, County Offices, Preston, to whom the completed forms should be returned not later than June 7th 1937. All communications must be endorsed "Assistant County Medical Officer". Any form of canvassing is strictly forbidden and will disqualify.

County Offices, GEORGE ETHERTON, Preston, Clerk of the County Council, May 1937.

COUNTY BOROUGH OF STOCKPORT

STEPPING HILL HOSPITAL (413 Beds)

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners for the post of Resident Assistant Medical Officer (male) at the above Hospital.

Salary £700 per annum with board residence and laundry. The person appointed will be required to devote the whole of his time to the duties of the office.

The appointment is for six months, but will at any time be determinable by one month's notice on either side.

Experience in Anaesthetics will be a special recommendation.

Applications stating age, qualifications and experience together with copies of three testimonials, are to be sent to the undersigned and endorsed "Assistant Medical Officer".

Shaw Heath, Stockport, I BARLOW, Clerk to the Public Health Committee, May 14th 1937.

COUNTY COUNCIL OF LINCOLN—PARTS OF LINDSEY

Applications are invited for the post of RESIDENT MEDICAL OFFICER at ST BRANSTON HALL SANATORIUM near Lincoln.

Candidates must have held resident hospital appointments and have had experience in the diagnosis and treatment of tuberculosis.

Salary £340 rising by annual increment of £15 to £450 per annum together with the usual residential allowances valued at £100 per annum. The post is designated under the Local Government and Other Officers Superannuation Act 1922.

Application forms with particulars of the appointment may be obtained from the undersigned to whom they must be returned with copies of three recent testimonials not later than June 4th 1937.

W S H CAMPBELL, County Medical Officer of Health, Public Health Department, County Offices, Lincoln, May 18th 1937.

CITY OF NOTTINGHAM

HOUSE SURGEON AT CITY HOSPITAL

The Nottingham City Council invite applications from duly qualified medical practitioners for a position as HOUSE SURGEON (male) unitised.

Salary at the rate of £400 per annum with board residence and laundry.

The appointment will be for six months with a prospect of renewal for a further six months if a letter of satisfaction is received.

The officer appointed will be under the control of the Resident Medical Superintendent and will take duties on the surgical side of the hospital and will administer anaesthetics.

The appointment does not come under the Corporation's Superannuation Scheme.

Applications (forms and further particulars) may be obtained from the undersigned to whom they should be returned by letter.

Can anyone will disqualify. The City Clerk, J. J. FICHTNER, City Clerk, May 1937.

LONDON COUNTY COUNCIL.

Applications invited from Medical Practitioners of at least one year's standing to under mentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade 1)
—Salary £350-£25-£425 with board, lodging and washing.

(a) **NEW END HOSPITAL** Hampstead N.W.3—Obstetric experience essential. Gynaecological and surgical experience desirable.

(b) **PADDINGTON HOSPITAL** Harrow Road W.9—Duties mainly medical.

(c) **ST ALFEGES HOSPITAL** 48 Vanbrugh Hill Greenwich S.E.10—Duties mainly medical. Midwifery experience essential.

(d) **ST MARY ABBOTS HOSPITAL** Marlton Road Kensington W.8—Experience in obstetrics and gynaecology essential.

ASSISTANT MEDICAL OFFICERS (Grade 1D)
—Salary £250 a year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(e) **ARCHWAY HOSPITAL**, Archway Road Highgate N.19—Medical duties.

(f) **HACKNEY HOSPITAL**, High Street Homerton E.9—Duties mainly medical experience in anaesthetics desirable.

* No accommodation for a woman.

(g) **HIGHGATE HOSPITAL**, Dartmouth Park Hill N.19—Duties mainly medical experience in anaesthetics essential.

(h) **PADDINGTON HOSPITAL** Harrow Road, W.9—Duties mainly medical.

(i) **ST BENEDICT'S HOSPITAL** Church Lane Toolin S.W.17—Duties mainly medical. Woman officer only.

(j) **ST GEORGE IN THE EAST HOSPITAL**, Raines Street, Wapping E.1—Duties mainly medical experience in anaesthetics essential.

(k) **ST JAMES HOSPITAL**, Ouseley Road Batham S.W.12—Surgical duties.

(l) **ST NICHOLAS HOSPITAL**, Plumstead S.E.18—Duties mainly medical experience in anaesthetics essential and in midwifery desirable.

(m) **ST PANCRAS HOSPITAL** Pancras Road N.W.1—General duties.

* No accommodation for a woman.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Sixth Division 24, County Hall S.E.1 returnable by June 14th.

Canvassing disqualifies.

CITY OF BIRMINGHAM
Dudley Road Hospital
(9.6 Beds)

Applications are invited from fully qualified Medical Practitioners for whole-time appointment as **JUNIOR MEDICAL OFFICER (Male)** at the Dudley Road Hospital Birmingham. The appointment will be for a period of six months but may be extended for a further period of not exceeding six months.

Salary at the rate of £200 per annum and full residential emoluments. The officer appointed will be required to report to the Council all fees allowances and emoluments (other than the foregoing) received by him.

Further particulars may be obtained from the Medical Superintendent at Dudley Road Hospital, to whom applications stating age, experience and qualifications with copies of recent testimonials should be forwarded not later than Thursday June 10th, 1937.

BECKETT HOSPITAL AND DISPENSARY
Barnsley (4 Residents)

HOUSE PHYSICIAN (male) required to take up duty as soon as possible. Applicants must be registered, and preference will be given to those who have held a previous hospital post.

Salary £200 per annum with board residence and laundry.

Applications together with testimonials should be sent to the undersigned immediately.

ARTHUR L. BOURNE,
Secretary Superintendent.

May 25th 1937

YORK COUNTY HOSPITAL
(104 Beds)

The post of **SECOND HOUSE SURGEON** and **RESIDENT ANAESTHETIST** will become vacant on July 1, 1937. Salary £140 per annum with board, residence and laundry.

Applications stating age and previous experience, together with copies of not more than three recent testimonials to be sent to the undersigned not later than 9 a.m. on Friday June 4th 1937.

J. R. MACKRILL,
Secretary

ROYAL VICTORIA EYE AND EAR HOSPITAL,
Adelaide Road, Dublin

HOUSE SURGEON

A vacancy will occur on July 1st 1937 for a House Surgeon at the above hospital. Particulars can be obtained from the Registrar.

May 24th 1937

May 24th 1937

May 24th 1937

May 24th 1937

May 24th 1937

UNIVERSITY OF LONDON
KING'S COLLEGE

Medically qualified **RESEARCH STUDENT** required in the Department of Physiology. Salary £300 per annum. Preference will be given to an Intending Pathologist. For further information apply to Professor R. J. S. McDowall, King's College Strand W.C.2.

THE WEST RIDING OF YORKSHIRE
MENTAL HOSPITALS BOARD

MENSTON MENTAL HOSPITAL
near Leeds

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an **ASSISTANT MEDICAL OFFICER** in the Board's service at the above Mental Hospital at a commencing salary of £350 per annum rising by annual increments of £25 to a maximum of £450 together with emoluments (board apartments and laundry) valued at £10 per annum. The Board will allow an extra £50 per annum to the successful candidate who (whilst on this scale) holds or obtains the Diploma in Psychological Medicine for which this Hospital affords special study facilities.

Consideration will be given only to Candidates who have had at least one year's (preferably two years') experience in general medicine after qualification.

The appointment is subject to the provisions of the Asylums Officers Superannuation Act 1909 Class I.

Applications with copies of not more than two recent testimonials stating age and full particulars to reach the Medical Superintendent West Riding Mental Hospital, Menston near Leeds not later than June 7th 1937. There is no printed form of application.

Board Officers
Wakefield
May 1937

G. L. BANNER
Clerk of the Board

May 1937

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COUNTY BOROUGH OF PRESTON
ASSISTANT SCHOOL MEDICAL OFFICER

The Council invite applications from Registered Medical Practitioners (female) for the position of **ASSISTANT SCHOOL MEDICAL OFFICER** at a salary of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum.

The duties are mainly in connection with the School Medical Service but a certain amount of time is given to infant welfare work, ante-natal consultations, diphtheria, immunisation and the treatment of venereal diseases.

Candidates must have had not less than three years' post-graduate experience including residential appointments, and must have had special experience in retraction work. Special experience in the diseases of children will be an advantage.

The person appointed will be required to pass a medical examination and to contribute to the Council's Superannuation Fund.

Application forms, together with further particulars, can be obtained from the undersigned to whom they must be returned endorsed "School Medical Officer" on or before noon on Monday June 7th 1937.

HERBERT E. NUTTER, Town Clerk
Municipal Building Preston

May 24th 1937

CITY OF MANCHESTER

BOOTH HALL HOSPITAL FOR CHILDREN
(760 Beds)

The Public Health Committee invites applications from registered medical practitioners for the post of **RESIDENT SURGICAL OFFICER** at the above-named hospital.

The salary for the appointment is £400 per annum rising by £25 annually to a maximum of £450 per annum with board residence and laundry in addition subject to the Manchester Corporation's conditions of service.

Applicants must hold a higher qualification in surgery and must have had previous experience in residential hospital posts.

Full information and forms of application may be obtained from the Medical Officer of Health, Sunlight House, Quay Street, Manchester 3 and applications for the post must be received by him not later than June 16th 1937.

Town Hall F. E. WARBRECK HOWELL,
Manchester 2 Town Clerk

May 25th 1937

May 25th 1937

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AUSTRIAN LADY (30) SPEAKING WRITING
English, German, French seeks post as
SECRETARY or RECEPTIONIST to doctor or
dentist. Shorthand, typing. Would make herself
generally useful. Best English references—Address
No 4020 B.M.A. House, Tavistock Square, W.C.1

A Course of Training in Dispensing and
Pharmacy is given at **GORDON HALL SCHOOL**
OF PHARMACY and Secretary Dispensers can
be supplied to Doctors. Sessions January
April and September—Apply Principals School
of Pharmacy Drayton House, Gordon Street,
W.C.1 Phone Museum 3930

A LADY DISPENSER BOOKKEEPER sup-
plied immediately on request qualified
and with practical experience in private practice
and dispensary work also trained in Bacteriological
Laboratories of the **LONDON COLLEGE OF**
PHARMACY FOR WOMEN Preparation for
Examination—Write, wife, or phone (Bays-
water 0969) Secretary 7 Westbourne Park
Road W.2.

ASSISTANT NURSE SICK VISITOR RE-
QUIRED for staff of large departmental store.
Salary according to qualifications.—Write fullest
particulars with photograph to **STAFF CONTROLLER**,
Benalls, Ltd., Kingston-on-Thames.

FULLY QUALIFIED MASSEUR REQUIRES
work preferably in charge of Doctors
Electrical and Massage Clinic. Can drive car—
Address No 4002 B.M.A. House, Tavistock
Square W.C.1

LEADING FIRM OF LONDON MANU-
FACTURING chemists require the **FULL-**
TIME SERVICES of a young medical prac-
titioner to assist in the **COMPILATION OF**
MEDICAL LITERATURE. Write, giving full
details, to—Address No 4192, B.M.A. House
Tavistock Square W.C.1

PHYSICIAN RECENTLY RETIRED FROM
large general practice desires **LIGHT OCCU-**
PATION in or near London. Act. 64 active
keen.—Address No 4030 B.M.A. House, Tav-
istock Square W.C.1

SECRETARY RECEPTIONIST FOUR YEARS
with private practitioner seeks similar post
in country. Age 24 years. London. Matric. can
drive car. typist. highest refs.—Miss PONTON
c/o Dr. Inman, Hanley Staffs.

THE LONDON AND PROVINCIAL MEDICAL
STAFF BUREAU (Licensed annually by the
L.C.C.) 24b Hereford Road W.2, will supply
qualified **Doctors, Secretaries, Receptionists**,
etc without fee. Medical Practitioners
Phone Bayswater 0923

THE ROYAL ARMY MEDICAL CORPS
ASSOCIATION 85 Euston Square,
S.W.1 (Telephone Victoria 2722) supplies
qualified **Dispensers, Bookkeepers, Laboratory**
Assistants, Sanitary Assistants, Male Nurses,
Mental and Special Treatment Orderlies, Dental
Clerk Orderlies, Porters, Caretakers, etc. with
out charge to prospective employers.

LOCUMS

WANTED BY RETIRED DOCTOR LIVING
in London **LIGHT LOCUM WORK**.
Hospitality for self and wife or moderate terms
according to work. Seaside or country preferred.
—Address No 4032 B.M.A. House, Tavistock
Square, W.C.1

WANTED—LOCUM AUO 1st 14th **EASY**
Practice South London 6 gms per week.
Live out. Suit London resident. No night work.
F.W. visits.—Address, No 3527 B.M.A. House,
Tavistock Square, W.C.1

WANTED—LOCUM FOR SIX WEEKS
mid July and August. Female practitioner
with or without car. Terms £1 1s. per day
board residence and expenses.—Day Johnson and
Boor Solicitors, Park Row Nottingham.

DISENGAGED AT PRESENT—BOOKING
clients names for **LOCUM SEASON**. Large
experience. Excellent testimonials. Protestant.
British. LHC. Absentee.—Address, No 4037
B.M.A. House Tavistock Square, W.C.1

F.R.C.S.ENG FREE TO DO SURGICAL
LOCUM country July.—Address No 4049
B.M.A. House, Tavistock Square, W.C.1

INDIAN AGE 10 SINGLE, L.R.C.P. L.R.C.S.,
wants **LOCUMS or ASSISTANTSHIP**. Ex-
perienced G.P. Can drive car.—Address, No
4034 B.M.A. House, Tavistock Square, W.C.1

HOSPITALITY IN CORNWALL DURING
September for doctor and wife (or small
honourarium if alone) during holiday of partner.
Practically every day free.—Address No 3214
B.M.A. House Tavistock Square W.C.1

HOSPITALITY LOCUM OFFERED DOCTOR
and family 23 weeks Aug-Sept. in Lan-
cashire seaside resort. Work light. Car essential.
—Address No 4047 B.M.A. House, Tavistock
Square W.C.1

HOSPITALITY LOCUM WANTED BY EXPE-
RIENCED DOCTOR for month of August. Own car
if required. Country or seaside preferred. Further
particulars on application.—Address No 4036
B.M.A. House, Tavistock Square, W.C.1

LOCUM SEPTEMBER 1st 15th—COUNTY G.P.
offers use of house to doctor and family in
EXCHANGE for **LIGHT WORK**. Charming
country within 50 miles of London. Three acres
garden tennis lawn electric light.—Address No
4015 B.M.A. House, Tavistock Square, W.C.1

LOCUM TENENS (LADY) AVAILABLE during
month of June. Does not drive car.—Apply
E. PARRY EVANS 52, Galeson Road E. Putney
S.W.15

LOCUMS WANTED FROM JUNE 14th BY
woman-doctor experienced hospital and
general practice. Excellent testimonials. Can drive
car.—Address No 4023 B.M.A. House, Tavistock
Square W.C.1

LOCUM WANTED JULY AND/OR AUGUST
for Practice in small seaside town. Work
very light. Partner also in charge. Five guineas
weekly.—Address No 4009 B.M.A. House, Tav-
istock Square W.C.1

RELIABLE LOCUMS WANTED IMMEDI-
ATELY Send full particulars—**BRITISH**
MEDICAL BUREAU 33 Cross Street, Manchester 2.

WOMAN LOCUM (DOCTOR) WANTED
for London weekday-class Practice from
July 26th to September 15th. Live out.—Address
No 4040 B.M.A. House, Tavistock Square,
W.C.1

PARTNERSHIPS

WANTED BY M.B. Ch.B., act. 28 PARTNER
SHIP preferred practice considered returning
£1,200 to £1,500 p.a., within 30-40 miles of Lon-
don, preferably north side. Ample capital ready.
—Address 2671, PRINCELY TURNER, Ltd 4 Adam
Street, London W.C.1

WANTED PARTNER ABLE TO UNDER-
take major surgery in large increasing South
Coast practice. Hospital. Commencing share £900-
£1,000. Preliminary assistantship.—Address No.
4017 B.M.A. House Tavistock Square, W.C.1

ADVERTISER AGED 37 MARRIED HOS-
PITAL AND G.P. experience desires good-class
PARTNERSHIP OR PRACTICE. London suburb
or coast town. Keen on sports. Free Autumn.—
Address No 4041 B.M.A. House Tavistock
Square, W.C.1

AN EXCEPTIONAL OPPORTUNITY ARISES
for a well-qualified man, preferably with
surgeal ability to acquire a **SHARE** worth over
£1,000 p.a. in a good-class Practice in pleasant,
growing Surrey suburb. Premium 2,000 guineas.
Modern hospital in district. Good house available.
—Address No 4193 B.M.A. House, Tavistock
Square, W.C.1

A THIRD PARTNER REQUIRED FOR
rapidly growing practice (panel 1,800) in
pleasant developing area south of Manchester.
Premium for one-third share, £1,500 inclusive of
book-debts and drugs. £750 p.a. guaranteed.
—Address No 4013 B.M.A. House Tavistock
Square, W.C.1

PARTNERSHIP—HALF SHARE (ABOUT
£1,250 gross) nice type, old-established Prac-
tice in famous old city. Panel and P.M.S. worth
£700 p.a. Public School and University Graduate
in Medicine. 27/28 preferred. Premium £2,600-
good house to rent. Full details and photo to—
Address No 3575 B.M.A. House, Tavistock
Square, W.C.1

PARTNERSHIP IN VERY OLD-ESTAB-
LISHED private and panel practice in North
London. Panel about 1,500. House available.
Excellent scope. Share value £1,000 at two years
purchase. Vendor on staff of local hospital.—
No 382, B.M.A. House, Tavistock Sq., W.C.1

PARTNER WANTED IN COUNTRY PRA-
TICE. Half share, £800 per annum.
Purchase price £1,600. Near country town.—
Address No 3556, B.M.A. House, Tavistock
Square, W.C.1

PARTNER WANTED IN WOMEN'S PRA-
ctice in northern city. Share about £700. Two
years purchase. Good house.—Address No 4025
B.M.A. House Tavistock Square W.C.1

W ENGLAND—PARTNERSHIP IN
rapidly increasing **PRACTICE** near sea.
Good hospital. Scope for mid and anses. Panel
2,100. Average £3,270 p.a., increasing 5/12
share now with early increase. Two years pur-
chase. Good house 1950.—**THE WESTERN MEDICAL**
AGENCY 22 Clare Street, Bristol 1 and 25 South
Molton Street, W.1

PRACTICES

WANTED A WORKING AND MIDDLE-
class panel PRACTICE, in or near Northern
or north western part of Birmingham. Would
accept managing branch surgery.—Address No.
4039 B.M.A. House, Tavistock Square W.C.1

WANTED BY EXPERIENCED GENERAL
Practitioner (married) middle and working
class **PRACTICE OR PARTNERSHIP** with sub-
stantial panel. Income £1,500. Near pleasant
country or sea.—Address No 4004 B.M.A.
House Tavistock Square, W.C.1

WANTED BY HIGHLY QUALIFIED AND
experienced physician **PRACTICE, OR**
PARTNERSHIP IN PRACTICE, doing medico-
legal work in London.—Address No 3948 B.M.A.
House, Tavistock Square W.C.1

WANTED—MIXED GENERAL PRACTICE
in or near London or Birmingham. Income
£1,500-£2,000 with good panel. Capital available.—
Address No 4196 B.M.A. House Tavistock
Square W.C.1

WANTED MIXED PRACTICE OF £1,500 TO
£2,000 p.a. in large country town anywhere
where there are satisfactory boys' schools. No
industrial practice considered. Advertiser aged 35
experienced house to rent preferred.—Address, No
3523 B.M.A. House, Tavistock Square W.C.1

WANTED PRACTICE, LONDON W.1 W.2
W 8 or S.W. districts. Non-panel and non-
dispensing. Income about £1,500 per year.—
Address, No 4033 B.M.A. House Tavistock
Square, W.C.1

WANTED PRACTICE OR PARTNERSHIP
£1,200 to £1,500 by married man, age 44
within 50 miles of London. Near Hospital and
good schools. Country district preferred.—Address,
No 4031 B.M.A. House, Tavistock Square, W.C.1

WANTED SMALL PRACTICE OR
NUCLEUS with good house in or near
London. Strictest confidence observed by private
advertiser.—Address No 4194 B.M.A. House,
Tavistock Square, W.C.1

DEATH VACANCY, LONDON S.W.2—
Panel 1,250. Receipts about £1,000 p.a.
House on lease. Rent £100 p.a. Premium 2
years or best offer. Old-established.—**THE**
WESTERN MEDICAL AGENCY 25 South Molton
Street W.1 Tel. Mayfair 6941 and 22, Clare
Street, Bristol 1 Tel. Bristol 2,659

EAR NOSE AND THROAT PRACTICE
required in a provincial centre by expe-
rienced ENT Surgeon, M.D. F.R.C.S. (Ent).
Hospital appointment essential. Capital available.
—Address No 4190 B.M.A. House, Tavistock
Square W.C.1

FASHIONABLE RESORT 5 COAST—
Middle-class **PRACTICE**. Small panel
established 30 years. £600 net. 2 years purchase.
average visits 45. Charming situated house in
good repair (5 bedrooms) garden garage £2,300
freehold. Best and growing part of town. Must
be purchased. Suit semi-retired doctor with some
family or younger man willing take private
patient.—Address No 4003 B.M.A. House,
Tavistock Square, W.C.1

FOR IMMEDIATE DISPOSAL, OWING TO
ill-health an old-established country
PRACTICE, now doing about 2650. Panel and
appts £430. Good scope. Nice house and gar-
den 660 Gals. Water electric light.—Address
No 2915 B.M.A. House, Tavistock Square W.C.1

FOR SALE, LONDON N. RECENTLY
established **PRACTICE**. Immediate disposal
ill-health. Good-class residential area. Ground-
floor flat on lease. Suitable for man or woman.—
Address No 4005 B.M.A. House Tavistock Square,
W.C.1

FOR SALE NEAR STRATFORD E.—AVER-
AGE £2,150 including £1,050 from panel and
appointments. Rent (long lease) £120. Premium
(to include drugs etc.) £4,600.—Address No 4111
B.M.A. House, Tavistock Square, W.C.1

ST PETER'S HOSPITAL FOR STONE ETC

Henrietta Street, Covent Garden W.C.2

The appointment of CLINICAL ASSISTANTS to the undermentioned members of the Honorary Staff who attend the Outpatients Department at the times indicated will be considered at an early date. A fee of Five Guineas becomes payable to the holder of this Hospital on appointment and applications should reach the undersigned on or before Tuesday June 15th

Mr John Sandrey—Mondays 3 to 6.30 p.m.
Mr Alban Andrews—Tuesdays 2 to 5 p.m.
Mr Ogier Ward—Wednesdays 3 to 7 p.m.
Mr F J F Barrington—Thursdays 3 to 7 p.m.
Mr R Ogier Ward—Fridays 9.30 to 11.30 a.m.

(women and children)
Mr Alban Andrews—Fridays 3 to 6 p.m.
(male out-patients)
Mr John Sandrey—Saturdays 2 to 6 p.m.

BEECHY ROGERS
Secretary

CONNAUGHT HOSPITAL

ORFORD ROAD E.17

(118 Beds with four Resident Medical Officers)

HOUSE PHYSICIAN (male) required

Salary £110 per annum with residence board and laundry. Appointment for about six months from June 8th 1937. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received on or before first post on Wednesday June 2nd.

CONNAUGHT HOSPITAL

ORFORD ROAD E.17

(118 Beds with four Resident Medical Officers)

CASUALTY OFFICER (male) required

Salary £110 per annum with residence, board and laundry. Appointment for about six months from June 8th 1937. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received on or before first post on Wednesday June 2nd.

CONNAUGHT HOSPITAL

ORFORD ROAD E.17

(118 Beds with four Resident Medical Officers)

HOUSE SURGEON (male) required.

Salary £110 per annum with residence board and laundry. Appointment for about six months from June 8th 1937. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received on or before first post on Wednesday June 2nd.

CONNAUGHT HOSPITAL

ORFORD ROAD E.17

(118 Beds with four Resident Medical Officers)

SENIOR RESIDENT MEDICAL OFFICER (male) required

Salary £175 per annum with residence board and laundry. Appointment for about six months from June 8th 1937. Applications stating age, nationality, qualifications and experience accompanied by copies of not more than three recent testimonials should be received on or before first post on Wednesday June 2nd.

THE NATIONAL TEMPERANCE HOSPITAL

Hampstead Road N.W.1

Applications are invited for the following post — CASUALTY OFFICER (male). Salary £120 per annum board residence, and laundry allowance being provided.

The appointment is for a period of 6 months as from July 1st. Preference will be given to those who have held a resident post. Candidates must submit applications stating qualifications, age, etc. with copies of not more than 3 testimonials by Friday June 11th addressed to the Secretary.

CITY OF LONDON MATERNITY HOSPITAL

City Road E.C.1

Applications are invited for the post of MALE ASSISTANT RESIDENT MEDICAL OFFICER for three months from July 1st 1937. Salary at the rate of £80 per annum. At the end of the period the candidate will if satisfactory be appointed Senior for three months at a salary of £100 per annum. Forms of application returnable not later than June 12th may be obtained from the Secretary.

THE BATTERSEA GENERAL HOSPITAL

BATTERSEA PARK S.W.11

Applications are invited for the post of HONORARY RADIOLOGIST. Candidates must possess a Medical qualification and a recognised diploma in Radiology and have had previous Hospital experience.

Applications accompanied by two recent testimonials should reach the Secretary not later than June 15th 1937.

CENTRAL LONDON THROAT NOSE AND EAR HOSPITAL

Gray's Inn Road W.C.1

ASSISTANTS IN THE OUTPATIENT DEPARTMENT

There are the following vacancies — THREE THIRD ASSISTANTS—one to attend on Tuesdays at 1 p.m. one on Fridays at 2 p.m. and one on Saturdays at 9.30 a.m.

TWO SECOND ASSISTANTS—one to attend on Saturdays (first session) at 9.30 a.m. and one at 11.30 a.m. (second session).

The duties are to assist the Surgeon in seeing the patients and the posts are honorary ones.

Applications which may be for periods of three six, or twelve months, should be sent to the undersigned immediately.

JOHN H. YOUNG
Secretary Superintendent

THE CHILDREN'S HOSPITAL HAMPSTEAD

30 COLLEGE CRESENT N.W.3
(45 Beds)

Applications are invited from registered Medical Practitioners for the post of RESIDENT MEDICAL OFFICER for six months from July 1st to December 31st 1937. Inclusive Salary at the rate of £150 per annum with board residence and laundry. Applications stating age, nationality, qualifications and experience with copies of three testimonials should reach the undersigned on or before June 17th 1937.

H. W. WALLIS ORAIN

Secretary

QUEEN MARY'S HOSPITAL FOR THE EAST

END STRATFORD E.15

Applications are invited for the post of CLINICAL ASSISTANT to the SKIN DEPARTMENT at the above Hospital.

Applications accompanied by copies of recent testimonials indicating experience from candidates who must be duly Registered Practitioners should be lodged with the undersigned not later than Wednesday June 2nd 1937.

Attendance will be required weekly—namely on Wednesday mornings at 9 a.m.

RAPHAEL JACKSON (Major)

Secretary

HOSPITAL FOR TROPICAL DISEASES

Gordon Street, W.C.1
(Seamen's Hospital Society)

HOUSE PHYSICIAN (male) required for six months from July 1st. Salary £1.0 per annum with board residence and laundry. Applications, with copies of three testimonials to be sent in on or before June 7th 1937 to the undersigned.

F. A. LYON

Secretary Seamen's Hospital
Greenwich S.E.10

ST THOMAS'S HOSPITAL

VACANCY

The appointment of a PHYSICIAN and in the event of a Physician to Outpatients being promoted to the Wards the appointment of a Physician with charge of Outpatients. Candidates must be Fellows or Members of the Royal College of Physicians.

Applications, with full details of academic career and copies of testimonials to be sent not later than June 9th to Clerk to the Governors who will be pleased to give further information.

THE QUEEN'S HOSPITAL FOR CHILDREN

Hackney Road London, E.2.

HOUSE PHYSICIAN required July 1st 1937.

CASUALTY OFFICER required July 1st 1937.

Some Dermatological work additional. Salary at the rate of £100 per year with board lodging and laundry in each case.

Applications must be made on forms to be obtained from the undersigned and must be sent in with copies of not more than four testimonials, on or before June 12nd 1937.

CHARLES H. BESSELL

Secretary

THE MARIE CURIE HOSPITAL

(Centre for Treatment of Cancer in Women by Radium and X-rays)

Applications are invited from qualified medical men for the post of RESIDENT MEDICAL OFFICER. Previous hospital experience desirable.

Application to be sent with copies of not more than three recent testimonials to the Secretary — Fitzjohn Avenue N.W.3

LONDON JEWISH HOSPITAL

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HOSPITAL OF ST JOHN & ST ELIZABETH

60 Grove End Road N.W.3

Applications are invited for the post of OPHTHALMIC SURGEON to the above Hospital. Candidates must be Fellows of a Royal College of Surgeons or Masters of Surgery in a recognised University and must be engaged exclusively in the practice of ophthalmic surgery. The duties include the charge of beds. Applications will be expected to call on members of the Medical Committee.

Applications, with copies of three testimonials, should reach the undersigned from whom further particulars may be obtained on or before June 7th 1937.

F. DUDLEY HOBBS B.A.
Secretary

CITY OF LONDON HOSPITAL FOR DISEASES OF THE HEART AND LUNGS

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LONDON E.2—Old-established middle and working-class PRACTICE in thickly populated locality. Well-appointed lock-up surgery in large building rented at £150 p.a. and sub-let at £275 p.a. Receipts £840 p.a. Panel 1,150. Premium £225 or near offer.

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3. **DEVON**—Well-established Country PRACTICE. Receipts average £1,000 p.a., fair panel. Increasing Residence available. Premium £2,000 or offer.
4. **SURREY—NICE PART**—Increasing well-established PRACTICE, receipts last year £722 p.a. panel 690 rapidly growing. Nice house for sale mortgage. Premium for practice £1,100.
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6. **NEAR KILBURN N.W.**—Old-established mixed-class PRACTICE. Receipts last year £660 p.a. including panel 400. Nice corner premises on rental. Premium £900.
7. **NEAR STRATFORD E.**—Old-established PRACTICE. Receipts last year £880. Panel 750. Very nice house rent £52 p.a. Densely populated district. Premium £1,500 or near offer.
8. **RAPIDLY DEVELOPING PART 13 MILES LONDON**—Old-established PRACTICE. Receipts average £1,800 p.a. panel 1,700. Charming home and garden. Rent £109 p.a. Premium £5,000. Excellent scope.
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SOUTH COAST WITHIN 100 MILES—Average £1,200. Medium panel. Good fees. Good family house (5 bed.) and good garden for sale—1.

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S. DEVON—NEAR COAST—Over £1,000 p.a. rapidly increasing. Small panel. Premium 2 years purchase. 8/9 roomed house to rent—3.

KENT SUBURB—ABOUT £1,000 P.A. developing area. Middle and better class. Small panel. Premium 1½ years purchase. Nice house—4.

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HANTS—COAST TOWN—OLD estab. Vendor retiring. Nearly £1,200 p.a. scope. Panel 1,192. Nice house garden etc. for sale or rent. Premium 1½ years purchase—6.

EAST YORKS—CLEAN TOWN—SHARE worth about £1,200 after preliminary assistance. Middle and working-class and panel of 2,600. Premium 2 years purchase. Choice of houses—7.

LONDON W—SEMI-CONSULTANT and Electro-therapeutic PRACTICE. £700/£800 p.a. Old estab. No panel 2 appts. Fees 10/6 per Good house. 6/7 bed etc. and garage. 2nd floor could be easily sublet. Premium £500. House to rent, or would sell—8.

S WALES—£1,400 P.A. INCREASING 98 per cent panel and contract. Very little midwifery. Good house 5 bed., 2 recep. surgery etc. Rent only £40 p.a. Premium £2,000 including drugs fittings, etc.—9.

SOUTH EAST COAST—POPULAR Resort. Over £1,450 p.a. Panel 500 or more. Visits 3/6 to 2/1. Premium 2 years purchase 2 recep 3 bed consulting room etc. to rent—10.

ESSEX SUBURB—ABOUT £880 P.A. Panel 750. Visits 3/6. Surgery 2/6 up. House 4 bed. garage and garden. Rent only £52 p.a. Premium £1,700 including lease fixtures etc.—11.

SURREY—1/4 SHARE OF £2,100 P.A. in steadily increasing PRACTICE. Visits 1/6 Midy 4/2. Large panel. Premium £1,350. Choice of houses to rent or buy—12.

LONDON SE—SUBURBAN GOOD less non-panel non-dispensing. Over £800 p.a. Fees 5/ up. Imposing corner family house to rent at £95 p.a. Premium £1,250—13.

URGENT SALE—KENT COAST—Favourite Resort. Very old estab. Vendor retiring through ill-health. Average over £600 p.a. Better class non-panel non-dispensing. Visits 1/1. Surgery 10/6. Good house 6 bed. Sell or let. Premium £1,000 or offer—14.

SPA PRACTICE—ABOUT £1,400 P.A. Oldest. Fees £1 1/1 upwards. Premium 2 years purchase. Excellent detached house 3 reception cars, 8 bed, etc. Close to chief hotels and Pump Room. £3,000 Freehold—15.

MIDLANDS—PARTNERSHIP SHARE producing about £1,250 p.a. in large Practice increase later surgical scope. Premium 2 years purchase. Choice of house—16.

DEVON—COUNTRY UNOPPOSED About £1,000 p.a. Panel over 400. Fees 2/6 to 10/6. Premium £1,500. Charming house. recep 6 bed surgery etc. 1 acre. Price £2,300—17.

LONDON SE.—£500 p.a. Panel 500 increasing. Ample scope. House 3/4 bed., etc. £60 p.a. Premium £750 or offer—18.

KENT—OVER £600 P.A. PANEL worth £220 approx. Fees 3/6 to 10/6. Several appts. House 3 recep 4 bed etc. garden. Rent £70 p.a.—19.

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FULL TERMS ON APPLICATION

Practices and Partnerships for Disposal

Full particulars sent free

1 MIDLANDS—Old-established non dispensing PRACTICE in first rate residential town Cash receipts average £1 640 p.a. Panel 560 House contains 6 bedrooms etc garage and small garden Price £2 400 freehold Scope Hospital Premium £2 850

2 LONDON, S.W.—Old established good class non dispensing PRACTICE in neighbourhood of Victoria Receipts last year over £660 including an appointment worth £60 and panel of about 200 Visits range from 3/6 to £1 1s mostly 10/6 to 12/6 No Midwifery Nice flat (3 bed rooms) rent £275 p.a. on lease inclusive Scope Premium £1,200

3 E MIDLANDS—Old established country PRACTICE averaging nearly £650 p.a. in pleasant village Appointments worth over £150 and panel 500 Charming stone built house (6 bedrooms), with central heating main electric light and power and water supply Large garage garden about 1½ acres Price freehold £1 700 Scope Premium two years purchase

4 ESSEX—PARTNERSHIP in well-established and steadily increasing practice in growing residential district within 12 miles of London Receipts past year £2,200 Panel about 1 150 Suitable house or other accommodation available One third share at two years purchase further share later Good Cottage Hospital

5 SURREY—NUCLEUS OF PRACTICE in one of the best outlying rapidly growing districts Receipts last year £280 Panel 87 Modern detached (specially built) house (4 bedrooms etc), with garage and garden Price £1 765 freehold, Plenty of scope for energetic man Premium £300

6 LONDON—Well established RADIOLOGICAL PRACTICE in thickly populated suburban district Receipts last three years averaged £1 060 p.a. Fees range from 10/6 to £8 8s House containing 10 rooms would be sold for £800 or let at £50 p.a. on lease Good introduction Premium £1 800

7 KENT—Old established and steadily increasing PRACTICE (in hands of Medical Woman) in rapidly developing district Receipts last year £680 No panel Visits mostly 5/- medicine extra Suitable residence could be obtained Excellent scope Premium £1 000

8 MADEIRA—PRACTICE averaging nearly £600 p.a. in one of the best parts Fees 10 6 and £1 1s almost entirely hotel work Excellent scope Premium £315

9 N WALES WATERING PLACE—PARTNER SHIP in middle and upper-class Practice averaging nearly £3 800 p.a. including selected panel 245 Fees 5/- to 10 6 without medicine—some £1 15 Detached house (4 bedrooms etc) with good garage and small garden to rent on lease Scope Premium one half share £ 900 to include surgery fittings, drugs and book debts Hospital

10 ESSEX—Old-established PRACTICE in outlying Suburban District Receipts average £2,125 p.a., including appointments worth about £260 p.a. and a panel of 1 784 Well-situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance Garage and fair-size garden Rent £120 on lease Premium two and a quarter years purchase Purchaser must be English, Scottish or Irish

11 N.E. COAST—PARTNERSHIP (after preliminary Assistantship) in mixed Practice about £3 100 p.a. in seaport town Panel 2 600 A suitable house could be obtained One third share at first to suitable man at two years purchase (or near offer) with option to increase to two-fifths in three years and to four-ninths later

12 S OF ENGLAND—Old established PRACTICE in agricultural district about two miles from the sea Cash receipts 1936 £995 including panel of 450 Fees 2/6 to £1 1s Medicine extra Good house (5 bedrooms 2 box rooms, etc) in half acre of ground with garage Central heating Electric light Price freehold £2 200 Scope for increase Premium £1 730

13 S DEVON—Increasing PRACTICE of £1,000 in delightful country district Panel 260 Fees 7/6 to £2 2s House with 5 bedrooms garage and garden etc to rent at £50 p.a. Scope Premium £2 000 or near offer

14 LONDON S.W.—Well-established PRACTICE (held by Medical Woman) in outlying suburban district Cash receipts average £960 p.a. No panel but scope if desired Purchaser could have use of surgery premises and living accommodation with services by arrangement Premium one and three-quarter years purchase

15 S COAST—PARTNERSHIP in very old-established good middle-class Practice £4 690 p.a. in rapidly growing watering place Panel 4 000 Visits range from 3/6 to £1 1s Suitable house obtainable Scope One fourth share would be sold at first at two years purchase

16 N.E. COAST—Old established and easily worked middle and better working-class PRACTICE averaging over £1 150 p.a., in seaport town No panel—a few contracting out patients Visits 5/- to 15/- Rent of consulting rooms £26 p.a. A suitable residence could be obtained Good scope much building going on Premium £1 500 (Contents of consulting rooms—including X Ray plant and electrical apparatus—about £120)

17 W WALES—PARTNERSHIP in first-class country Practice near sea coast Good house available to rent Facilities for country sport and for golf tennis and bathing Premium for share of £1 000 to £1 500 one and a half years purchase Knowledge of Welsh desirable

18 ESSEX—PARTNERSHIP in old established Practice in populous suburban district Panel about 3 000 Practically no Midwifery Semi-detached corner house (6 bed and dressing rooms) with garage and small garden to rent Plenty of scope for increase Premium for share worth about £300 p.a., £1 400 (by instalments if desired) Further share after about 18 months

19 N WALES—Old-established PRACTICE in growing district with beautiful surrounding country Receipts average £1,550 p.a. including over £800 from panel Visits 5/- to 15/- Nice private residence which can be bought or rented on lease Professional accommodation rented at £45 p.a. on lease Premium two years purchase or near offer Knowledge of Welsh an advantage though not essential

20 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London Panel 400 increasing Semi-detached house (4 bed and dressing rooms) with garage and garden to rent Scope for increase Premium £900

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Practices and Partnerships for Disposal (continued)

21 YORKSHIRE (N.R.)—Very old-established and steadily increasing country PRACTICE, between £1,400/£1,500 a year, including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden, for sale. Good schools and sport. Scope. Premium one and a half years purchase.

22 WESTERN AUSTRALIA—Old established PRACTICE, averaging £1 235 p.a., in small town in centre of one of the best and most prosperous pastoral areas. Brick built house (4 bedrooms) electricity and water. Rented on lease. Premium £640 sterling. Two Hospitals in town.

23 LONDON, S.E.—Increasing PRACTICE in populous outlying suburban district. Receipts last year £1 120. Panel nearly 1,200. Large house for sale or rent. Two Branch Surgeries. Scope for increase. Premium £2 000.

24 OPHTHALMIC PRACTICE in S Rhodesia—Locum Tenens required immediately with view to purchase. Gross receipts 11 months ended March 31st, 1937 £1,536. Possibilities of expansion for man with D.O.M.S. or D.O. and operative experience. Good well-equipped Hospital.

25 DEATH VACANCY—BOURNEMOUTH DISTRICT—Old-established PRACTICE doing about £250 p.a., but offering good scope. Panel recently started with 20 patients. Excellent no. basement house (6 bedrooms etc.) with garage and small garden. Price freehold £3 150.

26 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village. Cash Receipts last 12 months £1,240. Panel over 500. Small expenses. Detached house (5 bedrooms) with electric light main water etc. garage and garden for sale. Premium £2 100.

27 EAST ANGLIA—PARTNERSHIP in old established country practice about £3 700 p.a. Easy distance of the coast. Panel over 2 000. House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale. Freehold. Premium two fifths share two years purchase. Partner must be married aged 35-40. Preliminary Assistantship.

28 LONDON, N.W.—Increasing PRACTICE of £725 p.a. in growing district 30 minutes from Piccadilly. Receipts last year £764 (recently obtained appointment value £40 p.a., not included). Panel 550. No midwifery. Semi-detached double fronted freehold corner residence (4 bedrooms) garage and garden for sale. Scope. Premium £1 450.

29 SCOTLAND—PRACTICE averaging over £1,300 p.a. in Edinburgh. Panel over 900. Good house for sale.

30 LANCS.—Rapidly increasing mixed-class PRACTICE of £3 800 p.a. in manufacturing town. Panel about 2,670. Two houses to be purchased or rented at first. Alteratively a one half share would be sold at two years' purchase.

31 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2,500 p.a. Panel 1 790. House with 4 bedrooms and separate surgery accommodation, garage and garden to rent at £55 p.a. Scope. Premium one third share two years purchase.

32 S OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London. Panel 900. Well built house (5 bedrooms etc.) available for sale. One third or two-fifths share at two years purchase.

33 S OF ENGLAND—Well-established PRACTICE averaging nearly £1,200 p.a. in a seaside resort. Panel over 700. Visits 3/6 to 10/6, mostly 5/. Very little midwifery. Good corner house (5 bedrooms) with central heating, garage, and small garden for sale. Well-equipped Cottage Hospital. Good scope. Premium two years purchase.

34 LONDON, W.2—PRACTICE averaging over £800 p.a., including panel 165 Consultations 5/ upwards. Private residence to rent at £120 p.a. and surgery premises at £60 p.a. Scope for increase. Premium two years purchase.

35 LONDON, W.—PRACTICE of about £700 p.a., in residential district. Panel 500. Large corner house (7 bedrooms) with separate surgery entrance and good garden. Price of lease £1 350. Scope. Premium £1,250.

36 MIDLANDS—PARTNERSHIP in old established increasing Practice in pleasantly situated Country Town. Good appointments and panel. Visits 3/6 to £1 11s 6d. Medicine extra. Suitable house obtainable. Incoming partner must be good Surgeon—English or Scottish—aged 30-35. Small well-equipped Hospital. Share worth £1,250 p.a. at first at two years purchase.

37 MIDLANDS—Old-established PRACTICE in clean prosperous Manufacturing Town. Receipts average £750 p.a., including P.M.S. worth £125 p.a., and panel about 750. Pleasantly situated house (5 bedrooms, attics, etc.) on main road. Price (freehold) £3,200. Ample scope. Premium one and three-quarter years purchase.

38 E. ANGLIA—PARTNERSHIP in old established and steadily increasing Practice about £2,300 p.a. in beautifully situated Country Town. Panel 1,850. Good society and sport. Scope. One third share at first. Premium two years purchase.

39 N DEVON—Old-established PRACTICE averaging over £1 050 p.a. in small Watling Place. Panel about 400. Well built semi-detached house (5 bedrooms etc.) garden for sale. Beautiful surrounding country. All kinds of sport. Scope. Premium two years purchase.

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Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed.

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- 11 OUTLYING NORTHERN DISTRICT—Recently established PRACTICE at present producing over £340. Suitable house on rental at £90 p.a. Premium £340.
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- 13 SOUTHERN COUNTIES—Well established non Panel PRACTICE producing about £3 000 p.a. Fees from 5/1. Suitable house can be rented at £90 p.a.
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- 19 CROYDON AREA—Recently established PRACTICE. Receipts for last 12 months over £660 including Panel of 340. House with 4 bedrooms etc. garden and garage can be rented at £83 p.a. Premium £740.
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- 30 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to Vendor's illness. Panel about 640. Large house can be rented at £150 or purchaser could probably choose own residence.
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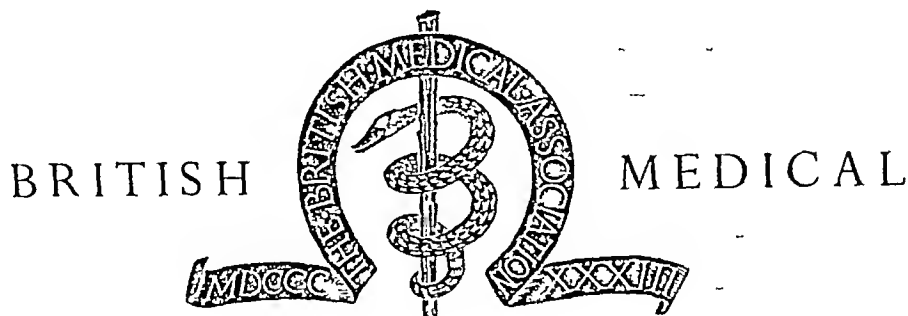
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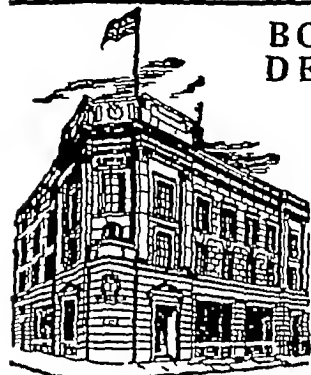
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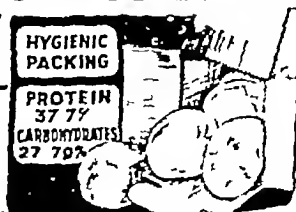


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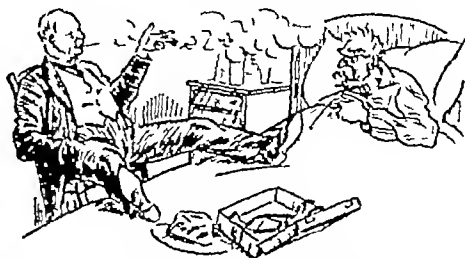
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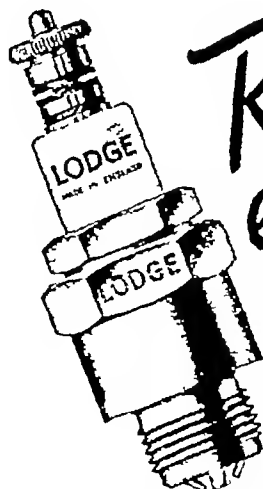
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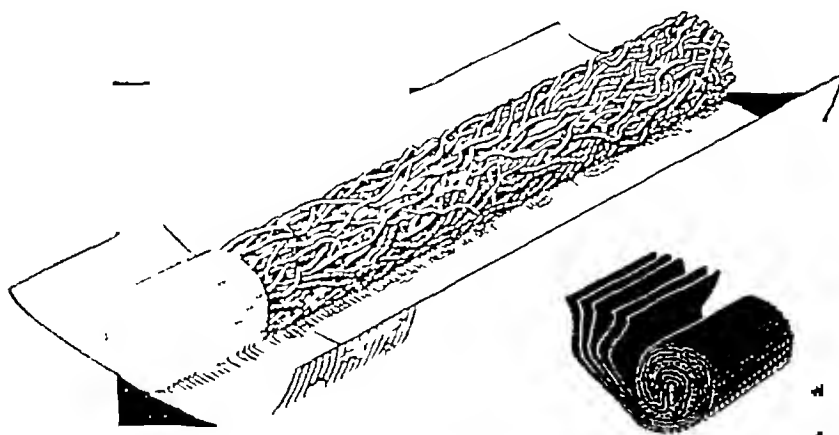
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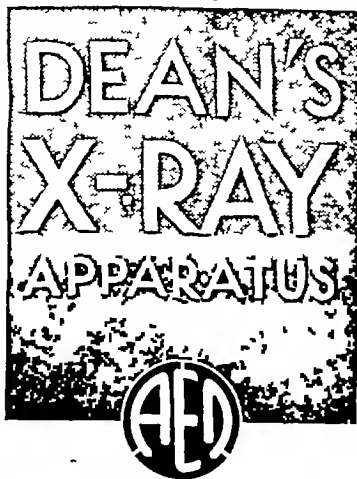
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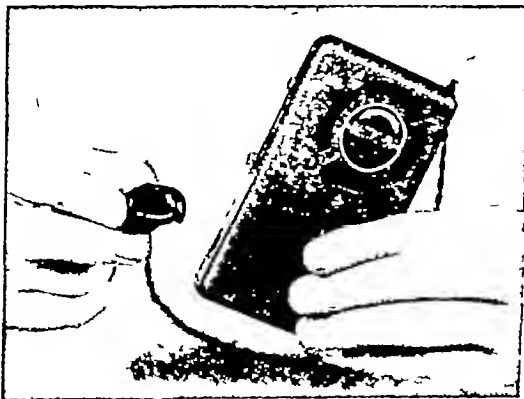
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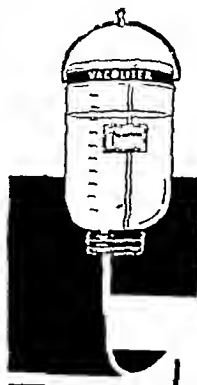
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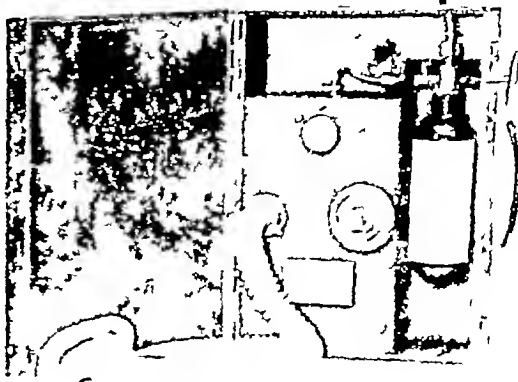
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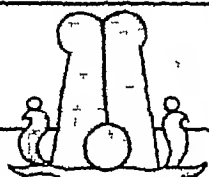
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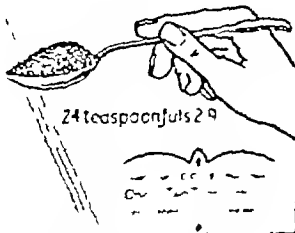
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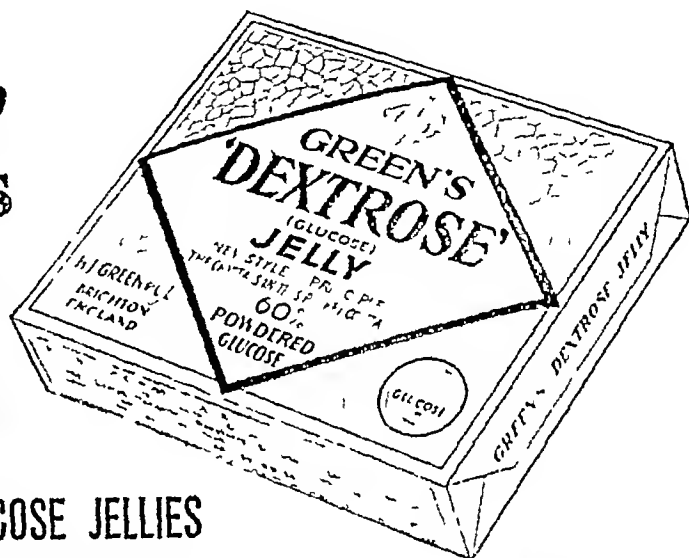
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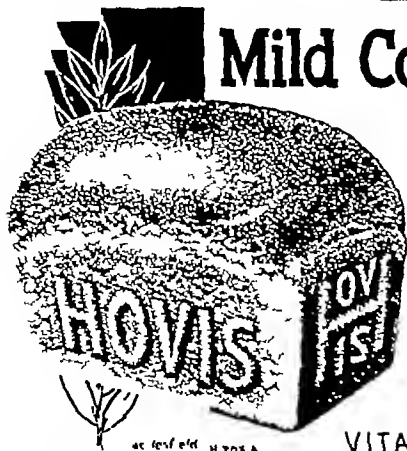
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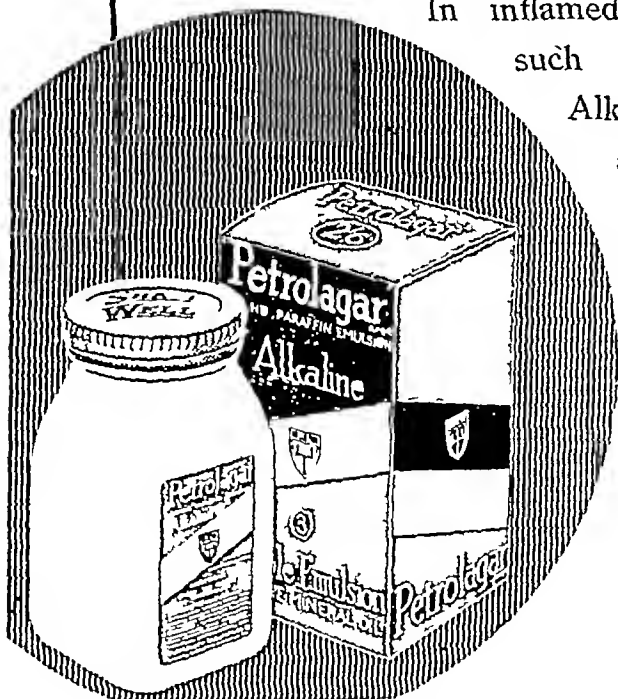
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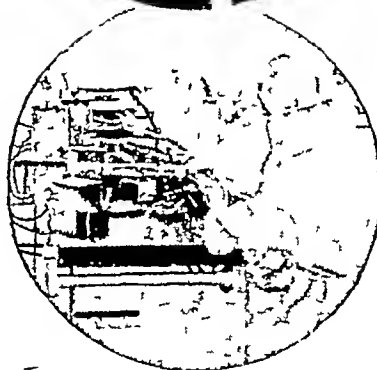
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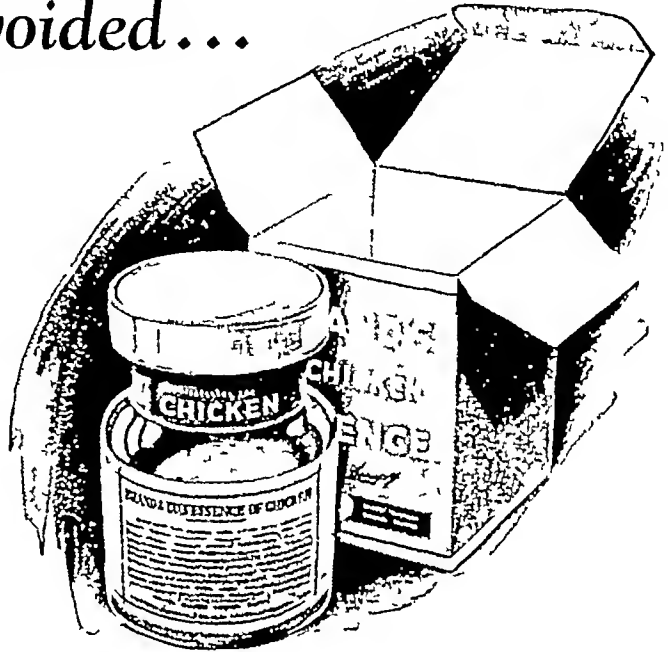
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EARLY DIAGNOSIS AND TREATMENT OF HEART FAILURE*

BY

WILLIAM EVANS, M.D., F.R.C.P. LOND

Assistant Physician London Hospital

(WITH SPECIAL PLATE)

Few illnesses can more readily compel a medical attendant to apply immediate therapeutic measures than heart failure. So alarming may be the symptoms and so great the anxiety surrounding the patient that a demand for hurried action is everywhere evident. Never is the necessity greater, however, for the doctor to make haste slowly, to act promptly but not precipitately, and yet again to treat cautiously but expeditiously. The need to do something is always present, but it should be no greater than the need to know everything before doing anything, so that an immediate perception of the expected course of the illness, and the processes involved, is an essential preliminary to the competent treatment of heart failure.

The Mechanism of Heart Failure

Although the true mechanism of heart failure continues to remain an unsolved problem, our knowledge of it on the one hand has helped us to conceive certain principles in treatment, and on the other hand our lack of knowledge is unlikely to have withheld anything revolutionary from present-day methods of dealing with the condition. The changes during failure are familiar to us, it is the evolution of these changes which eludes precise exposition.

The back pressure failure theory envisages stasis of blood in the vascular areas which drain in the direction of the affected heart chamber, so that obstruction in the mitral valve is expected to produce the following sequence of changes: distension of the left auricle, engorgement of the lungs, distension of the right ventricle and of the right auricle, engorgement of the veins of the neck and cyanosis, distension of the liver, and oedema of the lower extremities. Recently it has been shown (Thompson and White 1936) that left ventricular strain from hypertension, aortic valve disease or infarction of the left ventricle is the commonest cause of hypertrophy of the right ventricle, which occurs regardless of the presence of clinical evidence of left ventricular failure although this increases the degree of hypertrophy.

The forward pressure failure theory, supported by Sir James Mackenzie, postulates systemic failure following inadequate output of the left ventricle, while pulmonary symptoms in the same way are the outcome of failure of the right ventricle. This deficiency in the outflow of blood results in a depletion of the vascular areas and in ischaemia of the tissues situated in front of the affected heart chamber.

It is likely that both back pressure phenomena and a diminished cardiac output are features that exist together in many if not in most instances of congestive heart failure, but the knowledge of the part which each plays

in the development of failure is unlikely to contribute in a greater measure to the treatment of the condition than to indicate the need of relieving congestion and of increasing the efficiency of cardiac contraction.

Size and Position of the Heart in Failure

Cardiac enlargement is usual in failure, but it is rarely the direct result of failure, and its distribution and extent depend chiefly on the lesion which is providing the cause of the failure. Either with or without failure the progression of cardiac enlargement is very gradual so that sudden dilatation of the heart seldom occurs. Whenever such an event has been implied from a clinical examination, and displacement of the apex beat to the left has been noticed, three influences contriving to produce this change must be kept in mind before attributing it to cardiac enlargement. They are tachycardia, distension of the liver and ascites producing elevation of the diaphragm, and a right-sided hydrothorax. Even on radioscopic caution must be exercised when assessing the development of cardiac enlargement, so that the "squatting" posture of the heart, assumed as a result of a raised diaphragm from any cause, must not be interpreted as enlargement. Again, the possibility of pericardial effusion enlarging the cardiac silhouette as seen on radioscopic should receive attention in any case where an exacerbation of failure signs has occurred with the formation of effusion within serous cavities.

It is held by some that hydrothorax (usually right-sided) from heart failure does not cause cardiac displacement,

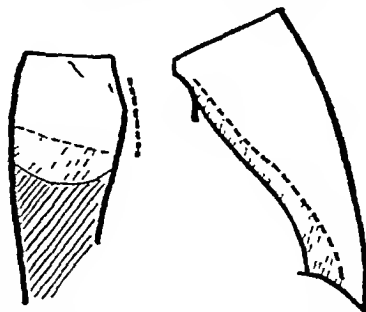


FIG A.—Displacement of heart in failure. Diagram showing superimposed outline of heart in teleradiographs 1 and 2 of the Special Plate.

but this is fallacious (see Figs 1 and 2 on Plate and Fig A in text). Certainly it does not displace the heart to the same extent as does an inflammatory pleural effusion because the quantity of fluid is not so great and, further, whenever the effusion in heart failure has become considerable pulmonary congestion with pleural effusion

*The substance of a lecture delivered before the North Eastern and Big Knoll Division of the British Medical Association, March 16, 1937.

occurs on the opposite side, and this opposes the initial displacement

Evidence of Early Failure

The need for recognizing early heart failure is only equalled by the need for early treatment and early treatment depends on early diagnosis. In order to gain this end the earliest evidence of failure must be sought in those patients known to suffer from heart disease which is expected to give rise to heart failure sooner or later. In them symptoms develop gradually and almost imperceptibly, so that our awareness of this happening will usually lead us to seek for premonitory signs and not to wait for the fully developed clinical picture of heart failure characterized by cyanosis, considerable breathlessness, conspicuous engorgement of the veins of the neck, pulmonary congestion with right-sided hydrothorax, enlargement of the liver with ascites, oedema of the lower extremities, and scanty urine with albuminuria. The recognition of early congestive heart failure depends on attention to the following essentials: undue breathlessness to customary exertion, venous engorgement, pulmonary congestion, hepatic distension, and a familiarity with the causes of heart failure.

Undue Breathlessness

Breathlessness on exertion occurs in health. With advancing age or with the onset of obesity this natural reaction to increased physical performance becomes accentuated. The breathlessness which heralds the commencement of heart failure is characterized by its occurrence during exercise which hitherto produced no breathlessness, or which is in excess of that measure which was customarily induced by a standard form of exercise. Thus the hall-mark of pathological breathlessness is present when exercise which usually produced no breathlessness induces it, when exercise which previously initiated breathlessness causes undue breathlessness, and when the breathlessness has shown progression within a relatively short period of time.

Venous Engorgement

An increase in the venous blood pressure may be regarded technically as the first evidence of heart failure but unfortunately its estimation cannot be carried out with the same ease as the registration of the arterial blood pressure. The direct method of recording the venous pressure by connecting a venepuncture needle to a manometer filled with citrate solution cannot for obvious reasons become common practice in clinical medicine so that some other means denoting a change in the venous pressure is desirable. Sir Thomas Lewis (1930) directed attention to a method which permits an approximate clinical estimate of the venous pressure. He pointed out that in health all veins which lie at a higher level than the manubrium sterni remain collapsed and those below are distended. Thus in a healthy patient in the reclining posture with the head resting on a pillow the external jugular veins are distended for about one third their course from the clavicle to the angle of the lower jaw. In a patient presenting a slightly raised venous pressure the column of venous distension reaches the centre of the sternomastoid muscle or higher. The veins in the neck are not evident in a healthy subject in the erect position but in established heart failure they are visible as cords reaching from the clavicle to within a variable distance of the mandible. This clinical indicator of the venous pressure should gain significance not only on account of its relative accuracy but also on account of the simplicity of the observation.

Pulmonary Congestion

When persistent crepitations are elicited over the bases of the lungs, mostly on the right side, from heart failure, the presence of a considerable degree of pulmonary congestion can be presumed. Earlier evidence of pulmonary engorgement is marked by vascular congestion in the hilum of the lungs. Careful auscultation along each side of the spine over the middle zones will often disclose, especially after coughing, isolated coarse crepitations at the end of a deep inspiration, but commonly the presence of this degree of congestion can only be made out on radioscopy, certainly the extent of hilar congestion can only be told by this method. The picture obtained is a characteristic one presenting wing-like shadows spreading from each hilum, and caused by an increase in the density of the pulmonary vessels, which are depicted here and there in cross section and appear like ink blots (Plate, Figs 3 and 4).

The help provided by radioscopy in the recognition of early heart failure has not yet gained the reputation it deserves. Nor should the method be applied solely in diagnosis, for it also provides an index in the evaluation of progress during treatment, so that the extent of hilar congestion as determined at intervals by radioscopy determines the advance or retreat of the process of failure (Plate, Figs 3 and 4).

Hepatic Distension

An increase in the volume of the liver is a sensitive indicator of an increase in the venous blood pressure. Although this natural manometer does not supply accurate quantitative values, when enlargement of the liver has been made out it serves as early evidence of heart failure, so that whenever failure is suspected or expected distension of the liver should be sought. Palpation immediately below the right costal margin may elicit tenderness in a patient presenting hepatic distension, but a quest for the descended liver edge as the hand travels upwards from a low position is a more reliable method of examination.

Specific Causes of Heart Failure

Familiarity with the conditions capable of precipitating heart failure ensures timely and efficient attention to a patient in whom failure threatens. To anticipate heart failure is often to postpone it to remain unaware of its causes and its early manifestations is to allow its grosser signs to develop. The causes of heart failure may be conveniently considered in two groups, as suggested by Parkinson and Clark Kennedy (1926), but here a reference to these will only include in the first place any special features which facilitate early diagnosis and secondly those details concerning the treatment of each group which cannot be regarded as common to all cases of failure.

Treatment of Established Heart Failure

Certain general principles apply to the treatment of most of the common examples of heart failure, so that in the first place it is opportune to consider these and later to detail any particular remedy or procedure which may apply when certain specific causes are present. An outline of those therapeutic measures to be adopted in the general case of heart failure is facilitated by referring to three distinct clinical types—established heart failure, early heart failure and abrupt heart failure.

The designation "established heart failure" is applicable when a patient presents characteristic physical signs of failure which have developed gradually and have pro-

gressed during the absence of treatment or with inadequate treatment. No rigid rules can be formulated to govern the management of all cases of established heart failure, but although every patient must be studied individually the treatment should generally provide for adequate rest, digitalization, and diuresis.

REST

In ambulatory cases a limitation of activity is of first importance in treatment, and in order to gain the fullest benefit from this curtailment of exercise the patient's usual daily habits should be ascertained and a programme modifying the day's activities should be complete in detail. A later rising time in the morning and an earlier retiring time at night periods of rest in the reclining posture after meals, walking slowly on level ground and avoiding hurrying and climbing, are among the instructions imparted to the patient in whom established heart failure is controlled by digitalis medication. At night the provision of extra pillows promotes rest and sleep.

In non ambulatory cases absolute rest is sought, and a patient is discouraged from indulging in any exertion, not even turning in bed. Again the head and shoulders should be supported in the upright posture, and although devices to meet this necessity have been improvised in the form of chairs, extension of these amenities to the construction of special beds has received but scant attention. Such a bed was designed by Sir Thomas Lewis, but the adoption of this helpful instrument in the treatment of heart failure in the wards of a hospital has proceeded very slowly.

Inseparable from any method adopted to ensure rest in a case of heart failure is the alleviation of the patient's natural apprehension and the provision of sleep. Alcohol, in that it is conducive to sleep and causes a feeling of well being may be dispensed with benefit, but in no sense must it be regarded as a heart stimulant. A mixture containing 20 grains of potassium bromide and chloral hydrate often suffices as a hypnotic or resort may be made to the barbiturates (sodium luminal 1 to 2 grains) or morphine (1/2 grain dissolved in the mouth, or 1/4 grain hypodermically). Certainly these drugs should be used with determination as they are important agents in the treatment of heart failure.

DIGITALIS

Good wine needs no bush and certainly the utility of digitalis in the treatment of heart failure does not need to be advertised; it has proved its worth. What does require emphasis is that it should be used in adequate doses so that our duty in treating heart failure is not so much the giving of digitalis as establishing a state of digitalization. Digitalization is only present when the patient's symptoms are lessened when diuresis has resulted when the pulse rate has been slowed to 70 per minute or under, when the ventricular rate has been similarly diminished and the pulse deficit annulled and when depression of the R-T segment is a feature of the electrocardiogram.

A choice of the preparation of digitalis must necessarily be made before determining the dosage. It is most desirable to adhere to the administration of a single preparation and acquire experience of its effects in different patients. Nothing is gained in fact a good deal is lost by substituting various preparations of digitalis either in the same patient or in different patients. It is far better to acquire exact knowledge of the value of a single preparation than to nourish a doubt concerning the comparative value of a number of preparations. The following may be regarded as representative of the digitalis group

and dependable when used in the indicated daily doses powdered leaf (4 grains), tincture (45 minims), Nativelle's granules (1/125 grain), and digoxin tablets (0.45 mg). Although these doses are comparable and basic they are not to be regarded as absolute standards in all patients with established heart failure. The dosage should be adjusted according to the severity of the failure, weight of the patient, and particularly the length of time required to establish a state of digitalization. In most instances the suggested standard dose is the approximate one, but often it will need increasing and sometimes decreasing.

DIURESIS

To produce efficient diuresis should be a constant aim in every case of established heart failure, and there is more than one method available to attain this object.

That rest in bed combined with a diminished fluid intake can produce prominent diuresis has not gained sufficient recognition. Fig B illustrates this effect in a

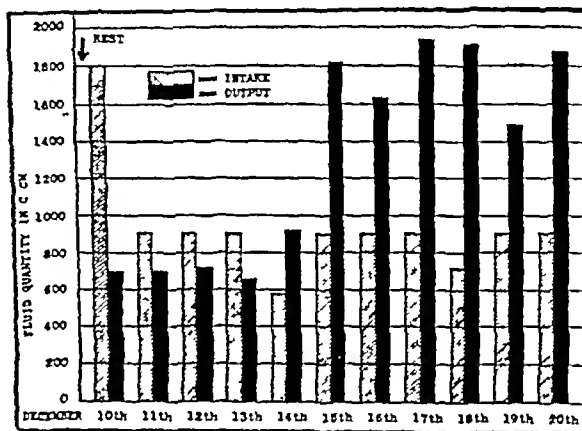


FIG B—Chart showing diuresis following rest in bed and a diminished fluid intake in a patient with mitral stenosis and heart failure with normal rhythm.

female, aged 36 years, with mitral stenosis, in whom the features of early heart failure presented. Cognizance of this happening is necessary in the evaluation of any remedy credited with diuretic properties in the patient instanced here unmerited repute might have been accorded any drug professing a diuretic action if it had been introduced when the patient was voiding scanty urine on admission to hospital. The lesson in this connexion is twofold: first it impresses the need of prescribing rest combined with a diminished fluid intake (1½ pints daily) in patients presenting heart failure, and, secondly, it emphasizes the importance of adequately controlling all clinical tests conducted to assess the diuretic properties of any drug.

Foremost among the drugs which can effect diuresis in heart failure when administered by mouth, is digitalis, and in most instances it should be preferred to other remedies in this group, such as ammonium chloride or the purine diuretics—for example, theobromine diuretin, theophylline or euphylline.

Intravenous and intramuscular salyrgan or novurit in 2 c.cm doses are pre-eminently the most powerful diuretics we possess and they form important implements now available to combat the effects of heart failure and to help restore cardiac efficiency. Parkinson and Thomson (1936) have shown that novurit gives satisfactory results when used as a suppository although of course its diuresis is not so profuse as when it is introduced intravenously.

or intramuscularly, but the advantages afforded by the simplicity of this method of administration are obvious. The prescribing of ammonium chloride along with salyrgan increases diuresis, but this is not always considerable. The most recent advancement in the treatment of heart failure has been the addition of mercurial diuretics to the other effective therapeutic agents—rest, digitalis, and hypnotics.

The effect of total ablation of the thyroid gland in heart disease presenting paroxysmal nocturnal dyspnoea and heart failure has to be discussed. Impressions concerning the benefit gained from this procedure are best got from a study of the results obtained in seventy-eight cases [thirty six by Blumgart and others (1935), and forty-two by Levine and Eppinger (1935)]. The therapeutic benefit enjoyed by some of these patients coincided with the lowering of the basal metabolism, and when this became reduced to minus 30 per cent. myxoedema frequently intervened, and this in turn responded to small doses of thyroid without materially detracting from the improvement resulting from the lowering of the basal metabolism. If heart failure was present with persistent oedema the operative risk increased considerably, so that it is evident that *total thyroidectomy is not often desirable* in instances showing failure, and certainly this procedure should be undertaken only when the recognized methods of treatment have failed and when the operation can hold out a reasonable prospect of considerable improvement.

Treatment of Early Heart Failure

A patient with heart disease is commonly examined during the pre failure period, when he will derive greater benefit from observation and instruction than from the initiation of any form of zealous treatment. Medicinal treatment, apart from a placebo, is unlikely to produce material benefit during this period. Certainly any attempt at digitalization at this stage is ill advised and without promise of improvement, so that it should be discouraged even though it might be given without harm.

In particular the patient is to be instructed on the subject of activities and diet. While it is permissible or even desirable to indulge in limited or graduated exercise, exertion is prohibited. In connexion with diet it is desirable that it should not be heavily salted and stress is directed to two main essentials—namely the avoiding of large or indigestible meals and, if obesity is a feature the resorting to a fat-reducing diet.

To gain the co-operation of the patient during this pre-failure phase should be a first consideration. No amount of enthusiasm or even heroism in treatment will produce improvement if the patient is not the doctor's ally. Nor must the psychological side be neglected so that encouragement and just optimism should be dispensed along with firm dissuasion where needed. The over-cautious should receive encouragement, and the reckless should be restrained and be made to realize the consequences of any disregard to instructions. Improved health should be promised on conditions and as a reward of attention to advice.

If the signs of early heart failure are beginning to collect and there is increased breathlessness, slight venous engorgement in the neck, and hilar congestion detected by radioscopy apart from the precautions already enumerated concerning exercise and diet, periods of controlled rest should be outlined. These will be in the mornings and evenings after the midday meal and at the week-ends. Digitalis should be added if auricular fibrillation has set in. The administration of mercurial diuretics combined

with a much-reduced fluid intake should be conjoined with the week-end rest.

The treatment adopted for this group of patients almost merits the designation prophylactic treatment, at any rate, it aims at postponing the signs of established heart failure. The measure of success gained from the care devoted to these cases justifies the zeal involved in collecting cases within the scope of this group.

Treatment of Abrupt Heart Failure

In some patients in this class the precipitation of heart failure may be an unforeseen contingency, and this particularly applies to cardiac infarction. It may also occur unexpectedly in hypertension, although paroxysmal nocturnal dyspnoea will often serve as a premonitory sign. Sudden exacerbation of failure symptoms may also occur in cases with established heart failure hitherto controlled by treatment, or even in some instances of early failure, in both of these groups either a period of increased activity and exertion or some intercurrent illness has caused a damaged heart to fail suddenly.

It is in this class of cases that the urge to do something is so strong and good judgement so often yields to mismanagement created by over-enthusiasm. The term 'cardiac stimulant' designates the drug whose purpose it is to help the heart in this sudden crisis. Many drugs have gained a reputation in this field, but usually this has not been merited and has been gained through uncontrolled clinical impressions. Strychnine, camphor, and pituitary are in this category, and have far survived their usefulness in this connexion. A warning is overdue concerning the danger of the wholesale and indiscriminate use of proprietary preparations imputed to be of this class of 'cardiac stimulants' in virtue of their action, variably claimed to be on the medulla, on the peripheral circulation, on the coronary circulation or as 'cardiac hormones'. A plea for resort to controlled clinical assay is made in order to regain a proper perspective of the value of these potions.

Strophanthin has seldom shown superiority over digitalis in cases of precipitate heart failure. Digitalis, particularly digoxin, has great value in abrupt heart failure associated with auricular fibrillation. Oral administration of 1 mg. of digoxin can lower the ventricular rate in auricular fibrillation within a few hours. Its success when the heart rhythm is regular is not so assured. Little or no advantage is gained by intravenous administration of digitalis.

Whenever cyanosis is a prominent feature and there is conspicuous venous engorgement in the neck, venesection is good practice. If restlessness and sleeplessness present hypnotics must be administered in adequate doses after providing support for the head and shoulders and making the patient comfortable.

If oedema and ascites are features salyrgan is indicated. In the case of a female patient with much oedema it is necessary to anticipate the considerable diuresis by tying in a urinary catheter in position so that the patient's energy is in this way conserved. Salyrgan medication has dispensed with the necessity of purging an oedematous patient for the purpose of ridding him of superfluous tissue fluids.

Heart Failure in Specific Conditions

Certain special features in the mechanism of early diagnosis and treatment of specific conditions which intimate failure will now be described.

HYPERPIESIA

Whenever congestive heart failure appears in a patient and the heart rhythm is regular, hyperpiesia may be regarded as the likely cause. To bear this in mind is to recognize the underlying condition when the failure has produced a fall in the blood pressure value. Sometimes when the onset of failure has caused the systolic figure to fall to a normal level the diastolic value has continued to remain high, permitting the diagnosis of hypertension. Often however, a fall in the diastolic blood pressure has accompanied a similar change in the systolic blood-pressure value and the diagnosis then rests on a record of a raised blood pressure during the pre-failure period and the finding of cardiac hypertrophy chiefly involving the left ventricle. An ominous sign has appeared when heart failure has been added in a case of hyperpiesia. Improvement may occur for a time, but longevity can hardly be mentioned in connexion with prognosis.

Digitalis is without any great reputation in the treatment of hypertensive heart failure, but it always merits a trial in individual cases, as it will usually produce some degree of improvement. Certainly it is the treatment of choice in the less common instances where auricular fibrillation is present.

The mercurial diuretics salyrgan and novurit hold first place in the treatment of hypertensive heart failure, and the administration of these should be augmented by providing organized periods of rest and a diminished intake of fluid (Figs 5 and 6).

Further, when failure has set in as a complication of hypertension, paroxysmal nocturnal dyspnoea (cardiac asthma) is a frequent accompaniment, and demands specific treatment in addition to the general regime adopted for the failure. The patient must be propped up in bed and potent hypnotics such as sodium luminal, 14 grains or morphine 1/4 grain administered each night until the general condition is improved from the use of diuretics. Digitalis medication should also be given a trial in these cases.

AORTIC INCOMPETENCE AND AORTIC STENOSIS

Aortic incompetence from syphilitic aortitis and endocarditis invariably precipitates heart failure with a regular cardiac rhythm and so does rheumatic aortic incompetence if the mitral valve has remained healthy or is only slightly damaged. Similarly the cardiac action is regular in aortic stenosis with heart failure if the aortic valve is the only valve affected. As in the case of hyperpiesia the onset of failure is a serious complication, and signals a grave outlook.

The failure associated with aortic valve disease also assumes hypertensive failure in that digitalis assumes second place to salyrgan or novurit, except in the less frequent instances where failure has recurred with auricular fibrillation.

CARDIAC INFARCTION

Although arrhythmia especially auricular fibrillation is sometimes present in cardiac infarction in the majority of cases normal rhythm is preserved. The signs of failure may appear abruptly in this condition and if the area of infarction is a large one the signs are correspondingly increased, thus pulmonary congestion becomes prominent, and not infrequently crepitations are found scattered over both lungs. The liver too may become distended early in the illness, and slight oedema of the ankles may appear.

Treatment of the failure in this instance resolves itself into dealing with cardiac infarction, so that rest ensured by morphine is the procedure to adopt in patients in this group.

CONGENITAL CARDIOVASCULAR DISEASE

Heart failure is not a common feature of congenital cardiovascular disease, and pulmonary infection and sub-acute bacteraemic endocarditis are the more likely complications to ensue. Cyanosis in these cases usually only serves to indicate the presence of a venous-arterial shunt, and is seldom an expression of the presence of heart failure. In those instances of congenital cardiovascular defects where cyanosis appears later in life the onset of heart failure may have caused cyanosis by producing a reversal of an existing arterio venous shunt into a venous-arterial shunt. The symptoms of dyspnoea and cyanosis, therefore, in congenital heart disease are not commonly manifestations of congestive heart failure, they do not call for special care or treatment except in those few instances which show frank signs of failure.

The cardiac rhythm continues to be regular after failure has set in unless congenital heart-block is present as a rare feature of interventricular septum defect. When failure has set in it is usually progressive, although adequate rest and treatment with mercurial diuretics and digitalis may produce temporary improvement.

EMPHYSEMA AND BRONCHITIS

Too often in the past a patient giving a history of a productive cough occurring mostly during winter months and presenting great breathlessness, cyanosis, and abundant adventitious sounds in the chest, has been regarded as a case of heart failure. More notice should be taken of emphysema as a common cause of extreme breathlessness and less of its influence on the heart. The severe breathlessness associated with emphysema is the direct result of a diminished pulmonary ventilation, and is only rarely the sequence of heart failure. The effects of emphysema on the heart have recently received attention. Parkinson and Hoyle (1937) determined the size and shape of the heart by radiology in eighty patients suffering from a high grade of emphysema. Enlargement of the pulmonary artery stem and its branches and of the conus of the right ventricle was present in about one half of the cases. Changes due to hypertension were also commonly met with. About one third showed no cardiac enlargement. Heart failure was infrequent (thirteen out of eighty) and in seven of the thirteen cases hypertension was a feature. They stated that congestive failure purely from emphysema and chronic bronchitis was rare and had a grave prognosis so that recurrent failure was almost unknown.

Of even greater importance in the management of a case of heart failure is the recognition of the effects of emphysema and chronic bronchitis in a patient presenting heart disease. The occurrence in these cases of attacks of acute bronchitis produces an exacerbation of symptoms and may cause alarm, for the breathlessness may be extreme and accompanied by a distressing cough with the voiding of thin sputum and often haemoptysis. In the presence of mitral stenosis and auricular fibrillation such symptoms have been attributed too readily to heart failure and the added pulmonary signs have been erroneously assigned to pulmonary congestion from failure instead of to diffuse bronchitis and emphysema. The treatment of each condition is so dissimilar as to urge the necessity

of recognizing in many cases of heart disease this prevalent "bronchitic element," and of deciding its influence in producing the symptoms before treatment is commenced. Adrenaline or ephedrine and a mixture containing potassium iodide, stramonium, and ammonium carbonate prove more beneficial than an increase in the dose of digitalis. It is likely, from experience with this type of case, that certain proprietary adrenaline like preparations have gained an over-measure of trust in the treatment of all cases of heart failure.

NEPHRITIS

Heart failure is a common event in nephritis when hypertension is present. In chronic nephritis cardiac asthma is often an added feature. This frequent occurrence of heart failure in nephritic hypertension is not universally realized, particularly in hypertension of acute nephritis. Ellis (*personal communication*) found evidence of heart failure in twenty instances among 100 patients with acute nephritis, and in nine of these it was severe. The importance of a more general acceptance of the common incidence of heart failure in nephritic hypertension is found in a wider application of specific remedies in these cases to cardiac rather than to renal failure.

ADHERENT PERICARDIUM

Adhesions may form between the parietal and visceral layers of the pericardium, partially or completely obliterating the sac, and yet produce no cardiac embarrassment nor result in cardiac enlargement unless valvular disease is present. In another group calcification of the pericardium may be added, but without symptoms. Where extrapericardial adhesions have bound the heart to the surrounding structures (mediastino-pericarditis) cardiac enlargement is often present, but even here coincident valvular disease may account for the enlargement. A special feature of a fourth group is the constriction of the superior and inferior venae cavae, and to a less extent the heart, by adhesive pericarditis, giving rise to a characteristic clinical syndrome (Pick's syndrome). The effects of these changes is to produce a condition comparable to that of heart failure but without pulmonary congestion, so that the symptom of breathlessness is never prominent in the initial stages. The means of recognizing cases in this group has been clearly detailed by Paul White (1935), who refers to the leading clues in the diagnosis in the following order: The insidious onset of dropsy and oedema of the lower extremities in a young person. Preponderant enlargement of the liver with ascites. Undue prominence of the jugular veins with increase of the venous pressure. Absence of any heart disease or nephritis in a case presenting dropsy. Small and regular pulse with a low systolic blood pressure and pulse pressure. Evidence of chronic pleurisy. Calcification of the pericardium seen on radiology. Low voltage curve in the electrocardiogram with flattening or inversion of the T wave in one or more leads. Previous history of pericarditis and polyserositis.

Pericardial resection by an experienced thoracic surgeon is the only method of treatment which holds promise of recovery from the effects of constrictive pericarditis and the number of patients who have gained benefit from this surgical procedure is fast increasing.

ARTERIO-VEINOS ANEURYSM

When a small communication has been established between an artery and a vein there is no demonstrable change in either the anatomy or function of the heart but

if the fistulous opening is a large one then symptoms and signs of heart failure develop. It is the arterio-venous aneurysm resulting from trauma therefore and situated in the extremities, particularly the thigh and leg, which specially produces changes in the heart. Here breathlessness and palpitation are common symptoms, and considerable enlargement of the heart, especially the left ventricle, is demonstrable on radiology. The pulse is regular, a little rapid, and is collapsing in character with an increase of the pulse pressure, obliteration of the arterio-venous shunt by digital compression raises the systolic and particularly the diastolic blood pressure, and the collapsing nature of the pulse disappears, the pulse rate also falls abruptly. With the fistula open the venous blood pressure is increased and pulmonary congestion is visible on radiology. Extirpation of the aneurysm causes the cardiac enlargement and the pulmonary congestion to disappear within a short period of time (see Figs 7 and 8), thus providing a rare example of reversible cardiac enlargement.

MITRAL STENOSIS

Most instances of mitral stenosis showing evidence of heart failure present arrhythmia, usually in the form of auricular fibrillation, but occasionally as auricular flutter, in some the rhythm remains regular. It is likely that early indications of heart failure are invariably present before the onset of fibrillation, and that the adoption of efficient treatment during this pre-fibrillation period postpones the onset of fibrillation. Once auricular fibrillation has become established in a case of mitral stenosis digitalis is pre-eminently the medicine to prescribe. In the uncommon instances of mitral stenosis presenting prominent and aneurysmal dilatation of the left auricle the absence of gross heart failure symptoms may be a notable feature.

THYROTOXICOSIS

Slight cardiac enlargement occurs commonly in patients with thyrotoxicosis in the absence of auricular fibrillation and heart failure, but failure is seldom if ever present with a normal cardiac rhythm. Again, not all cases of thyrotoxic fibrillation show evidence of failure. When it has set in digitalis will produce some improvement but subtotal thyroidectomy after adequate treatment with Lugol's iodine is unquestionably the proper course to adopt. An attempt to re-establish normal rhythm by quinidine administration during the pre-operative period is of doubtful value.

COMPLETE HEART BLOCK

When complete heart block is complicated by heart failure and when Adams Stokes attacks are absent digitalis is worthy of trial because it often produces clinical improvement and the failure symptoms disappear without causing undue slowing of the pulse. In cases subject to Adams Stokes attacks digitalis is contraindicated as it usually increases the incidence of the attacks.

Conclusion

In conclusion it may be said that in the diagnosis and prevention of heart failure it is important to seek early evidence of this in patients presenting heart disease which can ultimately precipitate failure and that in treatment it is necessary to individualize to treat with determination but not over-zealously to prescribe remedies whose worth has been established by repeated and controlled clinical trial to gain the full co-operation of the patient and to give constant encouragement.

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LUPUS VULGARIS

TREATMENT BY INTRADERMAL INJECTION OF
HYDNOCARPATES

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(WITH SPECIAL PLATE)

The numerous methods which have been devised for the treatment of lupus vulgaris bear adequate testimony to the obstinate nature of this disease. For this reason the encouraging results that have recently been obtained by the intradermal injection of esters of hydnoctarpus oil deserve more widespread attention than they have as yet received. Leprosy workers have for some years made increasing use of this method in dealing with cutaneous lesions and the analogy between this disease and tuberculosis led to the account by Sir Leonard Rogers (1933) of a case of extensive lupus vulgaris successfully treated in this way.

Soon after this publication treatment was commenced in the present series of fifteen cases, and preliminary reports were issued in the succeeding two years (Wallace, 1934 and 1935). More recently Burgess (1935) has described a series of eleven cases, in which clinical cure was obtained in seven and improvement in the remaining four.

Choice of Preparation

The substance first used in the present investigation was that known as moogrol. This is prepared by esterizing the total acids of hydnoctarpus oil, and consists of ethyl hydnoctarlate and ethyl chaulmoograte together with the esters of the other acids present in this oil. As reactions were sometimes unduly severe iodized moogrol (containing 0.5 per cent of iodine) was also tried. This however, seemed less efficacious and in addition produced in the skin a bluish brown discoloration of considerable persistence.

Later at the suggestion of Dr T. A. Henry of the Wellcome Chemical Research Laboratories both these forms were abandoned in favour of a third preparation phenyl ethyl hydnoctarlate. The change proved to be a satisfactory one as reactions became much less marked, and treatment could thus be advanced more rapidly. Phenyl ethyl hydnoctarlate which is therefore the preparation of choice is now on the market under the trade name of eulskol (Burroughs Wellcome and Co.). Its less irritant effect has been made possible by eliminating the small unsaturable portion of the total fatty acids during the preparation of the ester.

Technique

Injections are made intradermally with an ordinary 1 c.c.m. hypodermic syringe fitted with an agla 240 needle

(B.W. and Co.) This is a 3 mm needle fitted with a guarded point. Patients attend weekly, and at each sitting a series of wheals 1/2 cm to 1 cm in diameter are raised in the lupus patches and nodules. The total amount of injection at any one time has not exceeded 1 c.c.m., but Burgess, using phenyl-ethyl hydnoctarlate exclusively, has injected as much as 5 c.c.m. Reactions can be diminished by spacing the wheals as far apart as possible, and no area should be injected a second time until all inflammatory changes have subsided.

Lastly, it is important to avoid subcutaneous injection. This not only causes more severe diffuse reactions but also fails to produce the desired effect, for, as Beatty (1932) points out, the lupoid foci are mostly in the corium, and there is a layer of corial connective tissue between them and the subcutaneous tissue. These precautions are particularly to be observed in lesions around the eyes, where swelling of the loose tissues may be greater than elsewhere, and may cause some concern to the patient.

Effect of Injections

No general disturbance of any sort has been noted. The injection itself is practically painless but during the next forty eight hours a certain amount of redness and swelling appears, accompanied by a slight degree of pain and tenderness. The pain lasts for one or two days only, but the swelling may not subside for a week or longer.

As treatment continues a slowly progressive flattening of nodules and plaques occurs, together with a disappearance of scales and crusts. The granulation tissue between the lupoid areas diminishes. Tiny ulcers may appear in and around the site of injection. A varying degree of redness prevails, but gradually the active lesions are replaced by pale smooth scar tissue. Several months may elapse after the cessation of treatment before the final effect is seen. During this time the tendency to relapse is no less apparent than in other forms of lupus treatment. Careful observation is necessary to ensure that any recurrent nodules can be reinjected at the earliest possible moment.

The esters of hydnoctarpus oil are absorbed very slowly from the skin, and their effect on lupoid tissue is continued long after the purely irritant reaction has worn off. For this reason one hesitates to regard the action entirely as a non specific one, unless it be due, as Muir (1932) suggests, to the liberation of antigens.

Summary of Cases

The fifteen cases summarized in Tables I and II all attended a tuberculosis dispensary of the Lancashire County Council. Previous treatment had consisted of local and general artificial light therapy and occasional spiking with acid nitrate of mercury, but the lesions had mostly reached that curiously resistant stage where the disease appears to be neither advancing nor healing. All other forms of treatment were stopped at the commencement of the new method so that a fair trial could be made.

The length of treatment has varied in individual cases from six months to three years although in the longer cases as the condition improved injections have frequently been spaced out at fortnightly or even monthly intervals. Treatment has been unduly prolonged in some cases since considerable caution was exercised at the onset owing to the experimental nature of the method.

Progress has undoubtedly been more rapid than that made by artificial light treatment alone but there is no reason why eulskol injections should not be supplemented by general carbon arc baths as in some of the cases.

TABLE I—*Lupus Vulgaris Treated with Intradermal Injections of Hydnocarpates (15 Cases)*

Case	Age	Site of Disease	Duration of Disease in Years	Length of Treatment	*Approximate Size of Active Areas in Square Centimetres		Condition at Present Date
					Before	After	
1	35	Neck	10	9 months	27	Nil	Quiescent (see Plate)
2	29	Elbow	14	3 years	—	Nil	Quiescent (see Plate)
3	35	Forehead and forearm	24	3 "	—	—	Much improved
4	48	Forearm	40	3 "	25	3	Quiescent except for few nodules
5	18	Arm	10	6 months	—	Nil	Quiescent
6	27	Face and neck	13	2½ years	17	Nil	Quiescent
7	12	Thigh	2	9 months	9	Nil	Quiescent
8	14	Face	10	10 "	—	Nil	Quiescent
9	39	Face and neck	25	12 "	—	—	Slight improvement. Ceased treatment
10	14	Thigh	3	11 "	25	Nil	Quiescent (see Plate)
11	24	Neck and wrist	23	2½ years	36	20	Much improved wrist quiescent. Ceased treatment
12	11	Cheek and ear	10	3 "	3	2	Slight improvement
13	29	Face	27	3 "	18	14	Slight improvement
14	13	Buttocks	8	18 months	19	8	Much improved. Ceased treatment
15	39	Wrist	27	15 "	—	—	Quiescent except for few nodules

* Measurements are impracticable in some cases.

TABLE II—*Summary of Results (15 Cases)†*

Quiescent with pale healthy scars	7
Quiescent except for few active nodules	2
Much improved	3
Slight improvement only	3
	15

† Three cases were abandoned for reasons unconnected with the treatment. Two of these (Cases 11 and 14) are included in the "much improved" group, the other (Case 9) in the "slight improvement only" group.

reported by Burgess. Reactions too, are definitely less painful than those resulting from the usual caustic applications.

The cost is trivial, and the technique is so simple that the time factor at each session is reduced to a minimum. Patients as a whole have expressed satisfaction with the treatment and have attended with great regularity—a point of no little significance.

The intradermal injection of hydnocarpates in the small number of cases so far available has produced extremely encouraging results and appears to offer certain advantages over other routine methods. Further clinical trials are awaited with interest and some degree of confidence.

I have to express my thanks to Sir Leonard Rogers and to Dr T. A. Henry for their helpful interest. I am also indebted to Dr G. Lissant Cox, central tuberculosis officer, and to Dr E. H. A. Park, consultant tuberculosis officer, both of the Lancashire County Council, for permission to publish these findings.

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IDIOPATHIC STEATORRHOEA

REPORT OF A CASE ARISING IN ADULT LIFE

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It is largely due to the work of Hess Thaysen that attention has recently been drawn to persistent diarrhoea found in adults in non-tropical countries. This condition has variously been called idiopathic steatorrhoea, non-tropical sprue, and 'Gee-Thaysen's disease'. Following Hess Thaysen's observations (1929) several important series of cases have been collected (Holmes and Starr, 1929; Bennett, Hunter, and Vaughan, 1932; Thaysen, 1935; Moore *et al.* 1936), whilst isolated instances, some of which bring new and interesting points to light, have also been recorded (Mackie, 1933; Fullerton and Innes, 1936). In the majority of the cases described the symptoms apparently originated in childhood, the diarrhoea and tetany recurring in adult life with intermediate periods of remission. In many of these instances there was evidence of rickets, infantilism, and gross bony deformities. Bennett, Hunter, and Vaughan (1932) concluded from their observations that the spontaneous occurrence of the disease in adult life, though not impossible, would be very rare. The later studies of Hess Thaysen (1935) have shown that onset of symptoms in adult life is not so infrequent as was formerly believed. The same author has stipulated as criteria of the disease the following four points: (1) an abnormally large quantity of fat excreted in the faeces; (2) a normal or in some instances a slightly increased nitrogen excretion; (3) a flat blood sugar curve; and (4) a raised basal metabolic rate. Our own case conforms with the first three of these points, and reveals several other interesting features which make it worth recording.

Case Record

Clinical History.—The patient, a female 40 years of age, was quite well until seven years ago when fourteen days after her last confinement she began to have "dysentery". She counted as many as twenty motions a day (an average of about fifteen) and frequently had to get up at night for bowel actions. She noticed the stools were offensive, greyish white in colour, frothy and occasionally slimy but never blood stained. She had been feeling weak and cold for a considerable time and since May 1936 had experienced cramps in the hands and feet and occasionally in the abdomen. These cramps occurred mostly on exertion and also appeared to be precipitated by the menstrual periods. While they were present the fingers were drawn into the palms. Her feet and legs had swollen especially after she had been up for some time, and her face had also swollen occasionally. She had lost weight from 10 st. 12 lb. three years ago to a present average of 8 st. Her periods have been regular but the actual loss only slight.

The patient first came to our notice on August 14, 1936, when she was admitted to Selly Oak Hospital in an actual attack of tetany. Her condition then was as follows: Fairly well covered, colour good, no pigmentation, teeth in good condition. Slight oedema present over feet and lower parts of legs. Carpo-pedal spasm present. Trouseau's and Chvostek's signs positive. Marked hyperexcitability of all muscles including those of the tongue. Slight glossitis present. Heart and lungs normal. Blood pressure 120/80. Abdomen was distended and rectum somewhat ballooned. The urinal showed no abnormality.

Progress and Investigations—For the first week after admission the number of stools (putty-coloured and offensive) averaged about five a day but later dropped to one a day. Ammonium chloride 30 grains t.d.s. by mouth, was sufficient to check the tetany in about forty-eight hours.

On August 17 1936 the serum calcium was 6.8 mg. and the plasma phosphorus 2.9 mg. per 100 c.cm. On August 22 the red cells numbered 4,840,000 per c.mm. the haemoglobin percentage was 86 and the colour index 0.9. There was slight anisocytosis and the average size of the red cells was 7.5 microns. Examination of the faeces showed no occult blood. The total fats comprised 34 per cent of the dried material, the neutral fat was 4.8, the free fatty acids 15.2 and the soaps 14.1 per cent. On August 19 calcium lactate 30 grains three times a day was started by mouth. On the 25th the serum calcium was 8.1 mg. and on the 29th 8.2 mg per 100 c.cm.

A fractional test meal showed achlorhydria. X-ray examination of the tibia with control showed no decalcification and a barium enema demonstrated a marked dilatation of the colon.

The patient was discharged on completion of these investigations at her own request.

SECOND ADMISSION

She was readmitted on November 17 1936 with the following history. After leaving hospital she remained well only for about a week when the diarrhoea returned (about eight stools per day). Spasms in limbs returned also but with greater severity. Between the major spasms she had the sensation as if something were creeping under the skin all over the body.

On readmission she was in severe carpo pedal spasm which necessitated immediate injection of 20 c.cm. calcium laevulate intravenously. She was then given ammonium chloride 30 grains t.d.s. and calcium lactate 40 grains four hourly but without apparent effect. The spasm returned on the 20th when the serum calcium stood at 6.3 mg per 100 c.cm. and the plasma phosphorus at 1.5 mg. Another 20 c.cm. of calcium laevulate intravenously brought relief but though further 10-c.cm. injections were given on the 21st and 22nd a severe spasm occurred on the 23rd which was countered with a further dose of 20 c.cm. calcium laevulate. Ten units of parathormone on the 24th did not prevent another spasm on the following day this being again relieved by intravenous calcium laevulate. Just prior to this attack the serum calcium stood at 6.2 and the plasma phosphorus at 2.2 mg. per 100 c.cm. Six further injections of 10 units of parathormone were given on alternate days but they had no immediate marked effect on the level of the serum calcium which on the 27th was still 6.2 mg., and on the day after the last injection of parathormone (December 7) rose only to 7.2 mg per 100 c.cm. Her general condition was however very much improved and although all administration of calcium was discontinued from December 8 the serum calcium rose to 8.4 mg. on the 16th.

A slight oedema of the legs persisted during this period in hospital in spite of complete rest in bed whilst occasionally her face was puffy. This oedema was found to be associated with consistently low serum protein values as the following figures show.

21/11/36	Total serum protein	4.9 grammes per 100 c.cm.
27/11/36	" "	5.0 "
8/12/36	" "	5.1 "
16/12/36	" "	4.6 "
Albumin 1.4 grammes globulin 1.5 grammes.		

The following investigations were also carried out during the second period of admission.

Glucose Tolerance Test—Fasting blood sugar 63 mg per 100 c.cm. After 30 grammes by mouth 1½ hour 68 mg. 1 hour 76 mg. 1½ hours 88 mg. 2 hours 88 mg. 2½ hours 88 mg.

Fat Metabolism—Fats minus 5 per cent of statistical normal (F.Q. 0.85).

Renal Function Test

	Urea Concentration		Time
	Vol	Urine urea	
Before urea	60 c.cm.	0.84 %	60 min
1st hour after urea	188 c.cm.	0.65 %	60 min
2nd " "	86 c.cm.	2.34 %	60 min
3rd " "	33 c.cm.	2.85 %	30 min
Blood urea before urea by mouth during first hour 19 mg per 100 c.cm.			
Standard urea clearance 82 per cent of normal value (van Slyke).			
Blood urea during second hour after urea 58 mg per 100 c.cm.			
Standard urea clearance 89 per cent of normal value			

Calcium and Phosphorus Balance—The calcium intake during the three-day period was 0.54 gramme. The calcium output during the three-day period was in urine 0.058 gramme and in faeces 0.761 gramme giving a total of 0.819 gramme. The phosphorus intake during the three-day period was 1.341 gramme. The phosphorus output during the three-day period was in urine 0.862 gramme, and in faeces 0.865 gramme giving a total of 1.727 grammes.

Daily Fat Excretion—On a diet containing 39 grammes of fat per day a twenty-four hour specimen of faeces contained 13 grammes total fat. The same dried stool contained neutral fat, 9.3 per cent, free fatty acids, 19.7 per cent, soaps 22 per cent.

Blood Examination—The red cells numbered 4,960,000 per c.mm. and the haemoglobin percentage was 96. The blood cholesterol amounted to 136 mg. per 100 c.cm.

The urine indican reaction was strongly positive.

X-ray examination of long bones with control again showed no evidence of decalcification.

We are indebted to Mr Philip Jameson Evans of the Birmingham and Midland Eye Hospital who kindly carried out a slit lamp examination and found two circular opacities in the left lens.

THIRD ADMISSION

The patient was discharged on December 18 1936 on a low fat diet adequate calcium hydrochloric acid and vitamin D but this did not prevent a recurrence of tetany, which necessitated readmission for the third time on January 7 1937. Intravenous calcium was needed as before to check the spasms. During this admission we took the opportunity of confirming our previous findings on daily fat excretion together with an investigation of the nature and origin of the excreted fat. The nitrogen balance was also determined whilst the patient was stabilized on a fixed diet (carbohydrate 114, fat 39, protein 31 grammes). The results of these investigations were as follows. Of the 39 grammes of fat in this diet 35.6 grammes consisted of butter the characteristics of which were saponification value 231 and iodine value (of the free fatty acids) 32.7. The total fat excreted per day amounted to 14.7 grammes and this had the following characteristics: saponification value 208, iodine value (of the free fatty acids) 19.6.

Nitrogen Balance—Intake during two days was 9.8 grammes. The urinary output 11.5 grammes and the faecal output 0.5 gramme, giving a total of 12 grammes. The negative balance, therefore was 1.1 grammes per day.

Blood examination showed 4,000,000 red cells per c.mm., and 76 per cent. haemoglobin.

Blood sugar curve—10 grammes of glucose were administered in the form of a 5 per cent. solution intravenously over a period of fifteen minutes. The fasting blood sugar was 95 mg. per 100 c.cm., ten minutes after the injection was completed it was 140 mg., half an hour later 90 mg. and one hour later 90 mg. per 100 c.cm.

Discussion

Careful inquiry into the history of our case disclosed no evidence of diarrhoea or tetany prior to the onset of the present condition at the age of 34. This instance therefore supports Hess Thaysen's postulate that there is no reason why idiopathic steatorrhoea should not arise in

adult life in non tropical countries. In common with the majority of cases already described our patient presents a persistent fatty diarrhoea, low serum calcium and phosphorus, actual or latent tetany, a flat blood-sugar curve after glucose ingestion, marked dilatation of the colon, and abdominal distension. She also shows achlorhydria and a moderate degree of glossitis, but no evidence of any marked anaemia.

In view of the recurrent tetany and the constantly low serum calcium, one would expect some evidence of skeletal decalcification, but the absence of this may perhaps be explained by the results of the calcium balance, which point to only a small loss of endogenous calcium. The nitrogen balance determination eliminates any possibility of the steatorrhoea being of pancreatic origin. Hess Thaysen has stressed the necessity of this investigation in the differential diagnosis of pancreatic and idiopathic steatorrhoea. Together with the urea concentration test the faecal nitrogen value indicates that, in contrast with the faulty absorption of fats and possibly of carbohydrates, nitrogenous products are efficiently absorbed by the patient. Under the existing circumstances one would look for some increase in the nitrogen metabolism, and it is probable that the loss of weight and the low serum protein value with its associated oedema are evidence of protein malnutrition, resulting not from any disturbance in digestion or absorption, but from a relative insufficiency of protein intake.

The interpretation of the results of the inquiry into the nature of the faecal fat is admittedly difficult, owing to lack of published data. The character of the excreted fat differs considerably from that of the ingested butter, indicating that total faecal fat measurements cannot be regarded as a quantitative index of the absorptive power of the intestine towards fats. The fact that the iodine value of the faecal fat is lower than that of the ingested butter is suggestive of its being derived from the food and not from endogenous fat, the iodine value of which is much higher. This would support the usually accepted theory that the steatorrhoea in such cases is due to deficiency in intestinal absorption rather than to the alternative possibility of derangement in the mechanism of excretion from blood into the intestine.

Treatment of our patient has been disappointing. In spite of adequate doses of calcium, vitamin D, hydrochloric acid by mouth and a low fat diet relapses continue to occur, and it appears that the only measure which checks the diarrhoea effectively is complete rest in bed.

Summary

1. A case of idiopathic steatorrhoea originating in adult life is described.
2. A surprisingly good general condition of the patient and absence of bone decalcification in spite of persistently low serum calcium are noted.
3. Evidence is brought forward showing that absorption of fat and carbohydrate is inefficient, while that of protein is normal.
4. Persistent oedema associated with low serum protein is observed and an explanation for this is suggested.

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THE CULTIVATION OF MYCO. TUBERCULOSIS FROM HUMAN SPUTA

BY

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AND

J BARSON

(From the Bacteriological Department University of Birmingham)

The routine laboratory examination of sputum from suspect cases of pulmonary tuberculosis consists of the microscopical examination of appropriately stained films of the sputum. This is the only method recognized by the tuberculosis authorities for which they accept the financial responsibility. Every laboratory worker knows that it is only of use in positive cases and that a negative microscopical report on a single sample of sputum is of no diagnostic value. It is interesting to compare the reliance placed on the microscopical method in tuberculosis to the present position in regard to the laboratory diagnosis of diphtheria, yet there is no valid reason why cultural examination of sputum and other morbid materials for *Mycobacterium tuberculosis* should not be practised as a routine procedure and be recognized as equal in value to the cultivation of *C. diphtheriae* from throat swabs, etc. Given a reasonably simple and effective technique, the examination can be incorporated in the ordinary routine work of the laboratory, *Mycobacterium tuberculosis* is not a difficult organism to cultivate, though it is a slow grower even under optimum conditions.

We have tested the following technique over the past two years and have found it suitable for the routine cultural examination of sputum. Before incorporating the method in our routine work we carried out a large number of control cultivations on morbid materials in which *Mycobacterium tuberculosis* was found by microscopical examination. This method yielded 100 per cent positive cultural isolations from tuberculous sputum, cerebro spinal fluid, faeces, urine, and pus. Having thus established to our satisfaction the value of the method we then proceeded to apply it to the examination of a series of sputa that were negative for *Mycobacterium tuberculosis* on microscopical examination.

Technique

Any volume of sputum up to a maximum of about 5 ccm is thoroughly mixed with an equal volume of 4 per cent caustic soda solution. The mixture is incubated at 37° C for thirty minutes and is then centrifuged—in our case for one hour at 3,000 r.p.m. (The speed and time of centrifugation can probably be safely varied to suit individual convenience so long as the entire quantity of particulate matter is firmly packed at the bottom of the tube.) The supernatant fluid is then carefully decanted and the deposit rendered neutral to litmus with 4 per cent hydrochloric acid. As a rule about five drops of acid are required to neutralize the deposit from an initial volume of 5 ccm of sputum. The deposit is then thoroughly mixed up with a sterile glass rod and is thickly sown on to the selected medium.

Three media have been tested in the course of our work—namely Löwenstein's, Petroff's and Petraganis's—employing the method of preparation described by Jamieson (1936). All three media have given successful results, but we have found Löwenstein's to be the best for routine use. In our experience different strains of *Mycobacterium tuberculosis* have varied in their preference for these media.

all the strains we have isolated have grown readily on Lowenstein's medium. The way in which the medium is used appears however, to be a determining factor in the cultivation of the bacillus in some cases at least. Medium slanted in test tubes is generally unsatisfactory, and has often given no growth when parallel cultures put up in screw-capped bottles as recommended by McCartney (1934), have shown good growth. We therefore strongly advocate the routine use of these bottles as containers for the selected medium. The cultures are of course incubated at 37° C. Growth is usually visible in twenty-one days but even when no colonies are visible at the expiration of this period there may be a good growth of *Mycobacterium tuberculosis* as an extremely thin film on the surface of the medium. No cultures should therefore be discarded as negative until they have been examined microscopically since transplants from these film growths grow vigorously and typically.

In our series of negative microscopical sputa examined culturally we have included only those which contained purulent matter purely mucoid and salivary specimens were not considered. Up to the present we have examined 135 specimens from which we have cultivated acid-fast bacilli—with the morphological and cultural characters of *Mycobacterium tuberculosis*—in twenty-nine cases (21.4 per cent). Most of these cultures have not yet been subjected to the biological test, but two of them have been inoculated into guinea pigs because their extreme chromogenicity gave rise to some doubt about their identity. In both cases the inoculated animals showed the characteristic picture of experimental tuberculosis when they were killed and typical acid fast bacilli were found in film preparations from the affected lymphatic glands.

Results of the Investigation

From the above findings it is evident that in 21 per cent of cases the ordinary routine laboratory test for pulmonary tuberculosis failed to give information that is of vital importance both to the individual and to the community. Tubercle bacilli can only be discovered with certainty by microscopical examination when they are present in large numbers in the sputum, but cultivation can detect them when they exist in very small numbers. In the early stages of pulmonary tuberculosis the bacillus will only be found in small numbers in the sputum. These are just the cases in which a positive laboratory diagnosis is of the greatest value and which are most likely to be missed by a purely microscopical examination.

The positive cultural findings in most of our twenty-nine isolations were accepted by those who submitted the specimens to us as agreeing with or confirming their clinical findings. In three cases however we were informed that there was no clinical evidence of phthisis, and that the cultural findings could not be accepted. We were not informed why in the complete absence of any suspicion of phthisis the sputum should nevertheless be sent to the laboratory for examination for *Mycobacterium tuberculosis* but probably the examination was requested as a precaution for the relatives. Assuming that in these three cases the clinical opinion is correct and that no tubercle bacilli exist in the sputum, the isolation of the bacilli from the sputum raises the very interesting problem of the bacillus being either temporary or permanent. Cases of *Mycobacterium tuberculosis* certainly exist, and in some instances with a high degree of acquired resistance to the tubercle bacillus, but the relation between the clinical and cultural detection of tuberculosis is a problem which has to be known to help

as the microscopical test is accepted as the routine procedure by the tuberculosis authorities. The institution of a routine cultural examination of all purulent sputa that are microscopically negative would, we believe, throw light upon this important problem and lead to the recognition of those early cases in which there is some hope of permanent cure by efficient treatment.

The Fermentative Reactions

An additional feature of our study has been an examination of the sugar fermentation reactions of *Mycobacterium tuberculosis*. Our investigations are at present not far advanced, but as they may be of some value to workers interested in systematic bacteriology, and as the pressure of routine work makes it extremely unlikely that we shall be able to complete them in the near future, we include them here. The lack of information about the fermentative characters of *Mycobacterium tuberculosis* has been due to the difficulty experienced in finding a simple yet satisfactory basic sugar-free liquid medium that will support the growth of the bacillus. One of us (J.B.), after numerous trials, has evolved a medium which appears to satisfy the necessary requirements. This medium is prepared as follows. The white of one egg is thoroughly mixed with 200 ccm of tap-water. The mixture is then boiled for five minutes, filtered through a thin layer of cotton-wool, and cooled. One per cent of sugar and 3 per cent of litmus, or 1 per cent of Andrade's indicator, are added, and the medium is put into small screw-capped bottles containing gas tubes and sterilized. In this medium most of the strains of *Mycobacterium tuberculosis* that we have tested have grown slowly but quite vigorously at 37° C. The fermentative reactions have begun after some three weeks incubation. We have kept our cultures for an arbitrary standard period of six months, comparing them with uninoculated controls, none of which has shown any appreciable change in reaction over that period. Up to the present we have tested thirty strains of *Mycobacterium tuberculosis* isolated from various human sources, upon the four sugars, dextrose, lactose, mannite, and saccharose. Four of these strains failed to grow in any of the sugar media. Of the remaining twenty-six all have produced acid without gas in lactose, twenty-five have produced acid without gas in dextrose, twenty-one have given the same reaction with saccharose, and three have attacked mannite.

We wish it to be clearly understood that our investigations are only in a preliminary stage. We have not had an opportunity of checking them properly and we are therefore not certain that they are accurate. We hope, however, that some other worker with more time for research may be sufficiently interested to pursue this investigation further.

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Dr C. Claque (39 Rue Scheffer, Paris) has resumed the issue of the periodical *L'Actualité Scientifique et Médicale* in typescript form. The May number contains a brief account of the German Congress of Surgery in Berlin from March 31 to April 3, a programme of the coming Reunion Médico-Chirurgicale de Morphologie in Paris on May 19, a summary of the contents of the fourth (December 1936) bulletin of the last named society, and an announcement of the arrangements being made to promote associations between the universities of France and Germany.

ADVANCED EXTRA-UTERINE PREGNANCY

BY

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(WITH SPECIAL PLATE)

Extra uterine pregnancy is not a very common condition, although within the last two decades it appears to have become more frequent, this probably being due to greater accuracy in diagnosis. Advanced extra uterine pregnancy is, however, still a rarity, and the following case is worthy of mention from that point of view alone.

Case Record

Mrs. A., aged 33 years, was admitted to hospital on September 12, 1935, suffering from severe abdominal pain, sickness and vomiting, and collapse. The previous history showed that she was well advanced in pregnancy. Her last menstrual period commenced on April 16, 1935. During the first few months of pregnancy she complained of severe sickness and vomiting which was always accentuated at the suppressed menstrual periods. After the third month the nausea and vomiting became much less. During the second and third months of pregnancy she had several what she termed bad attacks of lower abdominal pain, associated with an increase in the sickness and vomiting. The abdomen just above the pelvis was always very tender to the touch. At no time during the pregnancy was there any uterine haemorrhage.

Past History—The patient had been married for six years, during which time she was never pregnant. She had consulted her family doctor about her sterility, and in fact, it had been suggested that she should have a dilatation and curettage. Her menstrual history was that the menses were always regular—every twenty-eight days and lasting six to seven days. There was no history of leucorrhoeal discharge or of any frequency of micturition. She had always enjoyed perfect health, and there have been no previous serious illnesses.

Examination—The patient looked extremely ill. She was absolutely blanched and her respirations were of a sighing character. Every time she attempted to sit up in bed she collapsed. Her pulse rate was 120, rapid and feeble. Her tongue was dry and she complained of great thirst. Her conjunctivae were practically colourless. She had severe abdominal pain associated with sickness and vomiting. The abdomen did not move on respirations. There was a fullness of the lower abdomen in the middle line. The abdomen was held very rigid and she complained of the greatest tenderness in the left iliac fossa. On vaginal examination, which was extremely difficult owing to the rigidity of the abdominal muscles, one could palpate a large mass filling the pelvis. This I considered was the normal pregnant uterus. Other signs of pregnancy were well advanced.

Diagnosis—It was obvious from an examination of the patient that the condition was a very acute one and that she was suffering from internal haemorrhage, which I considered was due to a ruptured uterus. The fact that she had had no uterine haemorrhage during the pregnancy and that the pregnancy was so advanced made me disregard the probability of this being a ruptured ectopic gestation. However, the seriousness of the condition was realized and I advised immediate operation.

Operation—On September 12, under general anaesthesia, the abdomen was opened through a lower mid line incision. On reaching the peritoneum I noted the bluish black coloration behind it indicative of intraperitoneal haemorrhage. On opening the peritoneum I found the abdominal cavity filled with partly clotted and partly fluid blood. In the lower part of the wound was a large mass and through a tear in the free surface of this mass could be seen a foetus covered by the amniotic sac. On further examination it was found that this was a large ectopic gestation. The uterus was slightly enlarged and congested. Both ovaries were normal. I resected the

grossly distended Fallopian tube, and then hastily removing all the large pieces of blood clot, closed the abdomen. No intravenous saline was given and the patient rapidly improved, within two weeks she had made a complete recovery.

Specimen

The large mass to the left as shown in the photograph is the grossly distended Fallopian tube. The placenta with the vessels running over its surface can be plainly seen, firmly attached to the Fallopian tube. The amniotic sac was opened and the foetus placed in this position in order to photograph it (see Special Plate).

Commentary

According to Schumann ectopic gestation occurs in only 1 in 267 pregnancies, or 0.38 per cent. The age incidence, according to Wynne, is between 24 and 33 years.

The position of the gestation varies. It can therefore be (1) cornual, (2) isthmal, (3) ampullary, (4) tubo ovarian or (5) ovarian. The commonest type is the ampullary, into which category this case belongs. This part of the tube is capable of great distension, and allows an ectopic gestation to develop much further than any other part.

Numerous conditions, such as inflammation in the lower pelvis, salpingitis, diverticulitis, and appendicitis, have been found to be predisposing factors to ectopic gestation, but in this case no history could be obtained of any such cause, nor was there evidence of anything pathological in the other tube. Congenital anomalies are often cited, and this might well have been the case here, but I have no proof.

It is common in cases of ectopic gestation to find that there is some history of sterility. Farrar quotes 16.6 per cent of cases in which ectopic gestation followed a long period of sterility, and 30 per cent in which there had been one previous child.

One interesting feature in the present case was the absence of the atypical menstruation as described by Bandler. In the majority of cases some slight uterine haemorrhage is complained of, but here the patient strongly denied that there had ever been any.

Schumann states that the greater proportion of ectopic pregnancies rupture at the eighth week, and that very few continue after the twelfth week of pregnancy. The most interesting point about the case here recorded was the fact that the pregnancy developed up to nearly five months.

I wish to express my indebtedness to Dr D. Stenhouse Stewart, who took the photograph.

L. T. Davidson, K. K. Merritt, and T. T. Chapman (*Amer. J. Dis. Child.* January, 1937, Part I, p. 1) gave eighteen premature and fifteen full term infants irradiated evaporated milk during the first six months of life to determine the degree of protection from rickets afforded by this means alone. Judged by x-rays none of the eighteen premature infants were entirely free from rickets, six showed slight, nine moderate and three marked rickets. Of the fifteen full term infants four were free from x-ray signs of rickets throughout the period of the study, one had moderate rickets and in the other eleven there was only slight rickets. In the group of premature infants in this study who were given irradiated evaporated milk as their sole source of vitamin D the rickets tended to develop earlier than in the full term infants. Irradiated evaporated milk has been shown to be considerably less efficacious for the protection of the premature infant against rickets than is metabolized vitamin D milk. When the two are given under identical conditions the inferiority of the irradiated milk is believed to be due entirely to the smaller concentration of vitamin D units.

PRONTOSIL BY THE INTRAPLEURAL ROUTE

TWO CASES OF STREPTOCOCCAL EMPYEMA

BY

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(WITH SPECIAL PLATE)

Now that the spate of writing for and against prontosil has lined down to a clearer stream it may be opportune to report two cases in which the dye was used with considerable success in the pleural cavity.

These two cases are interesting in that they both occurred after influenza, both patients were in extremely poor general condition (in one case there were several complicating factors) and in both the favourable progress could be attributed directly and almost entirely to prontosil.

Case I

A married woman aged 39 was admitted to the Birkenhead Municipal Hospital on January 28 1937 with a five-days history of influenza. She had several rigors at the onset of her illness and these were followed by joint pains backache, headache anorexia and nausea. On the day before admission a severe pain had commenced in her left chest and she was beginning to be short of breath. She was two months pregnant. Her previous ailments included erysipelas two years earlier for which she had had anti-streptococcal serum intravenously.

On examination the patient was in poor condition pale, cyanosed and dyspnoeic. Her temperature was 102.8° the pulse rate 126 and the respiratory rate 38. Her physical signs were those of left basal pleurisy with commencing consolidation of the middle and lower zones of the left lower lobe. Her urine contained a trace of albumin but no pus organisms or casts. During the next five days the temperature fell by 1.5° but her general condition remained poor. She was listless and strange in manner and at times appeared to be in a low delirium. The albumin in her urine increased and a specimen taken a week after admission showed many leucocytes some red blood cells squamous epithelial cells and coliform bacilli. By this time she was tender in the left renal angle and a diagnosis of pyelitis complicating an influenzal pneumonia was made.

On February 6 she passed an abortion of about ten weeks development with very little post partum loss. Contrary to expectation no symptoms of retained products or pelvic infection followed and the abortion had very little effect on her general condition. For the pyelitis a course of mandelic acid was instituted and her urine cleared completely within the next two weeks.

four days later 3 oz. of very thin red turbid fluid were removed. This again was sterile. The procedure was repeated at intervals with the complete disappearance of pus and re-expansion of the lung. On April 1 her chest was pronounced clear, and a radiograph taken on that date demonstrated complete absence of fluid (Fig. 2). All her symptoms had disappeared, she was several pounds heavier than on admission and her urine and sputum were satisfactory. As this radiograph had shown a 'pleural ring' a bronchography was undertaken by me, and the ring shown to be an emphysematous bulla in a normal bronchial tree with no evidence of the bronchiectasis which so often follows influenzal pneumonia. The patient was discharged in excellent condition on April 10, 1937.

Case II

A married woman aged 37, was admitted to Birkenhead Municipal Hospital on February 12 1937. She gave a history of the onset of pneumonia five days previously, following an attack of influenza.

On admission her temperature was 101°, the pulse rate 100 and the respiratory rate 32. She was pale dyspnoeic, and slightly cyanosed. Her physical signs were those of complete consolidation of the left lower lobe with a small pleural effusion. On aspiration this was clear and slightly straw-coloured. The size of the effusion increased, and on February 16 a further aspiration showed the effusion to consist of a thick creamy pus. Culture from this pus showed streptococci only and after aspiration of 12 oz. all distress disappeared. A radiograph after this aspiration showed a small amount of fluid surmounted by a zone of consolidation which was thought to be tuberculous. Repeated examinations of the sputum for tubercle bacilli were negative and the empyema gradually increased the organism found at each aspiration being the streptococcus.

On March 8 12 oz. of thick pus were aspirated, and as all the sputa had been negative for tubercle bacilli it was decided that rib resection in the near future was indicated. As in the previous case 5 ccm. of prontosil soluble were injected into the pleural cavity in an effort to minimize the risk of infection at operation. Three days later the pus was found to be thinner and red in colour and on culture showed no growth of organisms. The pus was seen in subsequent aspirations to become progressively thinner and finally no fluid could be obtained on aspiration. Specimens from each aspiration were sent to the laboratory but no organisms were found after the injection of prontosil. The consolidation gradually resolved and the patient was discharged on April 14 with no clinical or radiological traces of her illness other than a slight thickening of the pleura at the left base.

Conclusions

1 Both these patients who were extremely ill were saved from any operative procedures.

2 In both cases the recovery was complete.

3 In both the organism was the streptococcus and the improvement immediately followed the injection of prontosil.

4 It is reasonable to assume that this hitherto unpublished route of administration of prontosil has a place in the treatment of streptococcal empyema.

I am indebted to Dr. R. A. Grant medical superintendent of Birkenhead Municipal Hospital for permission to report these cases.

D. Gilbert (*Brit. med. J.* March 21 1937 p. 779) reports nine recent cases of benzol poisoning in female workers employed in Belgian mirror factories to varnish mirrors which have been silvered. The second protective coat of varnish applied after silvering is a solution of gum resins in benzol. Three deaths have occurred so far. The clinical picture is one of varying multifocal small and large haemorrhages and severe apastatic anaemia.

Clinical Memoranda

Partial Extra-uterine Pregnancy

(WITH SPECIAL PLATE)

On September 4, 1935, I saw a female patient, aged 27. She was pregnant and roughly at full term, and had spasmodic pains referred to the right iliac fossa which had lasted six days, becoming more severe during the last two days. There had been no "show". On examination it appeared that the presentation was a transverse one with the buttocks in the right iliac fossa. The os was not dilated. Caesarean section had been performed in February, 1932, but she was not aware of the reason. As the patient was somewhat exhausted with the pains, and in view of the fact that the presentation was a transverse one, and that the os was still closed, I decided to send her into hospital for Caesarean section.

OPERATION

At operation a very interesting state of affairs was revealed. A mid line incision was made, and on incising the peritoneum I was surprised to come down straight on to the child's buttocks and lower limbs. The child was delivered with very little difficulty and then one could see what had happened. The old scar in the uterus had "gaped" and the sides of the gap had become adherent to the parietal peritoneum. The child's buttocks and legs were outside and the head and upper part of the body were inside the uterus. The placenta was mostly in the uterus, but part of it extended over the right edge of the gap. As the gap was so wide and the edges "rounded off" a hysterectomy seemed the most reasonable thing to do. This was done and both mother and child made an uneventful recovery.

There was a fairly deep open sore running across the outside of the child's left thigh in the region of the trochanter, and this was apparently due to pressure on the edge of the gap in the uterus. At the end of three weeks this healed satisfactorily and really left very little deformity. The only other feature was that the child had slightly clubbed feet, but these also fully recovered at the end of three weeks daily manipulation.

COMMENT

The photograph (see Special Plate) shows the gap in the uterus and the "rounded edges". It would seem that the child must have grown through and stretched the old scar in the uterus during the period of gestation. It appears that this must have been a gradual process, as so far as I have been able to elicit from the patient the pregnancy followed a normal course with no unusual symptoms suggesting a sudden rupture.

EDGAR P. WATERS, M.B. F.R.C.S.Ed.,

Hon. Surgeon to Out-patients
North Lonsdale Hospital

Barrow-in-Furness

A Case of Vesico-colic Fistula

A case with certain striking features came under my observation for the first time some years ago and I have had an opportunity of seeing the patient from time to time since.

CASE REPORT

A man aged 58 came to see me in the first instance complaining of swelling of the right testicle. I found him to be suffering from epididymo-orchitis on the right side but was unable subsequently to discover any connexion between this inflammatory condition and the events which followed. The urine contained pus and many threads, and rectal examination

revealed no prostatic enlargement, though there was some thickening of the bladder base above. I prescribed the necessary treatment for his testicular condition and did not see him again for four months. On the occasion of this second visit he complained of the faecal odour of his urine which he said he had noticed on and off for several weeks. A specimen of his water was chocolate-coloured and had a strong faecal smell.

Cystoscopy showed a recess at the junction of the left lateral and posterior walls of the bladder and intravenous urography revealed slight dilatation of the left ureter, otherwise the urinary tract appeared normal. A barium enema made it quite clear that diverticulitis was present in connexion with the pelvic colon. In the circumstances I recommended that the patient should have a colostomy. This was not carried out until five months later, when another surgeon performed the operation. Immediate relief from the urinary symptoms resulted from this intervention: evidence of faeces in the urine slowly disappeared but about six weeks after the operation spasms of pain were felt in the bladder. As time went on these were increased and urgency and frequency slowly became more and more prominent.

I did not see the patient again, however, until nine months following his colostomy when his condition was truly pathetic for he screamed with pain every time he micturated. He had been suffering such agony on passing water that his doctor had found it necessary to give him morphine daily over a period of some months. At the time I saw him actually he had been having 8 grains daily.

Cystoscopy showed vesical calculi to be present in the bladder. Litholapaxy was contemplated but I found that in trying to distend the bladder the fluid simply ran out through the colostomy opening. I was therefore forced to carry out suprapubic lithotomy in spite of the presence of his sub-umbilical colostomy. Three stones were removed: the largest the size of a plum, the other two just a little smaller. After removal of the stones the patient did well and there was no difficulty in getting him quickly off the morphine, as the cause of his distress had now gone.

The connexion between the bladder and the bowel must have closed eventually because six months after my operation I was called out to see this patient again with acute retention of urine. The colostomy was still functioning well and there was no question of urine escaping at this time through the opening. I relieved his retention by catheterization, and took the opportunity of dilating the bladder neck with a large sound. This apparently had a beneficial effect for he subsequently passed water freely. At this stage there was no sign of any faecal content in the urine.

COMMENTARY

One fact which is perhaps of academic rather than practical interest is that although faecal material had been entering this patient's bladder for many weeks without interruption at no time was there the slightest evidence of pyelonephritis. Such an experience seems to give a very definite answer in the negative to the question: "Does infection ascend to the kidney from the bladder by way of the lumen to the ureter?"

If such a route is a common one surely the circumstances in this case were ideal for infection to occur in this way. Actually I would go so far as to say that I was particularly struck with the appearance of good health of the patient during the time that his vesico-colic fistula was allowing a free communication between the bowel and the bladder.

It is now two and a half years since I last saw this patient and I have just heard from him—four years after the colostomy—that he is in excellent health, he has had no further difficulty in passing his water, there has been no recurrence of faecal contamination of the urine and the colostomy is working well.

H. P. WINSBURY WHITE, F.R.C.S.,
Surgeon, St. Paul's Hospital.

London

Injection Treatment of Hernia

The injection treatment of hernia has definitely established its value. The following clinical history is illuminating.

A man aged 65 years consulted me on July 28, 1936. Twenty-two years previously he had developed an inguinal hernia. In 1933 he underwent an operation for strangulation. A few months later the hernia recurred. Again, in 1934 a herniorrhaphy was performed. In a short time the hernia once more reappeared. Both operations were done by competent surgeons. Examination revealed a right inguino-scrotal hernia. The injection treatment was commenced on July 31, 1936. The sclerosing fluid obliteration was used. It is prepared according to Mayer's formula. The injections were given at weekly intervals. Except for the first which was 0.5 ccm., the amount of obliteration injected at each treatment was 1 ccm. The necessary surgical technique for the successful performance of this procedure was very carefully observed. One may briefly mention that the needle was inserted vertically over the site of the internal ring until the point was felt to pierce the aponeurosis.

The final injection was given on December 2, 1936. On January 27, 1937 the hernia being now cured, the patient discarded his truss.

Interesting features in this case are (a) the patient had been twice previously operated on for hernia, (b) his age in no way interfered with the success of the treatment.

Auckland N.Z.

J. P. HASTINGS M.D., M.R.C.S.

Reviews

HUMANISM AND MEDICINE

Humanisme et Médecine. By Joseph Olinczyc. (Pp. 140, 12 fr.) Paris: Labergerie, 1937.

The *Oxford English Dictionary* gives four quite distinct meanings for the word 'humanism'. The sense in which Dr Joseph Olinczyc uses it in his book *Humanisme et Médecine* is the least technical of these—that defined in the dictionary as "the character or quality of being human, devotion to human interests"—and yet even this does not indicate quite the connotation which the author attaches to it unless it be remembered constantly and prominently that the 'soul' is as essentially part of the 'human' as is the body or mere intelligence. He emphatically does not mean a system of thought or action which is concerned with merely human interests (as distinguished from divine) or with those of the human race in general (as distinguished from individual) or devotion to literary culture, though he has a section in which he insists on the value of the study of 'the humanities' in the latter sense for the practitioner of medicine.

It is a short book but excellent of its kind. In scope it covers, though not so fully except as regards one matter, much the same ground as the central chapters of Sir Henry Brackenbury's *Patient and Doctor* dealing with the essentials of the relations, ideal and actual, between those two persons as individuals with the reasons for maintaining these essentials at all costs and with the way in which communal or social medicine should be developed strictly within its own sphere so that it shall not violate them. In his treatment of the subject and in his style the author admirably displays those French characteristics which we have learned to value so highly—a strict and consistent logic, a remarkable succinctness of expression and a power of indicating with few words important shades of thought and meaning.

Il ne faut pas ramener la charité personnelle et fraternelle au sentiment de solidarité sociale et collective, toutes deux sont nécessaires et ne sauraient s'exclure. Mais elles salimentent à des sources différentes, l'une aux aspirations éternelles de la personne, l'autre aux droits incontestables et légitimes de l'individu. Cultivons l'une et l'autre, mais ne laissons pas, au seul profit de la solidarité sociale, effacer la charité de la surface de la terre.

The whole short book is an example of wise thought and skilful presentation

PRACTICAL ANATOMY

A Manual of Practical Anatomy A Guide to the Dissection of the Human Body. Part III The Head and Neck. By Thomas Walmsley. New edition (Pp 357, 133 figures 12s 6d net.) London Longmans Green and Co 1936

The new edition of Part III of Professor T Walmsley's manual gives a clear, concise account of the essential facts of human anatomy, and is written with the primary object of providing a guide to dissection, but it is also intended to be an introduction to the further study of anatomy in the larger systematic textbooks and to give some indication of the bearing of anatomical facts on general practice. The present volume deals with the head and neck, and the description is chiefly confined to matter which can be verified in an ordinary dissection, while details of microscopical structure and the development of special organs are not included. The book is well written, and bears the hall mark of the practical observations of an experienced teacher.

The illustrations are in general good, and the three x ray plates of the skull, with explanatory diagrams may be specially mentioned. Some of the schematic diagrams, however, might be improved by the inclusion of some localizing landmarks—for example, a thin outline of the eyeball and optic nerve in Fig 68—and a more accurate representation of the proportional size and relations of the various parts should be attained. In the diagram alluded to the ciliary ganglion is shown with diameters greater than the transverse diameter of the internal carotid artery. Other diagrams—namely Figs 108 and 117—are capable of a more faithful representation of the structures depicted, with a proportional gain in clearness and accuracy. In our opinion a careful drawing from the original of the principal parts in their correct relations and proportions with a few simple orienting lines, is much more readily comprehended than schematic drawings without such a guide, the latter being comparable to a map of London without any indication of the River Thames. The compilation of the book as a whole has, however been very carefully conceived and carried out and judging from the popularity of the preceding volumes it should prove a valuable guide to students in the dissecting room. It supplies a fund of information presented in an interesting and attractive manner.

DERMATOLOGY AND SYPHILOLOGY

The 1936 Year Book of Dermatology and Syphilology. Edited by Fred Wise M.D. and Marion B. Sulzberger M.D. (Pp 720 illustrated 3 dollars or 12s 6d.) Chicago Year Book Publishers London H K Lewis and Co 1937

We welcome once more the yearbook produced by Dr Wise and Dr Sulzberger whose annual study of current literature always yields matter of considerable interest to their professional brethren. This year they give a special chapter on urticaria in which they summarize current views and theories on this important and baffling subject.

Notwithstanding the vast amount of work done on chronic urticaria during recent years, very little real progress has been made in its management and the riddle of its aetiology remains unsolved. Only in those comparatively rare cases in which it can be traced to a single allergen, such as feathers, pollens, etc., has the problem been solved. In the far commoner type of case where there is general sensitiveness we still remain in the dark and the vast number of drugs recommended for urticaria demonstrates conclusively how unsatisfactory the treatment is. Other subjects accorded prominence in the *Year Book* are the therapeutic control of syphilis and other venereal diseases and drug eruptions, including the toxic results of 'slim' (the name under which dinitrophenol is sold to the public for the treatment of obesity), a drug which may cause polyneuritis, bilateral cataract, severe pruritus, or even death itself. The highly important subject of industrial dermatitis, including its prevention, is also touched upon. The general practitioner will welcome the large amount of space devoted to therapy in this volume, and he may glean some guidance for the task of utilizing those fashionable remedies, the endocrines, with more intelligence and less optimism than the chemical manufacturers expect him to display. The authors are not blind to the dramatic side of disease, and we may say in conclusion that they have produced both a useful and an interesting volume which deserves attention from all who are concerned in these specialities.

BROMPTON HOSPITAL REPORTS FOR 1936

Brompton Hospital Reports Vol 5 1936 (3s post free). Copies from the Secretary, Hospital for Consumption, Brompton SW3

The slim attractively bound volume issued every year by the Brompton Hospital is now familiar to many of our readers, and the latest of the series will be welcomed. Like its predecessors it contains papers recently published elsewhere by the staff of the Brompton Hospital and the Frimley Sanatorium, in addition there are three special statistical reports, based on figures derived from experience gained in the hospital. The latest volume is almost entirely concerned with various aspects of pulmonary tuberculosis: infectivity, latency and immunity, relapse after cure, and thoracoplasty being some of the aspects of the disease discussed. A notable contribution is the survey of the surgery of pleural and pulmonary infections made by Mr J E H Roberts in the Littenstone Lectures delivered before the Medical Society of London in 1935. To the two papers by Dr R C Wingfield we should like to draw particular attention. The clinical study of relapse in pulmonary tuberculosis "will prove of much assistance to all workers concerned with the diagnosis and treatment of this disease. Sub Jove Frigido is a thoughtful and vigorous attack upon the concept 'sanatorium treatment'—a concept which in the light of the most recent knowledge of the treatment of pulmonary tuberculosis should now become obsolete. This paper deserves wide publicity among not only tuberculosis workers but also local authorities who might be made to realize how ineffectively public money is being spent at present in some directions and how unwisely withheld in others.

Yet another paper by Dr Wingfield (with Dr Margaret Macpherson) gives the results of a mass investigation of healthy adolescents. This investigation deserves the fullest sympathy and encouragement as it forms the first piece of research of this kind relative to tuberculosis in this country. Unfortunately its scope, restricted to 1,000

logical examination limits the conclusions that such an investigation might yield. The three statistical reports deal with the Brompton experience of thoracoplasty, pulmonary abscess and the radon treatment of pulmonary neoplasm. Since 1932 thoracoplasties have been performed in increasing numbers every year and now total 437. At present the operation is being done in 6 per cent of all patients with chronic pulmonary tuberculosis admitted to the wards of Brompton. The operative mortality is about 14 per cent., and the expectation of survival in those B3 patients who are suitable for thoracoplasty is three times as great as that of the average B3 patient. Of the survivors about 15 per cent are clinically cured. In the third report it is stated that there is no evidence that radon in any way prolongs the lives of patients suffering from carcinoma of the bronchus.

We should like to make a final reflection. Reviewing the *Brompton Hospital Reports* for the last five years one is forcibly struck by the absence of research on morbid anatomical, biochemical and bacteriological lines, or on their correlation with the clinical aspects of tuberculosis. In view of the unique opportunities of the hospital and its sanatorium this is to be deplored.

Notes on Books

The text of Dr DONALD HUNTER'S four valuable lectures on Occupational Diseases given to the Derby Medical Society in May 1935 which were published as clinical supplements to the *Guy's Hospital Gazette* have now been reprinted in book form with an index and copies are obtainable (price 9s.) from H. K. Lewis and Co. Ltd., 136, Gower Street, London, W.C.1.

The nineteenth edition of Stilling's *Pseudo isochromatic Plates for Testing Colour Perception* appears in its English garb under the editorship of Professor James Drever of Edinburgh and is published in that city by F. Bauermeister at 22s. 6d. The present edition which comes sixty years after the first, shows little departure from the last one. As in the Ishihara test and the Edridge-Green test, in common use in this country, the principle underlying Stilling's charts is the reading of numbers and the picking out of like-coloured dots against a background of confusion colours. On the Continent Stilling's chart seems to have the wider circulation. It has a larger range of tests for yellow-blue sensitivity.

Materia Medica, Toxicology and Pharmacognosy by Professor W. MAXIMOW (H. K. Linton, 30s.) is a textbook

Preparations and Appliances

A MODIFIED BRONCHOSCOPE

Dr J E G MCGIBBON (Liverpool) writes)

The modifications of the ordinary bronchoscope about to be described are mostly those of other writers, but they have been assembled and combined into one instrument with the generous advice and help of Mr Percy G Phelps of Messrs. Mayer and Phelps Ltd. Fig 1 shows the modified bronchoscope which can be made in various lengths and calibres—it has been found that for inspection of the main bronchi a bronchoscope of 39.5 cm. with an inside diameter of 10 mm. is most useful for the secondary bronchi an instrument 44.5 cm by 8 mm permits of an easy and well illuminated view while a tube 48 cm by 7 mm is used for the more distal bronchi. The tube is similar to the Jackson model save that the proximal inch is widened in the vertical axis so that the inlet of the tube is oval in order to facilitate the introduction of endoscopic instruments. Originally the instrument was equipped solely with the dual projected lighting system as used in the Negus laryngoscopes and oesophagoscopes, and we are indebted to the patentee—Mr R. Schranz of the Genito-Urinary Manufacturing Company Ltd—for permission to incorporate this system of lighting in the instrument. Later

plug into the sockets B. These sockets are lateral to those for the dual lighting system at the proximal end of the bronchoscope. By means of the hinges the telemagnifier can be tilted instantly out of the field so that instrumentation through the tube can be carried out with the telemagnifier either in position or tilted up as desired.

Fig 4 shows a special upper lobe bronchoscope which is lighted as described above and which can be used with the telemagnifier. It is designed after the model of F Vistreich of New York (*Arch Otolaryng.*, 1935 22 634). The dimensions of the bronchoscope are 36 cm by 10 mm and its distal end is cut to form a double V. At the apices of the Vs is hinged

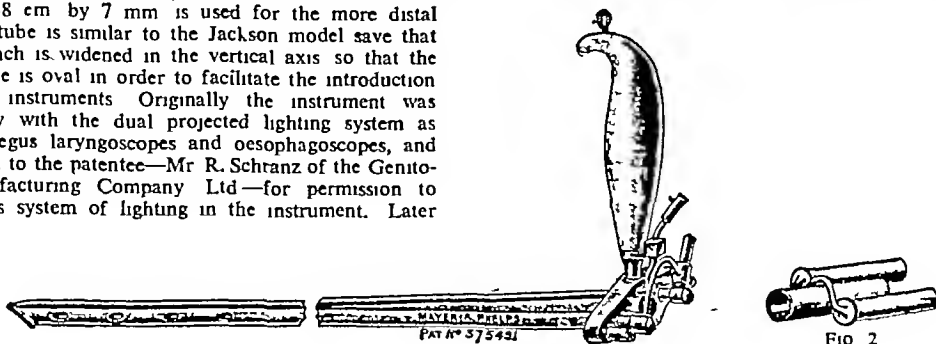


FIG 1



FIG 2

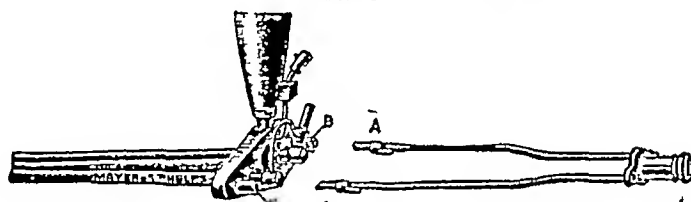


FIG 3

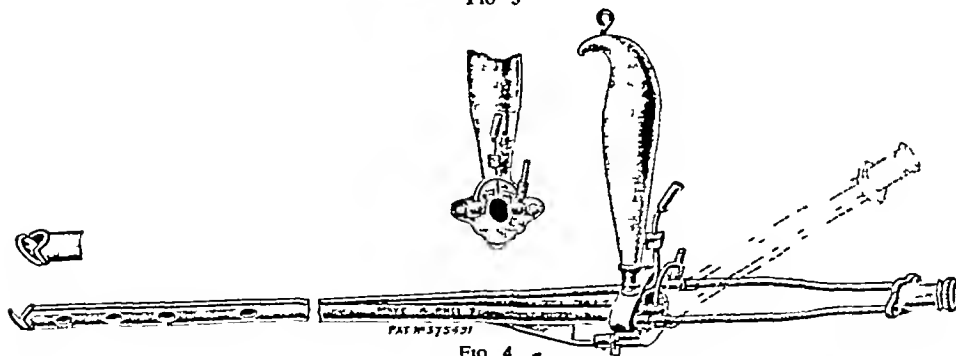


FIG 4

it was suggested by Mr R. Doyle, resident surgical officer, Royal Southern Hospital, Liverpool, that the value of the bronchoscope would be enhanced if distal lighting were added as not only would this increase the illumination for direct inspection of the bronchus but it would permit also of the use of the Pinchin Morlock telescopes (*Lancet* 1932 1 671) through the instrument. Fig 2 depicts the special holder for use with these telescopes. The dual lighting system is removed and the telescope holder is then fitted into the sockets usually occupied by this system. Fig 3 illustrates a "telemagnifier" as devised by S. Israel of U.S.A. (*Ann. Otol. Rhinol. Laryng.*, 1935 44, 285). The telemagnifier gives a magnification of 34 diameters; it is light in weight, causes no respiratory obstruction, and can be focused to different distances for use with tubes of various lengths. It is mounted on two rods which are hinged at A near the points where they

a small stainless steel mirror which is sufficiently large to reflect the entire image of the orifice and proximal portion of the upper lobe bronchus. The angle of the mirror is controlled by a screw mechanism at the proximal end of the instrument which can be operated easily by the thumb. It is necessary to point out that the interpretation of the mirror image thus obtained requires some practice but that once this technique is acquired the information procured is of great interest and value.

The instruments briefly described above give very excellent illumination; they possess a good working lumen and they can be used either with distal or proximal magnification. They have been in use regularly for two years in a bronchoscopy clinic and have given satisfaction. They are made by Messrs. Mayer and Phelps Ltd., of New Cavendish Street, London W 1.

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TREATMENT OF HERNIA

The growth of operative surgery has been so rapid and so striking that some of the changes that have taken place may not be readily appreciated. The comparative safety of operations to-day has led to a great diminution, if not disappearance, of those advanced conditions which were seen at one time because operation had been avoided on account of the high risk then associated with it. Goitres reaching down to the umbilicus and scrotal herniae as low as the knees, so that the sufferer constantly wore an overcoat to hide his deformity, are no longer seen, yet these were by no means rarities in the early days of Listerian surgery. There have been changes not only in the type of condition calling for surgery but also in the methods of treating certain conditions: this is particularly true of hernia. Since the war there has been a wider use of fascial sutures for the larger hernias, especially those of the inguinal variety; surgeons have been increasingly influenced by physiological principles, and such mechanical devices as filigrees have been almost universally abandoned. In the treatment of oblique inguinal hernia in healthy young adults due respect is now being paid to the sphincter action of the conjoined tendon, and efforts are being made to preserve the inguinal sphincter and not destroy or distort it by cutting or suturing. It is everywhere realized that in young healthy patients with oblique inguinal hernia the complete removal of the sac is what is really needed. The Bassini operation and allied procedures which comprise stitching the conjoined tendon to Poupart's ligament in many cases unnecessarily interfere with the natural beauty of a delicate sphincter mechanism. This was emphasized during a debate on the treatment of inguinal hernia at a meeting of the Surgical Section of the Royal Society of Medicine in December of last year. Efforts have also been made of late to revive the treatment of hernia by injections into the sac. This revival has coincided with the recent popularity of the injection treatment of varicose veins, haemorrhoids, hydroceles, and other conditions which were once treated in this way but which with the development of Listerian surgery had become the almost exclusive province of

operative surgery. The pendulum has swung in the opposite direction. If to-day we no longer degrade port by injecting it into hydrocele sacs, but use more appropriate sclerosing solutions, the principle is unaltered: to some extent there has been a reversion to pre-Listerian practice. The presence of a preformed sac in cases of oblique inguinal hernia is now universally accepted as one of the chief aetiological factors, and is probably regarded by most surgeons as the all-important one. In such cases the processus vaginalis remains open in part or throughout, and the physiological process of peritoneal oblitative fusion which normally takes place has been defective or absent. It is reasonable to suppose that by injecting suitable sclerosing solutions into the sac this oblitative process may be induced artificially, and, provided there is elimination of the sac, there should be cure of the hernia.

The injection treatment of hernia, like that of hydrocele, is no new thing. In the year 1832 George Heaton of Boston¹ used *Quercus alba* for injection into hernias, and in 1835 Valpeau in Paris found that a patient whose hydrocele he had injected with an iodine solution had been cured of his hernia also. Valpeau subsequently treated three cases of hernia by incising the inguinal canal and the sac and flushing the wound with iodine solution. Others used essential oils, cantharides, alcohol, and other substances, but the increased safety and popularity of operative surgery and the successful results of the radical cure of hernia did much to overshadow the injection treatment. It was for the most part given up, but within recent times interest in it has been revived once more. That this interest has come about rather belatedly is not surprising when we consider the scepticism with which the injection treatment of varicose veins was at first received by the profession. In this country particularly there has, with few exceptions, been but little interest in the procedure. Delisle Gray has perhaps done most to bring it to the notice of the profession, and early this year the matter was debated in the correspondence columns of the *Journal*. In Spain and in America, on the other hand, the injection treatment of hernia has attracted considerable attention. By 1931 Mestre² of Barcelona had treated 10,000 cases of hernia by injection without mortality. Numerous articles on this method have recently appeared in the U.S.A. the *Annals of Surgery* for March 1937, for example contains five papers by workers in the department of surgery in the University of Minnesota and another paper appears in the

¹ *Med Rec* March 1937, p. 239² *Med Annual* 1931, 49, 239

THE TAVISTOCK CLINIC

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MEDICAL JOURNAL

March issue of the *Canadian Medical Association Journal*. The selection of appropriate cases is of the greatest importance only reducible hernias capable of proper control by a truss are suitable, and the small reducible inguinal hernia appears to be the most suitable. The solutions employed have been many and varied, and include such constituents as phenol, alcohol, tincture of thuja glycerin, and Canadian pine extract, the technique is a specialized one. Any number from four to twenty or thirty injections may be necessary, and the object appears to be to produce a fibroblastic reaction of a plastic character, which not only seals off the sac but also closes the inguinal canal. It is claimed that with care complications are singularly few, and there can be no doubt that in those who have a horror of operation, or in cases in which other special circumstances arise, the cure of hernia by an ambulant method which ultimately allows the patient to discard his truss has something to be said for it.

THE TAVISTOCK CLINIC

Everyone knows by now the work of the Institute of Medical Psychology. The Tavistock Clinic was founded in 1920 at a house in Tavistock Square London, to treat patients suffering from the neurotic disorders which are a serious and a growing handicap to the community in these days of rapid change and great stress. The need for the clinic was proved by the long waiting-list which quickly accumulated. As its work became known and its revenue increased, its council took a lease of the abandoned packing department of Shoobred's in Malet Place, and reconstructed this as a modern and efficient out-patient clinic with a children's department. The charity then took the name of the Institute of Medical Psychology, for it is not only a treatment clinic, but a centre of research and teaching in practical psychology. Many specialists and general practitioners of medicine have fitted themselves at the clinic to deal expertly with neurotic illness. Certain commercial concerns have however imitated the new name and real confusion has resulted possibly to their advantage but not to that of the clinic. The council has therefore decided to readopt the old name of "The Tavistock Clinic," with "The Institute of Medical Psychology" as a subtitle and a letter announcing this by Sir Henry Braeklenbury, appeared in our issue of April 17. Old friends of the institution will probably be pleased that the associations of the pioneer days are to be perpetuated.

All however, is not well, for the clinic is in very serious need of money. It maintains an in-patient hostel in Endsleigh Street but the lease expired a few months ago and the council had not nearly enough funds to build and equip a hostel on a new site which it had acquired. Fortunately the threat of a complete loss of in-patient accommodation has been averted for a time, as the lease of the present in-patient department has been extended until midsummer, 1938. The council, however, is in urgent need of the financial help which will enable it to proceed with its plans for a new hostel, which must be in working order by that date. It may also have to spend money immediately on improving the fire precautions in the present hostel. Nor does the shortage of money affect the clinic's in-patient work only. Unless it can obtain much better support, the council says in its report for 1936, it will have to curtail the present work drastically besides abandoning its most promising and partly accomplished extension—the care of in-patients. We cannot do better, in stating the need of the clinic than use the council's own language. "Here is a hospital which was the pioneer in a field now recognized as of the first importance in regard to the national health which is doing work of a very high standard indeed and showing constant results which are gratifyingly successful which has waiting at its doors for attention large numbers of patients urgently requiring help and ever clamouring for succour, which has all its plans ready for that enlargement which is essential for meeting the increased demand daily made upon it, but which is crippled in its beneficent activities and even brought into jeopardy by a general lack of appreciation of its purpose and its needs not surprising at an early period but amazing to-day."

In addition to its ordinary appeal and indeed to the special appeal which it is now addressing to the general public the council is making a special effort to attract the help of the industrial community and especially that of large employers of labour. Official figures show that not less than one-third of the total incapacity of employed persons in this country can be attributed to neurotic illness. Quite apart from this appalling figure, there is an immense amount of unrecorded and even unrecognized inefficiency due to minor degrees of neurosis. If the public realized the loss of damage and misery caused by neurotic illness in its great variety of forms appreciated the possibility that the Tavistock Clinic—in conjunction with a sufficient number of affiliated treatment centres—could greatly reduce the incidence of neurosis and gave it the support it deserved th

improvement in the health and the happiness of the community, not only in mind but also in body, would be tremendous. Everyone who possesses insight into the mental needs of the community will support the Tavistock Clinic of Malet Place as energetically and generously as he can.

field. It is hardly likely that any animal will be found to rival the rat in its capacity for transmitting a variety of diseases, nor will many afford discoveries of such general interest as the infective tumours of wild rabbits recently brought to light in America but these examples will serve to show what may lie hidden in a territory which seems to have been neglected.

TUBERCULOSIS IN VOLES

Widespread interest has been taken in a report by A. Q. Wells¹ on the first results of his investigation of disease in wild voles. It was observed some years ago that these animals appeared to be subject to periodic fluctuation in numbers the population increasing for several years and then diminishing greatly in a few months. The nature of the conditions causing this was quite unknown and the object of Wells's work was rather to study factors controlling the spread of epidemic disease than merely to establish its nature in this particular case. The immediate results are quite unexpected for they are that voles trapped in uncultivated areas in England, Wales and Scotland are suffering from advanced and extensive tuberculosis with widespread caseating lesions in subcutaneous tissues and in the viscera which contain large numbers of acid-fast bacilli. These bacilli have produced fatal disease in guinea-pigs and non fatal in rabbits rendering both animals tuberculin-positive, they are therefore certainly tubercle bacilli but whether they are of the bovine or some other type is not yet known. To those accustomed to regard tuberculosis as a disease of domestication in animals its prevalence among inhabitants of wild uplands and moors will seem positively incongruous. There are some puzzling features in this discovery which make it seem unwise to draw any conclusions at this stage. It is difficult to see how such a disease as tuberculosis could be responsible for a periodic rapid slaughter of animals with an intervening steady rise in population moreover voles supposedly suffering from this epidemic disease have been examined before without this very striking and obvious condition being found. On the other hand there is the fact that 134 voles trapped in seven different localities have been found with tuberculosis if the disease is really widespread in such areas there is even a possibility of appreciable contamination of water supplies and the presence of similarly infected voles on farm lands would have to be considered a serious factor in the spread of tuberculosis among cattle. Extensive field work will be necessary to determine the distribution and frequency of the disease and with this information and the identification of the type of tubercle bacillus which is all important it will become possible to decide whether these disturbing speculations have any further basis in fact. In the meantime we may reasonably ask ourselves whether disease in animals is being adequately studied in this country. It might have been supposed that the common diseases of our principal fauna were well known but we may now wonder whether there are not other species especially among wild animals and perhaps birds whose entire pathology is an unexplored

ROBERT PHILIP AND TUBERCULOSIS

This year marks the half-century since Robert Philip established in three small rooms at 13 Bank Street Edinburgh, "The Victoria Dispensary for Consumption," and thus opened a campaign against the ravages of tuberculosis a campaign that has been pursued tenaciously for many years and found support abroad earlier than in Philip's own country. His contribution to the control of tuberculosis is appreciated to the full only when the appalling conditions that existed fifty years ago are realized. In this country tuberculosis showed a greater mortality than any other disease and the sufferers were excluded because of the chronicity and infectious character of the disease and no other provision for treatment existed except such as could be provided in the Poor Law institutions which were both feared and detested. Robert Philip realized that the control of tuberculosis was not merely a medical problem but that it involved social and economic and even political considerations as important as the medical aspect. And his conception of the work of the tuberculosis dispensary must have been founded on a prophetic consciousness of the additions which were to be made to the then inadequate knowledge of the disease for contact examination without radiology could only have removed the gross evils of the infection. Perhaps this is partly the reason why so many years passed before the example set in Edinburgh was followed elsewhere in Great Britain. The first tuberculosis dispensary in England was established at Paddington by a voluntary body in 1909 though by 1905 there were already fifty in France all based on the principles laid down by Philip. When finally the State decided to take over the control of the disease in Great Britain it was able immediately to adopt a scheme whose details had been thoroughly worked out. Much of the spade work in the control of tuberculosis had already been done by the (voluntary) National Association for the Prevention of Tuberculosis founded in 1898, and in this work, too, Philip had played a conspicuous part. But perhaps the most important thing is the international influence Sir Robert Philip has exercised through his numerous publications and attendances at congresses in persistently bringing before responsible authorities the evil results of the disease and the methods that can be used to combat them. Finally his appointment in 1917 as the first professor of tuberculosis in this or any other country which has encouraged the founding of four similar chairs in Europe since must have done much to further the teaching and study of the disease. An article in the May issue of the *Edinburgh Medical Journal* describes the Edinburgh Tuberculosis

Scheme from its foundation fifty years ago and the part played by Sir Robert Philip. A list of his contributions to the literature of tuberculosis is added. The article concludes "In their own many and different ways, both at home and abroad, governments, universities, medical societies and colleges, tuberculosis associations, and old students have shown their appreciation of Philip and his life-work. It is only fitting that the Edinburgh Medical School which he has served so well in many capacities should on this fiftieth anniversary place on record its tribute." We feel that we can do no less.

INTERNATIONAL ABOLITIONIST CONGRESS

A main if not the chief function of the forty seventh International Abolitionist Congress, held here on May 20 to 22 (writes our Paris correspondent), was to strengthen the hand of the French Government whose Minister of Public Health M. Henri Sellier, has drafted a most ambitious Bill dealing with venereal disease, prostitution, and allied subjects. This congress had the avowed support of powerful sections of the community but it is no secret that important forces in the fighting services look askance at the prospect of the suppression of the regulation of prostitution in brothels under more or less official medical supervision. It is significant that Cardinal Verdier, Archbishop of Paris, was a member of the Comité d'Honneur and it would seem that the Church is adopting a more call a-spade attitude in this field than it did only a little while ago. It may be noted that the present system of regulation of prostitution in France dates from the Revolution and the First Empire. Before that time prostitution was not regulated in any official sense, and was, indeed liable to severe penalties. Even now the legal status of tolerated brothels in France is very precarious, and in any given community it is the mayor who has it in his power to smile or frown on such undertakings. He may authorize or forbid them and if he has authorized one he may change his mind and close a brothel without having to pay any compensation, the law having hitherto given no official sanction to the public brothel to enjoy any of the rights of commerce. In fact however petted and pampered such institutions may be in practice they are in the eyes of the law still only tolerated. Hence the term 'maison de tolerance'. The landlord of a house used as a maison de tolerance may turn his tenants out as promptly as he likes and with no fear of prosecution for legislation dealing with rentals etc. does not apply to brothels. In French law every contract with an immoral element is considered as void and null. The legal vulnerability of even the most regulated of brothels and the legal powers possessed by mayors are two features which the enemies of the regulation of prostitution have done their best to bring to the attention of the public at this well attended Abolitionist Congress in Paris. One of the most interesting reports presented was by Dr. Hermans, secretary of the Netherlands National League against Venereal Disease. The lesson of Holland in this respect would seem to be that a well-organized voluntary association is remarkably effective even when unaided by coercive State measures.

THROMBOTIC NON-BACTERIAL ENDOCARDITIS

In 1923 Libman¹ suggested that endocarditis could be classified as rheumatic, syphilitic, acute bacterial, sub-acute bacterial, and indeterminate. In the following year he² separated from the indeterminate class some cases having features in common which he called "atypical verrucous endocarditis". Gross and Friedberg³ who have described the morphology of the rheumatic heart in much detail, have also been investigating this indeterminate group and have recognized a form of endocarditis distinct from the atypical verrucous type, which they term "non bacterial thrombotic endocarditis". At the Mount Sinai Hospital 150 cases have been diagnosed post mortem as indeterminate endocarditis during the last twenty years. Of these Gross and Friedberg excluded over a hundred as there was a possibility of an active rheumatic or bacterial infection, or details were incomplete. There remained, however, nearly fifty cases which showed a characteristic endocarditis and could be subdivided into three main clinical groups. In the largest group were those with chronically deformed valves, usually of rheumatic origin, the patients had died of cachectic or of infectious diseases but there was no microscopical evidence of active rheumatism. In these cases yellowish vegetations of somewhat friable nature were found on the valves; they were larger than rheumatic vegetations and sometimes were polypoid similar to those in bacterial endocarditis. They occurred either on the closure line of the valve cusp or on the corpora arantia and never involved the mural endocardium or valve pockets. The mitral valve was affected in almost every instance and the other valves less frequently in the order corresponding with the valvular involvement in rheumatism. Microscopically the vegetations consisted of agglutinated blood platelet thrombi showing varying degrees of organization. There was practically no cellular reaction in the valve or endocardium, apart from those lesions which Gross⁴ has described in inactive rheumatism. Cachectic or marasmic vegetations are well known but the importance of the recognition of this thrombotic group by Gross is the distinction that can be made between them and terminal rheumatic or bacterial vegetations. The second clinical group consisted of three young women suffering from severe thrombocytopenic purpura; the course was acute and pyrexial but repeated bacteriological investigations were negative. At necropsy thrombotic endocarditis was present together with splenomegaly; microscopically there was in addition to the valvular changes widespread change in the smaller vessels characterized by hyaline or granular thrombi which occluded the lumen and in some instances were organized. In the third group the onset of the illness (also in young women) was marked by polyarthritis which involved both large and small joints. There was persistent fever and polysclerosis. Blood cultures were sterile and death resulted from cachexia and increasing anaemia. The pathological changes consisted of widespread

J. Amer. med. Ass. 1923 80 813
Arch. intern. Med. 1924 33 70
 Ibid. 1936 68 (6) 621 (2)
Amer. J. Path. 1935 11 711

endothelial proliferation in small vessels producing endarteritis and endophlebitis in some cases this was associated with obliteration of the lumen by hyaline thrombi and in one there was a necrotizing arteritis somewhat resembling that found in polyarteritis nodosa. Further, there were adhesions obliterating the serous cavities and thrombotic endocarditis. Gross and Friedberg do not suggest that the valvular lesions played any part in the clinical course or that they are the essential part of the syndrome but the lesions are obvious post mortem and are a common feature in all three groups. The second and third groups have clinical points in common and also resemble both clinically and pathologically the cases of disseminated lupus erythematosus described by Baehr, Klempner and Schiffrin¹. It would appear that they are clinically related on the one hand to polyarthritis and on the other to polyarteritis nodosa, whatever their aetiology may be. A more detailed study of these obscure "endothelioses" is overdue, and the work of Gross and Friedberg gives a useful foundation for it.

OPIUM SMOKING IN THE FAR EAST

From the time of the Hague Opium Convention of 1912 efforts have been directed to put down opium smoking in the Far East. Gradual but effective suppression of the trade was contemplated twenty-five years ago, but the extent of illicit traffic was reported to have so hampered attempts at suppression that in the Geneva Conference of 1925 it was resolved to put off further measures until a Commission about to be appointed, should report that smuggling was under control. Even then a period of not exceeding fifteen years was mentioned as a reasonable interval before suppression could be effectually carried out. As the result of the Commission's report a conference of representatives of the Powers concerned was held at Bangkok in 1930 and an 'agreement for the suppression of opium smoking in the Far East' was signed. This agreement came into force on April 22 last and as it has been ratified by all the Governments parties to it some progress may now be anticipated. Great Britain for the Malay States and Hong Kong, the Netherlands for the Netherlands Indies, France for Indo China, Portugal for Macao, Japan for Formosa and Kwantung, Burma and Siam are the parties concerned. The agreement sets up Government monopolies for retailing and distribution of prepared opium, prohibits smoking under 21 years of age and provides for severe penalties for offences. The final act recommends licensing, rationing, and registration of smokers, measures for facilitating the cure of opium smokers, and research into the physiological and psychological effects of such smoking. Annual reports are to be made to the League of Nations and special opium revenue accounts are to be kept. In accordance with the findings of the Commission of Inquiry, the need for limitation of poppy cultivation is to be kept in view, and indeed this is a question which it is understood will shortly be the subject of a fresh international Conference at Geneva.

¹ *Trans. Ass. Amer. Phys.* 1935, 50, 139.

INTER-DEPARTMENTAL COMMITTEE ON ABORTION

The Minister of Health's statement in the House of Commons about the newly appointed Inter-Departmental Committee on Abortion was briefly reported in our Parliamentary Notes last week. The chairman of the committee is Mr Norman Birkett, K.C., and the other members are Dame Lucy Baldwin, Lady Ruth Balfour M.B., Sir Comyns Berkeley, consulting obstetric and gynaecological surgeon to the Middlesex Hospital and chairman of the Central Midwives Board, Mr H. A. de Montmorency, Dr T. Watts Eden, consulting obstetric physician to Charing Cross Hospital, Lady Forber, who as Dr Janet Lane-Claydon was engaged in medical research for the Ministry of Health, Sir Rollo Campbell Graham, chief Metropolitan magistrate, Dr G. C. M. McGonigle, medical officer of health for Stockton-on-Tees, Sir Ewen Maclean, president of the British College of Obstetricians and Gynaecologists, Captain M. P. Pugh, prosecuting solicitor for Birmingham since 1924, Mr W. Bentley Purchase M.B., coroner for the northern district of London, Mr C. D. C. Robinson, Mrs Ernest Thurtle and Lady Williams, wife of Sir Rhys Williams Bt. The committee's terms of reference are "To inquire into the prevalence of abortion and the present law relating thereto, and to consider what steps could be taken by more effective enforcement of the law or otherwise to secure the reduction of maternal mortality and morbidity arising from this cause." Communications relating to the inquiry should be addressed to the Secretary, Committee on Abortion, Ministry of Health, Whitehall, S.W. 1.

RESEARCH DEFENCE SOCIETY

The eleventh Stephen Paget Memorial Lecture on "What Research Owes to the Paget Tradition" will be delivered by Professor G. Grey Turner D.Ch., M.S., F.R.C.S., at the annual general meeting of the Research Defence Society at the London School of Hygiene and Tropical Medicine, Keppel Street, W.C., on Tuesday, June 15, at 3 p.m. when the chair will be taken by the president, Lord Lamington, supported by Sir Arthur Stanley, chairman of committee, and Professor A. V. Hill F.R.S. vice-chairman of committee. Tea and coffee will be served after the meeting, and visitors will be welcomed.

Professor James Young D.S.O. M.D., has been elected chairman of the medical advisory board of the British Social Hygiene Council in succession to Sir E. Farquhar Buzzard Bt., K.C.V.O. M.D.

The National Hospital for Diseases of the Heart has arranged for the St. Cyres Lecture for 1937 to be delivered in the Barnes Hall of the Royal Society of Medicine, 1 Wimpole Street, W. on Thursday, June 10, at 5 p.m. The lecturer is Dr Ch. Laubry, professor of cardiology in the University of Paris, and his subject "Considerations Pathogeniques et Cliniques sur les Rythmes de Galop."

LEAGUE OF NATIONS HEALTH PROGRAMME

THE NEXT THREE YEARS' WORK

A session of the Health Committee of the League of Nations which directs the health work of the League and in particular the Health Section of the Secretariat, was held from April 26 to May 1 under the chairmanship of Professor Parisot, director of the Institute of Hygiene at Nancy. Representatives of seven countries attended, the British representatives being Dr M T Morgan and Dr N M Goodman of the Ministry of Health. The main work of the Committee was to approve the next three-years' programme (1937-9), largely a continuation of the work already carried out.

Epidemiological Intelligence

The service of epidemiological intelligence and public health statistics includes the work of the Eastern Bureau at Singapore, which is in weekly communication with the ports of Eastern countries, and the intelligence service at Geneva, from which are published figures relating to communicable diseases and births and deaths from all countries where such data are available. These services are to be maintained and developed. The international list of causes of death is now being revised by a technical committee with a view to making the public health statistics of different countries internationally comparable. A study was started last year, and is to be continued, with the object of presenting in statistical form the state of public health in reference to 'vitality,' meaning fertility and population, and "health," meaning mortality, morbidity, and the incidence of physical and mental defects, reference also being made to geographical, social, and economic environment and the various medical and sanitary activities of the community concerned. Material regarding maternal mortality and welfare is being collected in a number of countries to form the basis of a double report, one part dealing with the organization of welfare services and the other with maternal mortality and morbidity and their causes.

Biological Standardization

Another governmental conference on biological standardization similar to that which met in Geneva in 1935 is projected for 1939 if the experimental research work now being done internationally in this field is sufficiently advanced. Forty-one countries, including Great Britain, India, all the Dominions except New Zealand, and the United States have adopted or are about to adopt some or all of the international biological standards and thirty-one countries, including those just mentioned except Australia, have created or are about to create national centres to hold and distribute the international standards. The task of the central institutes at Copenhagen and at Hampstead will thus be simplified though it is anticipated that the Copenhagen institute will as in the past have to supply international sera to the great majority of national centres.

Several questions in the field of serology need to be reviewed from the therapeutic and the practical aspects. Changes in the international standards for tuberculin and staphylococcus antitoxin fall to be considered. A new field recently explored is that of anti snake venom serum. The problem of standardization here is so wide and complicated that it is considered wise at present to limit the study to anti viper serum and to the European viper. The Copenhagen institute is in correspondence with the European laboratories producing anti viper serum (Milan, Paris and Zagreb) and is endeavouring to work out methods of standardization. At the same time the assistance of institutes in Eastern countries is being secured with a view to the standardization of anti-cobra serum.

Pharmacological standards, as well as those for vitamins and sex hormones come within the next three year programme of the Biological Standardization Commission.

Malaria Leprosy Dangerous Drugs

The Malaria Commission is to take in hand the preparations for another governmental conference on quinine and kindred febrifuges, to be held not earlier than 1939. This conference will also take up the question of synthetic drugs. It is proposed that the League should organize meetings of experts from the various institutions for the study and prevention of leprosy, including the British Empire Leprosy Relief Association, with the object of taking up certain definite questions so that the main effort may always be concentrated upon some matter of outstanding importance.

On the proposal of the United States Government the Health Committee will proceed, jointly with the Office Internationale d'Hygiène Publique (an autonomous body, but related to the League by virtue of the fact that its permanent committee is the General Advisory Committee of the League's Health Organization), to study a new phenanthrene derivative of morphine—namely, desomorphine—which appears to be particularly harmful by reason of its toxicity and habit forming properties. The Health Committee has also undertaken to study the various methods of treatment of addicts in European and North American countries.

Housing and Physical Fitness

Among the subjects which have lately occupied the attention of the Health Organization, and are included in its three-year programme, are housing, physical fitness, and nutrition. A conference on rural hygiene in Eastern countries is to be held at Bandoeng, Java, in August next at the invitation of the Netherlands Government, and a similar conference for the American continent is mooted for 1938, to be held in Mexico City.

Arising out of the first (European) conference on rural hygiene in 1931, the study of housing has been continued, and the committee recommends a number of subjects for the attention of the experts who will be meeting during the present year. With regard to physical fitness, it is considered that the work in this field can only be adequately pursued by appointing a committee of physiologists to formulate the scientific basis of rational physical education adapted to different ages. The International Labour Office has already set up a committee with a similar reference, and the two bodies will collaborate.

Nutritional Surveys

A Technical Commission was appointed by the Health Committee in 1935 for the development of the League's work on nutrition which came forward so prominently at the Assembly of that year, and this body has now recommended a list of subjects for further study. The first of these is the assessment of the nutritional state of children. A consultation of physiologists and paediatricians held in December last recommended various types of survey, one being applicable to the state of nutrition of large groups of children and limited to a record of physical appearance, weight, and height and another to smaller groups but involving more extensive tests including a thorough medical examination as well as an economic social and dietary survey. A third type of inquiry is also proposed aiming at a study of the disturbances affected the body owing to a quantitatively and qualitatively deficient diet. Several of these different types of study are being carried out in Belgium, France and the Netherlands; others are contemplated in Sweden, Czechoslovakia and Austria and will deal with 50,000, 10,000 and 20,000 children respectively.

It is also considered that a general study should be made of the extent to which diets in common use fall below it.

WILLIAM EVANS EARLY DIAGNOSIS AND TREATMENT OF HEART FAILURE



FIGS 1 and 2.—Teleradiographs showing displacement of heart in failure. Fig. 1 before treatment shows greater displacement of heart from right-sided hydrothorax than Fig. 2, after treatment

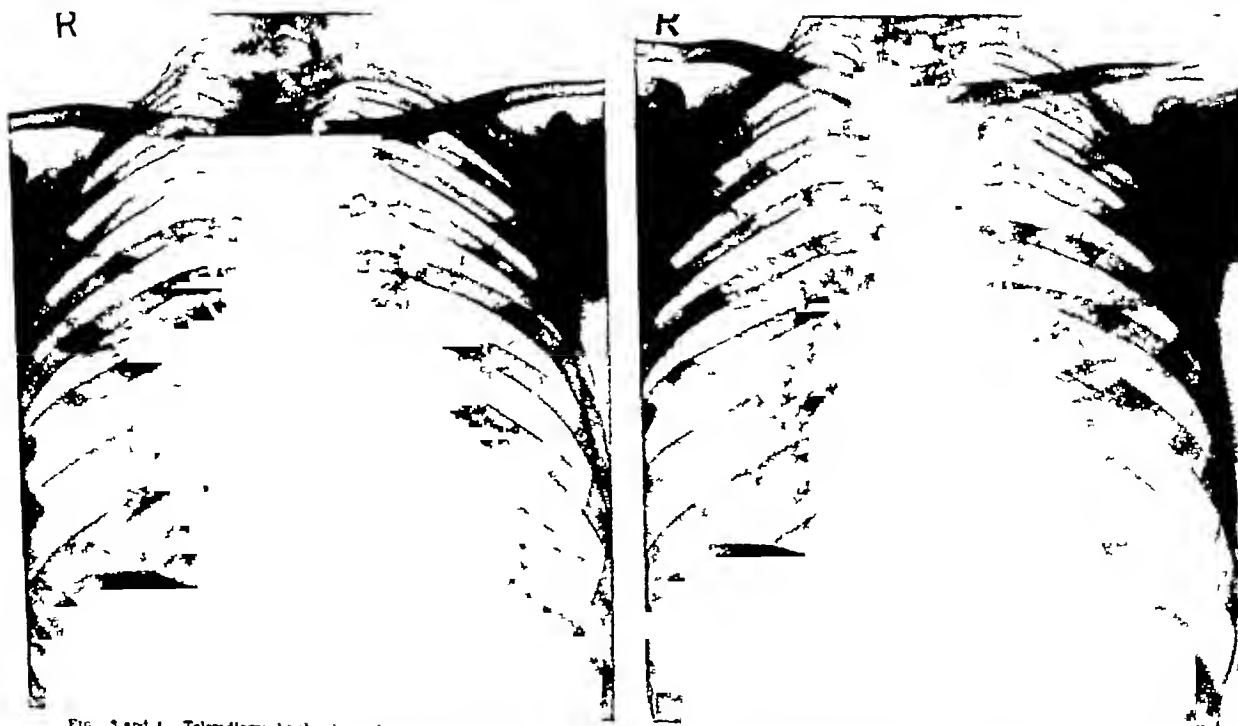
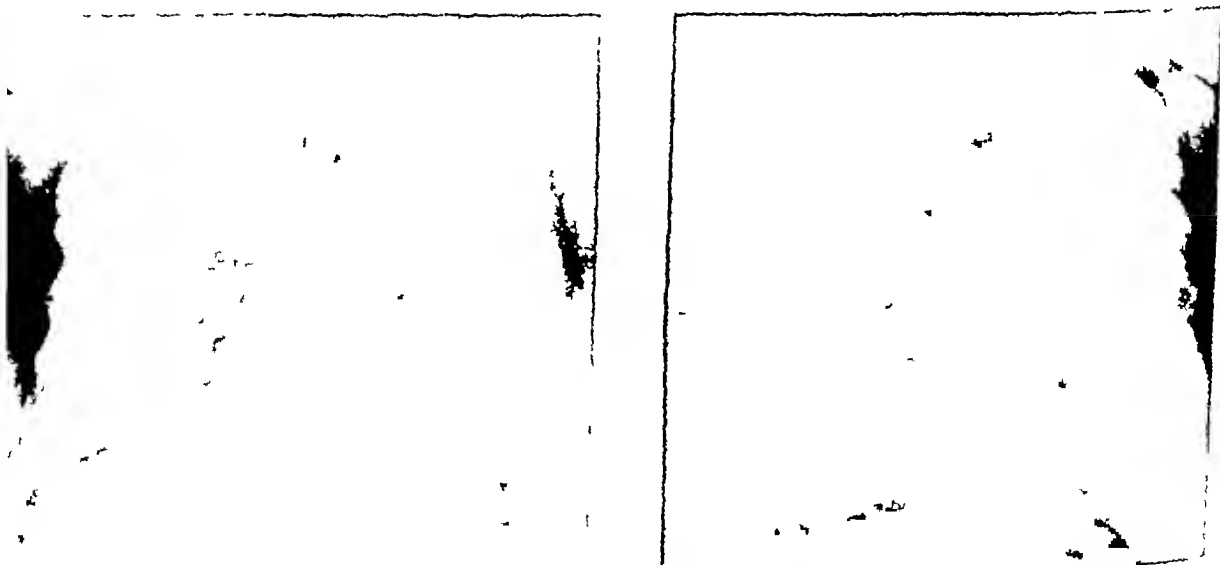


FIG. 3 and 4.—Teleradiographs showing pulmonary congestion in heart failure. Characteristic hilar shadows appear in both skiagrams, but are less conspicuous in Fig. 4 taken after three weeks rest, than in Fig. 3 taken before resting

WILLIAM EVANS EARLY DIAGNOSIS AND TREATMENT OF HEART FAILURE



FIGS. 5 and 6.—Teleradiographs showing relief of pulmonary congestion from heart failure by rest in bed along with a diminished fluid intake and salyrgan administration. Fig. 5 was taken before treatment, and Fig. 6 one month after commencement of treatment, in a case presenting hypertensive heart failure.



FIGS. 7 and 8.—Teleradiographs showing arterio-venous aneurysm. Heart diminishes in size and pulmonary congestion is relieved following resection of aneurysm. Fig. 7 taken before operation. Fig. 8 taken one month after removal of arterio-venous aneurysm of lower third.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 5 1937

CAPITATION FEE: COURT OF INQUIRY PROCEEDINGS

The Court of Inquiry into the insurance capitation fee opened its proceedings at the Ministry of Health on Wednesday, May 26. Lord Amulree presided, and the other members of the tribunal were Mr Thomas Howorth and Mr D H Robertson with Mr E H Phillips, secretary.

The Insurance Acts Committee of the British Medical Association was represented by Dr H Guy Dain who presented the case, together with the following: Dr D E Dickson (chairman of the Panel Conference), Dr J A Brown, Dr D G Greenfield, Dr E A Gregg, Dr C F T Scott, with Dr G C Anderson and Dr C Hill (respectively Medical Secretary and Deputy Medical Secretary).

The case of the Ministry of Health and the Scottish Office was presented by Mr T D Harrison, who was supported by the following: Mr J Chown, Dr Ferguson, Mr E Hackforth, Mr T Lindsay, Mr F F Marchbank, Mr A W Neville, and Miss M E Ritson.

Other parties which put in an appearance included the Medical Practitioners Union, the Joint Conference of Friendly Societies, and the National Association of Insurance Committees.

First Day

Opening Proceedings

LORD AMULREE said that the Court proposed to hear first the evidence of the Insurance Acts Committee, then that of the Medical Practitioners Union, after which the case of the Ministry of Health and the Secretary of State for Scotland would be presented. There would then be opportunity for other bodies to make comment, and a general reply would be made.

DR GORDON WARD made a protest on the ground that the Ministry had refused to circulate its memorandum generally beforehand (he understood that memoranda had been exchanged between the Ministry and the British Medical Association but these had not been generally available) and that the Minister was not to place his evidence before the Court first. He also objected that between the issue of the terms of reference and the date on which memoranda of evidence had to be submitted only thirteen days were allowed to elapse, two of which were public holidays. LORD AMULREE said that the protest would be noted but with regard to the order of procedure everyone would have an opportunity of stating his case, and there would be opportunity for a general reply.

Some preliminary argument then took place between Dr DAIN and Mr HARRISON (for the Ministry) with regard to the periods taken as relevant for the purpose of comparison. Dr Dain pointed out that the evidence given before the previous inquiry in January 1924 referred to the conditions obtaining in 1922, whereas the Ministry in its present memorandum had taken 1924 as the basic year.

LORD AMULREE said that the position was that in 1924 the available evidence related to facts ascertainable for 1922, just as the position to-day was that although the Court was sitting in 1937 the data available were those obtaining in 1936. On that understanding Dr Dain proceeded to open his case.

The Committee's case and the case of the Ministers with the rejoinders were published in the *Supplement* to the *British Medical Journal* of May 29.

Insurance Acts Committee Case

DR DAIN, in opening the case for the Insurance Acts Committee, said that in preparing its memorandum the Committee had been concerned with the changes which had taken place since the previous award in 1924. These changes came under two headings: economic changes which affected the population as a whole, including doctors, and changes in the work and responsibility of insurance practitioners. When they approached a decision on a matter like the capitation fee, in which a very large number of doctors were concerned on the one hand and the Government of the country on the other, it was almost impossible to settle by agreement between the parties, and so it became necessary to ask for a tribunal consisting of persons not connected with either party to hear the arguments and determine the result.

In 1920 a board of arbitration fixed the fee at 11s. Economic conditions altered rapidly at that time, and two years later practitioners accepted without further argument a reduction to 9s 6d. But in 1924 the question was again argued before a Court of Inquiry, which awarded 9s, the figure reflecting the changed economic conditions of the country. The items of service per insured person which the profession claimed to be rendering at that time numbered 375 or, according to the Ministry, 35. A great increase had taken place since then in the amount of work required on behalf of insured persons, and a request for a reconsideration of the fee was on the point of being put forward in 1930 and 1931, when the economic crisis occurred, as a result of which the medical profession consented to a 10 per cent deduction partly removed in 1934 and finally in 1935. In the beginning of 1937 the Committee approached the Minister and it was agreed that the matter should go to the present Court.

At the hearing in 1924 the profession were considerably disadvantaged on two points. They had not a sufficient volume of figures on the cost of practice or on the number of services given. After the award in that year steps were taken to remedy that deficiency, and it was hoped now to satisfy the Court that the figures put forward in the memorandum were substantially correct and not to be really disputed. On the economic question generally it must be remembered that the number of insured persons in proportion to the whole population was increasing so that this service absorbed a greater part of the work which fell to the doctor's lot. A doctor in any large practice must depend to a greater extent than formerly upon his insurance work. There had been

a large increase in the proportion of doctors to the population since 1924, and it was now practically impossible in most areas for a man to be in practice without undertaking some insurance work

Economic Factors

Passing to economic factors that concerned doctors, Dr Dain drew attention to the appendix by Professor Bowley, who had estimated that the fall in cost of living for middle-class persons had been from 7 to 10 per cent. since 1924. The Ministry had taken a different set of figures, and had suggested that the deduction from the doctor's capitation fee on this account should be in the neighbourhood of 5d, computed, properly and fairly, on the doctor's net income, not his gross income. This corresponded more or less to the 7 per cent. of Professor Bowley, so that there was no great disagreement on that point. He added, however, that as the fee fixed by the Court would date from 1938 it should be borne in mind that a rapid increase in the cost of living was now taking place, and was likely to go further before the end of the present year.

A large volume of figures had been collected with regard to practice expenses. The practice taken into consideration by the Court in 1924 was that of a doctor who dispensed for his private patients and not for his insured, and it was estimated that his practice expenses would be 25 per cent. of his receipts. Such figures as were then available had been compiled partly over war years, and were subject to a number of serious criticisms. But the figures collected since then showed a very steady average for the various kinds of practice, and the comparison which should be made to-day on that basis showed that in place of the 25 per cent taken in 1924 33 or 34 per cent should be taken to-day. These figures had been collected from doctors willing to submit their accounts, in many cases audited by professional auditors, and in other cases accepted by the income tax inspector. They included all kinds of practices, and they showed that practice expenses should be considered as representing one third instead of one fourth of the gross income. Copies of the original accounts could be seen by the Court.

Dr Dain next dealt with the way in which the expenses of practice were made up. The Ministry had assumed that 75 per cent. of the expenses came under the head of travelling, but the expenses included part rent and rates, service heating and lighting telephone repairs and locumtenents as well as travelling. Travelling accounted for approximately one-third of professional expenses. On the other items there had been very little change. If some of them such as telephone costs had gone down others like domestic service had gone up, and the cost of locumtenents was greater.

The Ministry had suggested that there had been a saving of 35 per cent in the cost of travelling since 1924. The Committee's assessment was very different and he proposed to call motor experts to give evidence on that point. Moreover the distances travelled had increased on account of the population having moved away from dense areas into the new housing estates. As a matter of experience they found that they had more miles to travel. The increasing number of doctors in practice had reduced the income of the individual doctor, and yet to-day he was travelling further for the same money. In the Ministry's case it was suggested that the doctor had economized in travelling by reducing the horse power of his car but the only evidence offered was the enormously increased sale of smaller motor cars. He suggested that this had nothing to do with doctors or their practices but was the result of the altered type of person who purchased a motor car to-day as compared with 1924. Evidence on this point would be offered. The saving in the cost of travelling was represented only by a matter of a penny or less in the capitation fee.

Services Rendered to Insured Persons

Dr Dain next dealt with the service rendered to insured persons. Immediately the previous Court was over the Committee instituted a new method of collecting statistics. The method was set out in the rejoinder to the Ministry's memorandum. Areal documents were available showing the number of volunteers. The principle was to ask for volunteers from every area to the proportion of 10 per cent. Although for the years from 1924 to 1930 the samples were not up to the requirements so far as numbers were concerned, in later years it had been possible to get the requisite sample in all areas. The result was a day to day record of the work done. It included the whole of the doctor's work, not just a proportion of it. Further, it extended over a series of years. Although the figures did not relate to any particular practice over the whole of the twelve years, 3,000 practices had contributed their figures for one year or a period of years. Visits and attendances varied considerably from one year to another, an indication of the variation in sickness incidence. Great unfairness might result from comparing any particular two years. In 1927, for example the attendances were 503 per insured person, and in 1931 they had fallen to 475. If these were the only figures available it would be taken that the doctors were doing less work, but the succeeding years showed that this was not the case. The Committee offered the Court a set of figures from which it was fair to deduce the amount of work done, not in one year but over a period. There was a great discrepancy between these figures and those of the Ministry, and the Court would have to satisfy itself as to which were correct. There were one or two factors which supported the contention that since the 1922 figures were prepared there had been a substantial increase in work. This was shown by the increase in the number of certificates and prescriptions issued. The Ministry's figure of 4.6 prescriptions per insured person suggested that the Committee's figure of five items of attendance was reasonably accurate at any rate more nearly accurate than the Ministry's figure, which would make it appear that each insured person got more prescriptions than visits or attendances. If an insured person went five times a year to his doctor it was not unreasonable to expect that he might get four prescriptions issued, for a patient did not get a prescription at each visit or attendance. The prescriptions must be less rather than more than the number of attendances.

The Ministry's figures started from the year 1924 covered thirteen years and 600 practices and in each case only a proportion of the practice was reckoned. There must be a number of sources of error in figures taken in that way. The count was taken months after the event and those of them in practice knew how the doctor's list was in a continual state of change. In the Committee's computation they had asked practitioners to count up to the end of the year the attendances they rendered, and the result corresponded at any rate to a fairly steady figure. Such changes took place in the lists that the value of any count taken some time afterwards was seriously vitiated.

After dealing with various matters relating to the method of computation Dr Dain submitted that on the increase in the amount of work practitioners could properly substantiate a claim for an increase of one third on the capitation fee.

Nature of Service

Passing to the nature of the work done he said that those who spoke for the profession had always taken the view that the service given should be a full general practitioner service and the best that the doctor could provide. When as not infrequently happened some new method of diagnosis or treatment arose they believed that the practitioner should not say that this was not before the Court of Inquiry when it made the last award and

ought to be regarded as an extra, they had maintained that such new methods should be absorbed into the service and given to insured persons in the expectation that the next time the Court was assessing the capitation fee it would bear in mind that practitioners were in fact doing work which did not come into the original calculations. He pointed out that to-day no woman expected to go through her confinement without being examined ante natus, and although the importance of ante natal examination was appreciated by the profession in 1924, the public did not appreciate it. Methods of diagnosis had extended very much during the last ten years. There had been, and still was, an increasing interest in the causes of disease, and this had led to more work.

The Ministry rather belittled the work that the insurance practitioner was called upon to do, referring somewhat slightly to 'catarrhal diseases and rheumatism'. It had taken unfortunate examples, because, in fact, the work done on catarrhal conditions—the taking of swabs, the examination of antrums and sinuses—and in rheumatism—bacteriological examination of stools and other procedures—all entailed very much more work than a few years ago because then they were not so familiar with the causes of the complaints. He submitted that the Committee had not in the least exaggerated the importance of the change in the nature of the doctor's work, if anything it had been understated. A change in the nature of illness had to be noted. It was not only bus drivers who showed an increased incidence of gastric and duodenal ulcer—he believed this applied over the whole population. There were other conditions which were on the increase, among them nervous strain due to pressure of work and repetition work in factories.

References to Hospital

On the hospital question, of which a point was made in the Ministry's case it must be borne in mind that the insurance service was a general practitioner service only and did not include specialist service—pathological and x-ray services and so on. If it was true that practitioners sent a large number of their patients to hospital, let it be remembered that they were sent there for bacteriological tests, x-ray examination, or specialized consultation, and, the examination having been made, the patient came back to the insurance doctor for treatment. Practitioners carried out the treatment for gastric ulcer after the x-ray examination, for pernicious anaemia after the blood tests had been made, and so on. They were sending large numbers of patients to hospital, not to the diminution of their work, but rather to increasing the value of it. If the practitioners could do all work which the Ministry suggested they should do they would be right in asking not for a modest 12s 6d., but for a much larger sum. As an evidence of the increased amount of work, there were now large numbers of people with diabetes or pernicious anaemia who were only alive because of the treatment they got week in and week out, month in and month out. These people remained constantly under treatment.

Finally, Dr. Dain touched on the question as to the admission of juveniles—those who had left school at 14 plus and had gone into employment. It must be borne in mind that the Ministry first offered a capitation fee of 6s for these persons, then 7s 6d., and at last talked over with the Committee the possibility, under certain conditions, of applying to them the ordinary capitation fee. To turn round now and say that 4s 6d. would be a fair fee for these young persons was not a very reasonable attitude. There were one or two points to bear in mind. The number of these people was a steadily decreasing one and was liable to sudden extinction should any Government raise the school leaving age to 16. In that case they would not come into insurance any earlier than now. That was one possibility which he hoped the Court would not entirely ignore. The Ministry's case was that the inclusion of this group of juveniles reduced the average

age of insured persons. That was true, but the reduction was by no substantial amount when one put one million against eighteen millions, and moreover, it was a decreasing amount because, with the declining birth rate, the number of these people would gradually shrink. On the other hand the age of the population was gradually increasing. Figures had been obtained from an expert which showed that the mean age of the population was 31½ years, and that by 1950 it would be 36 years.

To summarize the case, the Committee appreciated that owing to the reduced cost of living 5d. might be deducted from the capitation fee, and a further halfpenny or penny on account of the reduction of the cost of transport. On the other hand increased practice expenses justified an increase of 9d., and the increase in the items of service given to insured persons an increase of 3s 3d. This resulted in the 12s 6d. which, the Committee submitted, should be paid to the insurance practitioner.

Travelling Expenses Evidence

Mr. H. SCOTT HALL, a motor engineer, consultant in motoring economics, and a motoring journalist, gave evidence on his report, which was included in the rejoinder by the Insurance Acts Committee, on the question of car costs. He explained how the figures given in that report had been arrived at. Asked by Mr. Harrison whether there was not a big difference between the depreciation figures in 1924 and in 1937, he said that the difference arose from the fact that the actual market values of cars did not drop with anything like the same rapidity in 1924 as they did to-day. Asked how much longer a car lasted in 1924 than in 1937, he said that broadly speaking his opinion was that a car was used for a year or a year and a half longer in 1924. The reason for the more frequent change had to do to a great extent with fashion, and with the fact that, in view of the generally good appearance of cars on the roads, the doctor could not afford to go about in a car not in good condition.

The point was put to the witness by Mr. Harrison that the more frequently a doctor changed his car the lower would be his maintenance costs in the sense of repairs and overhauls. Mr. Scott Hall replied that for the first 24,000 miles maintenance should mean no more than periodic decarbonization, occasional adjustment and greasing, and possibly, depending on the nature of the district, re-lining of the brakes. He said that there was no economy in maintenance effected by selling a car the first year. He also stated that the 10 h.p. car was not used to any great extent by doctors.

Mr. PATON, director of Mann Egerton and Co., Ltd., consulting engineers to the Medical Insurance Agency since 1933, put in a statement concerning fifty consecutive sales of new cars to doctors in the Greater London area from June 1935. The average value of the car purchased was £251, and the average horse power was 14.6. He had got out corresponding figures for fifty consecutive sales from January 1, 1934, when the average value of the car purchased was £324, and the average horse power 13.03. In both lists he had eliminated consultants so far as he knew them. These were new cars, not second-hand, but doctors did frequently purchase second-hand cars preferring a higher grade of second-hand to a cheap new one. The guarantee for a second-hand car was three months only, and therefore the maintenance charges began almost at once, whereas a new car had a clear year.

In reply to a member of the tribunal, who asked why the average horse power of doctors' cars should be relatively high, the witness replied that the average doctor did not like a 10 or 7 h.p. car, he preferred from 14 to 18 horse power. Many doctors, especially in the London area now ran American cars, which brought up the average a little. The young practitioner might start with a 7 or 10 h.p. car but he liked to change as soon as he could to something better. Questions of comfort and prestige he supposed, entered into it.

Mr HARRISON for the Ministry said that Mr Paton's figures were really for suburban London. It would be interesting to have evidence from industrial areas like Leeds and Birmingham on that point.

Dr DAIN said that the Committee was contesting the Ministry's case that there had been a very large drop in the cost of travelling, but it was extremely difficult to provide evidence if it was required from different parts of the country. The sale of cars in large provincial cities would be spread over an enormous number of agents.

The I.A.C. Statistics

Before the Insurance Acts Committee case concluded Dr Dain was asked certain questions by Mr Harrison for the Ministry.

Did the doctors make their returns knowing the purpose for which they were to be used?—Yes, they knew they would be used for this purpose at some future time.

How did the Panel Committee get the 10 per cent of practitioners who made returns?—They called for volunteers.

They asked everybody and took what they could get?—If you like to put it in that way.

There was no attempt to select 10 per cent of people in typical practices?—Over the whole country, no, in areas where there were more volunteers than required some selection would be made.

You made no attempt to select so as to secure industrial semi-industrial rural practices large and small practices and so on?—We have them classified into rural and urban.

In your system there is nothing to prevent the whole of the returns from a particular area relating to one type of practice?—There is nothing to prevent it, but it did not happen. We can say that.

In recording attendances may not a doctor interpret it too widely and tick up an attendance every time he sees an insured person on whatever subject? Insured persons come to their doctors on other matters than health, say for a signature for a passport?—That is not a professional attendance on an insured person. I cannot guarantee that such things have never been done, but I cannot conceive a practitioner recording it as an attendance on a patient.

Supposing a doctor visits a patient in the morning and tells him to come to the surgery at night for a certificate, would that count as a visit and an attendance?—Certainly not. More over, if a patient is ill enough to require a visit, he is not well enough to come down for the certificate the same day. Doctors usually have their certificates with them.

Is a call at a branch surgery properly a visit? Is it not an attendance?—In outlying villages these have been counted as visits. They require travelling on the part of the doctor outside his immediate area.

If his practice is so extensive that he has to have a branch surgery for the convenience of himself or his patients, a patient's call there should not count as a visit?—Well, it is counted as a visit, it affects the statistics very little.

In reply to members of the tribunal Dr Dain said that the average of 53 items of service per insured person per annum was not the average of a very wide range. The highest figure would be about 7 in a thickly populated area. He also said that the computation of practice expenses did not include interest on capital or payment of income tax taken generally, the expenses were such as the income tax inspector would allow. They included the rent of the part of the house used for professional purposes. Lord Amulree said that they apparently included commission on debt collection, but there were no debts in insurance practice. Dr Dain replied that the whole expenses of practice private and insurance had been taken in order to compare with the figures presented at the previous inquiry. Practice expenses were the same for insurance as for other practice, except for dispensing and for such matters as debt collecting.

How do you account for practice expenses varying so much in individual cases?—It is difficult to give any idea. One man does all his work in one house, another has branch surgeries. One has an assistant and another has not. One may be economical in his practice, another more extravagant. It is the difference between one person and another.

What number of visits and attendances would be considered a reasonable day's work for a doctor?—We gave evidence on that before the last inquiry and we understood it was taken into consideration in the award made in 1924, so we have not come prepared to argue that point. We have directed our attention to changes which have taken place since the award.

Mr Harrison said that at the last inquiry it was mentioned that a doctor with a list of about 2,000 would have to see rather more than 25 patients a day.

Dr Dain mentioned that the figures for the first three months of the present year had been taken, during which time there was a fairly severe influenza epidemic, and if this period were added to the 1936 figures the average of attendances and visits combined would be raised from 5.13 to 5.23.

Case of Medical Practitioners' Union

Dr GORDON WARD said that the Medical Practitioners' Union had considered that the discussion on the capitation fee would take into account every relevant factor, not be confined to the narrow range of statistics. He asked whether he was at liberty to present the case on more general grounds. The Chairman said that the Court by its terms of reference could consider 'other relevant factors' relating to changes which had taken place since 1924. Dr Ward said that a memorandum had been prepared by the Union in more ample form than the restricted evidence so far given. The Chairman said that in the circumstances Dr Ward had better put the whole memorandum before the Court, but he hoped it would be relevant. Reference to pensions and other matters were somewhat outside the scope of the Court.

Dr Ward said that pensions could only be provided by raising the capitation fee, and that was a considerable point. He then proceeded to speak on the Union's memorandum. The memorandum he said had been circulated to the profession and in response 200 letters had been received supporting the views put forward. The Medical Practitioners' Union was a registered trade union, affiliated with the Trades Union Congress, the great majority of its members being insurance practitioners. To the Royal Commission in 1925 the Union put forward as the only proper basis for capitation the current value of the services rendered as on that date. He proposed to put before the Court the nature of the services rendered by insurance practitioners. The public believed that a doctor was essentially a wealthy man. He drove a car and had a large house, and people did not stop to consider that the car was part of his obligations and the house included his surgery. As to remuneration the average doctor in Glasgow made £8 a week from his panel and spent £3 14s in earning it. As for the doctor's duties, he was on duty every day of the year all day, and all night too except during his annual holiday. The doctor must bring to his work no mean ability. An extremely high grade of skill was required of him. It cost him a minimum of £1,000 and six lost years of wage-earning to qualify for his profession. On the top of an ordinary education had to be added a special education. When he had entered the profession he was required to keep himself up to pitch and fully cognisant of new methods of diagnosis and treatment. As an insurance practitioner he had a considerable burden of clerical work. After doing his own proper work he had to do the work of the approved societies.

Conditions of Service

The number of prescriptions issued in 1920 in England alone was 28 millions, and in 1935 it had risen to 51 millions. That indicated that the work the practitioner had

done must have increased very considerably. Figures for disablement told the same story. In 1920 disablement amounted to four million weeks and in 1933 to 14 million weeks. With regard to the attendances per head, he was willing to accept the I.A.C. figures as accurate but he wanted to put before the Court something in the way of supporting evidence. Accordingly he read a number of letters from members of the Union and others giving particulars of the actual work they did. As for the conditions of service, there was first of all, some question of prestige. It was felt by the medical profession that the official administration of the insurance service had done serious injury to the doctors' prestige, and his Union accordingly offered evidence of the attitude of the Ministry under various heads. In Ministerial publications insurance doctors were subject either to offensive patronage or a detailed setting out of their faults, showing an altogether wrong orientation of feeling and policy in the Ministry. He objected to the schoolmaster tone towards insurance practitioners in reports of the Chief Medical Officer of Health of the Ministry. One of the things against which the insurance practitioner had kicked most was the record cards a perpetual source of annoyance, though he agreed that the clinical record was valuable. Dr Ward also spoke of intensification of services, a thing which could not be shown in statistics. A point to be borne in mind was the large number of calls which came out of hours, especially now that telephone kiosks were everywhere and patients were tempted to ring up their doctor for trivial causes. It was supposed to be a rule that if a doctor was required for a visit he should be informed before 10 a.m. on that day. In the old days this rule was more or less followed, but nowadays it had been more or less allowed to lapse. Formerly patients called upon the doctor when they had what might be described as a legitimate illness but nowadays they came to the doctor for a chat when he did not want them. Again the suggestions made by the Press and by wireless on matters of health had led to a good deal of imaginary illness and accident proneness and had thereby increased the burden of the insurance practitioner.

On the question of discipline it ought to be remembered that insurance practitioners like other people, in due course grew old and their memories were affected. They became not so nearly 100 per cent efficient as they used to be. Any tolerable disciplinary scheme would make allowance for age and normal failings to which everybody was liable. In the discipline under the Insurance Act there was need for a better adjustment of the punishment to the crime. Again it was one of their old grievances that the Ministry was both judge and accuser.

Coming to the consideration of the basic fee Dr Gordon Ward referred to the scale of fees allowed for comparable services by the National Deposit Friendly Society, which offered the great advantage of extra fees for special services. Had no futile records had found no need for a complex disciplinary code and covered the supply of medicines as well as the attendances in the ordinary visiting fees. He entered upon a comparison between the society's fees and those under national health insurance.

Second Day

On the second day of the hearing Dr Gordon Ward continued his remarks. He mentioned that in some of the Press reports of the proceedings on the previous day the Court had been referred to as an arbitration. His Union did not regard it as an arbitration at all an arbitration meaning that the result was binding upon the contending parties. This was a court wholly appointed by the Government.

Lord Amulree: It is a Court of Inquiry. It is not an arbitration in a technical sense.

Dr Ward: I cannot say what "a technical sense" means.

Continuing Dr Ward said that the Union put forward a case for a capitation fee of 13s 6d. But it felt that

the final capitation fee must cover more than that, as it ought to remedy the unsatisfactory conditions under which the service was given. It proposed that insurance practitioners should have 'promotion' at intervals, signified by an increase in pay, the promotion corresponding to what took place in the Civil Service. For every three years of completed service an insurance practitioner should be entitled to an increase of sixpence per head for each person on his list. As a return for such increments the practitioner should be required to attend at least one week's course of post graduate study in a year. With regard to pension, the Union asked for this on a scale comparable to the pensions offered in other branches of the public service. It suggested that the cost of pensions might be met by the allocation of something like 3s per year per head.

The Union's demands consisted of a basic capitation fee of 13s 6d, a further reserved fee of 4s 6d to be applied for pensions and three-year increments, the same consideration from the Minister of Health as was given to other health officers, and the appointment of a committee to consider the co-ordination of all health services. With regard to the question of juveniles, he said that it was well known that the 14-16 age period had a large accident incidence and many other troubles relating to adjustment to a new mode of living. If practitioners were to take the risk it was hardly likely that they would consent to accept a lower fee than was given for other classes, for example, 18-20, with no special risks.

The Position of the MPU

Mr Harrison (for the Ministry) asked whom the Medical Practitioners Union represented and how its interests differed from those of the Insurance Acts Committee. He was not sure whether he was fighting one opponent or two.

Dr Ward: You are fighting two. The MPU is a trade union. It appears here virtually on the same platform as the British Medical Association and a large number of our members are members also of the Association. But we do feel that the line of approach of the Association has been made on a narrow basis and is not the best. There is an honest difference of opinion between us without any real hostility.

Mr Harrison said that the Chairman had rather indicated that he regarded a good deal of the memorandum of the MPU as outside the terms of reference of the Court. He himself submitted that the whole of it was entirely out of the terms of reference and was certainly something that neither the Ministry nor the I.A.C. expected to be discussed. (Dr Dain assented.) If he had to deal with this he would be in a great difficulty.

Dr Dain said that the I.A.C. represented the whole body of insurance practitioners, who elected from their number the Panel Committees, which were statutory bodies under the Act. Groups of Panel Committees appointed representatives to the Insurance Acts Committee, and individual Panel Committees sent representatives to the Annual Conference which instructed the I.A.C. That position had been recognized for many years by the Ministry, and in any matter of business the I.A.C. and the Ministry dealt with it by negotiation when it concerned for example, alterations in the articles or terms of service and when as occasionally happened the capitation fee came up for consideration, memorandums were exchanged between the parties.

Dr Ward asked whether the terms of reference of the Court were before the constituent bodies who composed the Insurance Acts Committee.

Dr Dain said that the Insurance Acts Committee on that matter took full responsibility.

Lord Amulree from the chair said that this Inquiry was between the Ministries on the one hand and the representatives of the British Medical Association on the

other, and he took it that Dr Ward's position was that of a witness helping the Court to arrive at a proper decision.

Dr WARD: That is a matter for you to rule. We regard it as a public inquiry when everybody may be heard.

The CHAIRMAN: You are here among other people to assist the Court in enabling it to arrive at a proper decision. We have taken your evidence, and I do not see where your grievance lies.

Dr WARD: The two parties have prejudiced the Inquiry by exchanging memorandums over weeks past, and the Inquiry is conducted on a narrower basis than that announced by the Minister of Health in March of this year. We have been prejudiced in the case we might have been able to prepare. The Minister said clearly in March that the whole question would be put before the Court, but it is only a part of the case which is before the Court.

Case of the Ministry of Health and the Scottish Office

Mr T. D. HARRISON, in opening the case for the Ministry, said that he had with him certain officials who in due course would be tendered as witnesses. There was no point at issue in this case which raised any question with special reference to Scotland, and unless the Court wished to hear a special witness in regard to Scotland he did not propose to call one. Before proceeding to criticize the case put forward on behalf of the doctors there were two points on which it would be as well to make a few general remarks. The present Court was free from at least one of the complications which were present in 1924. There was on this occasion no sort of attack being made from any quarter on the medical service as a whole. The Minister of Health had never said that the service was other than a good and efficient service. Neither in 1920, when a similar point went to arbitration, nor in 1924 at the Court of Inquiry, was anything like that said on behalf of the Minister, but in 1924 there was quite a hot attack from other quarters on the way the system was being worked and it was argued that the service was not only unsatisfactory in many respects but unduly expensive. It was no part of the Minister's case in 1924 that the service was not satisfactory, and his predecessor Mr. (now Sir Maurice) Gwyer expressly dissociated himself from any attack of that kind. On this occasion no attack was made from any quarter. No doubt the service was not perfect, no service was or ever would be, and all doctors had not the same degree of skill, ability or even energy. But the Minister did not question in any way that the service was, within its limitations, a good and efficient service. To-day it was widely recognized that insurance practitioners were performing quietly and steadily a service of national importance and it was the earnest hope of the Minister that all parties engaged in this work might co-operate with the central department in improving and where possible extending the service to the lasting benefit not only of that large section of the population which came within the direct scope of medical benefit but of the nation as a whole.

No "Niggardly Economy"

The second point was that the Minister had not approached the question of the capitation fee either generally or by comparison with 1924 in any spirit of niggardly economy. The Minister had shown no desire at any stage in the history of the scheme to beat the doctors down or to secure some sort of service at the lowest possible rate. On the contrary, the constant aim of those associated with the central administration had been from the very beginning to secure the best practical service supplied by the largest number of best available doctors and to pay to those doctors a fee which would be a fair remuneration for the work they did and at the same time would have regard to the nature and extent of the service actually supplied by those doctors while not imposing

an unfair burden either, through his contributions, on the insured person or on the national exchequer. The Minister had shown in the present case a studied moderation in the way he had put forward the documents and although the factors which indicated that a reduction of the fee would be justifiable had been within his knowledge for some time it was not he who had taken the initiative in these proceedings. That was not the origin of the present Court. The origin was that the Minister had been asked by the doctors for an increase in the fee. It was evident that there was a section of the medical profession engaged in insurance practice which considered itself down-trodden, underpaid, and bullied by the Ministry. He hoped that was only a small section. Possibly it was a legacy from the earlier days of insurance. The old attitude of hostility had changed. Young men had come into the service who had never known the bitterness of the original disputes. If anything he said could remove remnants of suspicion that the Minister was there to "down" the doctors then he would not have wasted his time.

Mr Harrison went on to remind the Court of the past history of the capitation fee. When the service started in 1912 the fee provided for the doctors was based on such information as the Government possessed concerning the average payment in club and contract practice.

Dr Dain objected at this point that Mr Harrison was going back further than the period covered by the reference to the Court.

Mr Harrison said that he did not include Dr Dain among those who regarded the Minister with suspicion, although the tone of the rejoinder made by the Insurance Acts Committee had caused him to wonder a little. He did not know whether it was in the nature of the "retort courteous" or the "countercheck quarrelsome."

Admission of Juveniles

The first move which gave rise to the present proceedings was the announcement by the Minister of his intention to introduce legislation to extend national health insurance so far as medical benefit was concerned to juveniles (14-16) in insurable employment. The insurance of this class did not include sickness and disablement benefit and as those benefits carried with them certification it followed that the doctors would be released from the obligation of issuing certificates in the case of these persons. Before introducing legislation it was of course necessary to find out how much the new scheme would cost. Accordingly negotiations were entered into with the Insurance Acts Committee as to the proper fee, and the Minister suggested 6s. which was refused by the I.A.C. It was said that the Minister was attaching too much importance to the point that these juveniles would be relatively sickness free and thereupon he suggested a fee of 7s. 6d., but this also was declined. The I.A.C. not only said that there must be the full capitation fee for these juveniles but that a higher capitation fee all round was called for. That was the first time that that point was raised officially.

Dr Dain pointed out that in 1934 or 1935 the Committee had approached the former Minister of Health then Sir Hilton Young, on the subject of the increased capitation fee.

Mr Harrison said that that was not made as a formal demand. It was as a consequence of the recent history he had outlined that the matter came before the present Court. He was not suggesting that the Minister's counterclaim that the fee ought to be reduced to 8s. was a second thought on his part. All the information justifying that claim had been in his possession for some time past but it was not he who had raised the issue. The Court ought to know what the position was with regard to the cost of medical services and what the doctors' claim was in hard cash.

Dr Dain protested that this was outside the terms of reference of the Inquiry. The question of where the money should be found ought not to be introduced into the discussion.

Mr Harrison said that he was not even going to make any suggestion as to where the money should be found, but the Court must know what it was doing. As a matter of figures, when the one million juveniles came in there would be about 19½ million insured persons. With that number one shilling either way on the capitation fee meant about £955 000.

Dr Dain: I object to it being put to you as a reason which should influence your decision, the amount of money to be found.

Mr Harrison: I am not putting it as a reason, but only that the Court may know what it is doing.

Dr Dain: A very fine distinction, my lord.

Criticism of Committee's Records

Mr Harrison then turned to the examination of the Committee's case. The figures which had been adduced showing the number of services although valuable as a method of comparison, did not necessarily prove that the service given was a better or a worse one. One doctor might diagnose a case correctly at once, another doctor, not so clever or so fortunate might have to pay a number of visits before he diagnosed a case. Yet the first service must be the more efficient.

Dr Dain said that he did not follow that argument or agree with it.

Mr Harrison said that the figures were not in themselves a complete test of the nature of the service being rendered. Again it was a flat rate capitation fee which was being dealt with and they could work only on averages. When working on averages it was very important to make comparisons between averages of the same kind of things. It was necessary to be sure that the average was a true one not vitiated by any fault, and then care must be taken to compare like with like. It was not safe to compare figures compiled on one basis with figures compiled on another, still less to compare a figure compiled on a basis which was stated to be adequate and accurate with a figure which was stated by the same authority to be unreliable.

He was not impugning the care with which the figures had been collected or the spirit in which they were put forward but the comparison was made between the items of service per insured person per annum stated to the 1924 Court (3 75) and the items (5 0) on the figures now available as the average of the last seven years and Dr Dain had told the Court exactly how those figures were prepared. Having averaged out these records for the last seven years he compared the result with the figure, 3 75 for 1922 which the Court might be surprised to hear, was obtained from the official record cards and according to Dr Dain hopelessly understated the position. The other side said that the official records revealed a lower number of services than were actually given. On the other hand while the IAC figures for 1922 and for 1936 were obtained on a different basis so making comparisons impossible the methods adopted on both occasions by the Ministry were to all intents and purposes the same. Wherever the inaccuracy might be whether in the official records or in the Committee's method the two sets of figures produced an entirely different result. After pointing out some discrepancies between the figures Mr Harrison argued that the Committee's averages were quite unreliable because they had not been obtained in a manner which fulfilled the canons of statistical science.

Adequate Sampling

What were the essentials for a proper sample? (1) The sample must be selected absolutely at random. (2) there

must be no possibility of bias in the selection of the sample, either deliberate (of which he did not accuse the other side) or introduced automatically by the nature of the method adopted, (3) the sample must be sufficiently large, for the larger the sample in relation to the class investigated the smaller would be the margin of error. In the case under consideration the doctors were spread all over the country, working in all sorts of districts and in all sorts of conditions as to population. In dealing with such a class three further essentials must be laid down: (1) the method must be such as to secure that all parts of the country were represented in the sample with sufficient uniformity, (2) all types of practice should be included in their proper proportions, (3) care must be taken that the sample did not consist only of people having a high average or a low average—there must be a proper mixture of doctors with high, medium, and low numbers.

How did the figures brought forward by the Committee comply with these requirements? Mr Harrison proceeded to read an extract from an article by Dr A. Bradford Hill in the *Lancet* of January 9, 1937, Dr Bradford Hill was medical statistician to the Medical Research Council, and he wrote as follows:

A sample which is composed of volunteers or self selected individuals is not likely to be a random sample of the universe from which it is drawn. If for example a treatment of colds by vaccine is offered to a group of persons the volunteers are likely to belong mainly to that section of the group which suffers most severely from colds and hopes for some advantages from the treatment. They are in that event a select group not comparable with the remainder of the population from which they were drawn. In such cases the question must always arise: Is the act of volunteering correlated with any factor which may have an influence upon the final results of the experiment?

In the case of the Committee's figures the doctors who made the returns selected themselves. He supposed that a certain number would start sending in returns and then drop out. But that was the way by which were obtained the individuals on whose records the sampling system was based. They were volunteers who knew why they were asked to volunteer. There were two types of person who would be more likely than others to agree to keep these records and go on keeping them and those were just the people who would produce, if the sample were confined largely to them a higher figure than the true average. The first was the practitioner who was exceptionally enthusiastic about insurance practice and who was in fact giving a larger number of services than the average man. He was the type of doctor who would go out and see a patient that same day, whereas another would put it off until the day after to-morrow. He felt sure that there were a number of doctors who did give a much higher average of services than the common level. They were just the type of people who would fill up the returns, and he did not suppose that even they were enthusiastic about insurance practice as they were would be unaffected by the knowledge that any high records of theirs would be very useful to those who were asking for the returns. The second class of practitioner was one who knew that he was giving a higher number of services than the average owing to the conditions of his practice and was possibly smarting under a certain feeling of grievance that he was not getting adequately paid. He would be likely to return cards showing a maximum service. On the other hand there was no temptation for the doctor who knew that he had a low average to make such returns and he would remind the Court of what Dr (now Sir Henry) Brackenbury said at the previous inquiry. I know from experience that a doctor always has the impression that he has done far more and has seen a greater number of patients than he really has. If he totals up the number of people he has seen he is surprised to learn how few they are. He did not think that that conflicted with the general experience. Altogether

there was no security that in this sample not only high but medium and low records were introduced. The tendency was for the high to come in and the low to remain out.

Ministry's Method of Ascertainment

Turning to the method of ascertainment adopted by the Ministry Mr Harrison said that the doctors were selected on two grounds only—that they must have more than 500 persons on their lists, and that they were known from the personal experience of regional medical officers to be careful record keepers. The sample was well spread over the country. Urban, mixed, and rural practices were selected approximately in the proportion 7, 2, 1, being roughly in correspondence with the number of insurance practitioners engaged in these types of practice. From each selected practice 500 cards were taken, perfectly at random, as set out in the appendix to the Ministry's case (*Supplement* May 29, p 324). The advice of Mr Kyd, principal actuary in the Government Actuaries Department, had been taken on the rightness of the sampling.

Mr HOWORTH. Granted that the cards are properly filled up by the doctors.

Mr Harrison said that the same thing applied to 1924. There was no reason to suppose that the proportion of bad record keeping differed as between the two years. There were doctors who were known to be poor record keepers, but the record keeping on the whole was really well done, and if there were any doubt on that score he would say again that the records were selected from doctors who were known by experience to be good record keepers.

In 1924, in connexion with the Royal Commission of the following year, a test sample was taken on exactly the same method as was employed in 1936, and the figures were set out in paragraph 15 of the Ministry's case. In its rejoinder the Insurance Acts Committee stated that its own figures covered a great many more insured persons—namely, 1½ millions—the Ministry's figures covering only one third of a million. That was plausible, but misleading, because, of course, the Committee got its total of 1½ millions by taking all the insured persons on their doctors lists whereas the Ministry had based its figures on the method of taking a sample of 500 cards from each practice. In point of fact the actual number of insured persons who were on the lists of the doctors whose cards were inspected was just over one million. The cards examined were those which were in the doctor's possession at the close of the year and any persons who had not been on the doctor's list during the whole year were eliminated. He described the adjustments and corrections made in the figures as set out in the memorandum. The result of the survey was that the average number of services per card examined was 3.66. A special investigation of services given to persons who died during 1936 was made, and showed that these persons received 9.17 services. In addition the particulars of services given in 1936 to persons who died after the end of that year but before the date when the investigation was made were taken out. The period between the end of 1936 and the date of the investigation was about one-fifth of a year and on the assumption of a death rate of 10 per thousand a little calculation showed that the inclusion of the records in respect of attendances on persons who had died increased the average number of services per insured person during 1936 from 3.66 to 3.72.

After corrections and the weighting described in paragraph 18 of the Ministry's memorandum the total services came out at 4.12 for 1937 as compared with 3.99 for 1924, an estimated net increase of work of about 3½ per cent. The appropriate increase in the capitation fee on this account was about 4d., which might be taken as a set-off to the additional cost of living.

To show how carefully the survey was made an examination took place of the shift of population since 1924. In the North of England and South Wales there were at both periods more insurance practitioners per insured population than the average for the whole country. In proportion to the insured population the number of records examined in these two areas was about 9.4 per cent. higher than the number examined for the rest of England and Wales in 1924 and about 16.5 per cent. higher in 1936.

Prescriptions as a Criterion

He next took up the point which had been made that according to the Ministry's returns there had been more prescriptions issued to patients in 1935 than there had been services. He had a complete answer to that argument. The suggestion seemed to be that there was some relationship between the number of prescriptions and the number of services. He contended that the number of prescriptions was not an accurate guide to the totals in the number of services. If there were any necessary connexion between the number of prescriptions and the number of services it would be shown in Scotland also, but he had the figures of the number of forms as they called them in Scotland, a form containing one to three prescriptions, and in 1924 the number of forms per person in Scotland was 1.7, and had fallen ever since, the figure for 1924 being the highest on the list.

Dr Dain said that the records in Scotland were on a different basis, and to compare the figures of Scottish practice with English figures might mislead the Court.

Mr Harrison said that the same argument applied to England. Frequently more than one prescription was entered on one piece of paper. Special examinations were made in 1920 and 1930 to ascertain the number of prescriptions per script in England and Wales, and in the former year the average was 1.15 and in the latter year 1.276. A special check had just been made in three of the large pricing bureaux—namely, those of the north-eastern district, Lancashire, and the south-eastern district—and it was found that the number of prescriptions per script had gone up. If one assumed that what had happened in those districts operated throughout the country it would appear that the average number of prescriptions per script had gone up to 1.34. Sometimes doctors wrote on two pieces of paper, which counted as two prescriptions but there was only one attendance. What the figures showed was that of 100 patients who received service something like ninety-two got a prescription on their attendance or visit and the remaining eight did not. He thought that was a reasonable percentage of people who did not get prescriptions. The figures were only in respect of persons who were entitled to prescriptions; no correction required to be made in respect of doctors who dispensed.

Practice Expenses

Coming to some general considerations, Mr Harrison said that he could not agree that, as suggested in the I.A.C. case the practitioner incurred a heavier responsibility when he sent his patient for examination to his hospital. Nor did he see the relevance of the argument based on the ageing of the population. With regard to practice expenses everything that he had said about the principles which should be followed in taking a sample applied here. These samples again were taken entirely from volunteers and without any attempt to sort them out. The practices with lists of 2,000 or 3,000 were large practices and the ratio of expenditure did not compare with that of medium practices. He examined the figures given in the Committee's case in some detail and said that he found difficulty in understanding how a practitioner could possibly spend on his practice the sums indicated—namely, on a practice with a gross return of £1,500 practice expenses to the amount of £500. Pro-

fessor Bowley had given the budget of an average doctor's family from which it appeared that the amount of rent and rates chargeable to the practice—namely, one third of the total—was £41 and fuel and light £18.

Dr Dain raised the objection that Professor Bowley's figures ought not to be taken unless Professor Bowley was present, he had been present on the previous day, and Mr Harrison had intimated that he did not wish to ask him any questions.

Mr Harrison said his only point was that when all the deductions for practice expenses were taken as implied in Professor Bowley's table quite a large sum—roughly £300—had still to be accounted for. What was that £300 spent on? He supposed it included bringing in a locum-tenent for the summer holiday, but that would not be more than 20 guineas. He agreed that if an assistant were employed this would be a substantial item, but he had figures which seemed to show that the number of assistants for insurance doctors was very small. Again, an assistant was not ordinarily required solely for insurance work. Unless a doctor had a list of 2,500 or over the only reason why he employed an assistant was that he and the assistant between them could run both the insurance and the private side of the practice. The assistant was brought in not because he was necessary for insurance work but because the doctor in addition to his insurance income might derive a large income from private practice. In those circumstances salaries of assistants ought to be eliminated from the computation just as the cost of drugs and charges for bad debts ought to be eliminated as having no relation at all to the ordinary insurance practitioner.

Lord Amulree said that he wished Mr Harrison would clear up the point about assistants. Why should not the assistant's salary be included in the reckoning as practice expenses whether the list was over or under 2,500?

Mr Harrison thought there was something to be said for disregarding the salary of assistants all the time but when the practitioner was compelled by the regulations to have an assistant owing to the size of his list it was very difficult to say that the salary should not be taken into consideration. A man who wanted to enlarge his business and found he could not do it single handed took in someone else, and his income was thereby increased. But there was this difference in the case of the practitioner with a list of 2,500 that he was not free in the matter. Therefore it would be fair to include the cost of an assistant when the list was above that level.

Lord Amulree asked what was the difference between an assistant and a locum-tenent. Was it merely that one was permanent and the other temporary? Mr Harrison explained that the former actually took the place of the doctor when the latter was away.

Lord Amulree. In other words holidays with pay.

Mr Harrison said that was really what it amounted to. The doctor's income from his insurance practice was continuing during his holiday and the cost of the locum-tenent being reckoned among practice expenses for the determination of the capitation fee he was really having holidays with pay.

The Position of Juveniles

Finally Mr Harrison dealt with the question of juvenile entrants. The fact that the Ministry had offered 7s 6d for these persons did not mean that that was thought to be an accurate amount and at the time it was suggested the Ministry had not got the result of the special survey referred to in paragraphs 22 and 24 of its case which showed a substantially decreased number of services for people of these ages. The Ministry thought that doctors should get something between one third and one half of the capitation fee in respect of juveniles. If this was to be regarded as a rate for the whole of the insured population it meant a reduction of 2d or 3d.

Dr DAIN. Is it assumed that the whole million juveniles will go immediately into employment?

Mr HARRISON. It is assumed that only two-thirds of the people of that age will get employment.

Dr DAIN. That makes it only some 700,000.

Mr HARRISON. No the million represents the two-thirds.

Dr DAIN. The absolute number of the persons from 14½ to 16 at the moment is one and a quarter millions and it will go down and there are no means by which it could be increased.

Mr Harrison having concluded his address for the Ministry, Dr Dain suggested that the case put forward by the Ministry so far as concerned the amount of work done by practitioners was extremely meagre. Was it really the best evidence that the other side could put forward? Mr Harrison replied that five counts had been taken—in 1922, 1924, 1930, 1934, and 1936—and the expert advisers of the Ministry had assured them that the method adopted was a very good one for arriving at the correct figure.

Third Day

Motoring Costs

The Court sat only in the morning of May 28, when technical evidence was taken.

Mr W. C. BURNS, deputy to Captain A. Hudson, chief transport officer in the Engineering Department of the G.P.O., gave evidence in support of the figures put forward by the Ministry with regard to motoring costs. The first figures were the Treasury rates allowed to civil servants for cars used on official business. These figures for 1924 were a contemporary document, arrived at after full discussion between experts on behalf of the Post Office and the Whitley Council and with a full knowledge of the conditions of motoring at that time. The same thing applied to the revised rates fixed in 1933 and reviewed in 1937. Not merely had the conditions of motoring changed as between 1924 and 1937, but the very cars themselves had changed out of recognition. If a car of 1924 appeared on the streets to-day it would be an utter anachronism. Thus there was the danger of comparing unlike things. Luckily the Ministry had not to rely on the authority of one or two individuals, as the doctors did, but they had the authority of the representative body of the motoring industry, the Society of Motor Manufacturers and Traders. When dealing with the question of motoring for a very large class of persons, and having in mind the fact that cars had radically changed their character there was only one method of arriving at a reliable figure—namely to take a cross-section right through the range of cars of different h.p. to find some feature making it possible to compare the car of 1924 and that of 1937. The feature selected was the price per h.p. of the chassis. Having taken the average h.p. price of ten selected groups of cars they had gone on to find out what was the proportion of h.p. sold in these various groups in the two years and by that means arrived at a composite figure which was an expression of the average price per h.p. of a complete range of cars.

Roughly twice as much was paid for a car of equivalent h.p. in 1924 as would be paid in 1937. Motor travelling costs since 1924 had come down by nearly one half and it was a fair assumption that the change applied to the cars used by the medical profession in the same way as it did to the cars used by the general motoring public. He was proceeding to examine the figures given in the Ministry's case when Mr Robertson, a member of the tribunal, expressed some scepticism with regard to the method adopted. He pointed out that taking a range of cars of ten different horse powers the range would be different in the two years 1924 and 1937 and in the latter year it would include a much larger number of small cars. He thought one ought not to

assume that the price of the high h p car had fallen by 50 per cent

Depreciation of Cars

The witness said that as the 1924 car was so very different from the car of 1937 there was no proper basis of comparison between any two particular cars, and therefore it was necessary to take a general average over the whole range of cars. It was said that 10 h p cars were not used by doctors, but the Ministry, in putting forward those figures, had assumed that the sales of cars which applied to the public generally applied also to insurance practitioners. As to a fair depreciation, it had been suggested that at the end of the first year a car had depreciated approximately to 55 per cent of its sale value, at the end of the second year to 50 per cent—that is to say, a car was worth only half its original value after two years—and to 40 per cent after three years. If a doctor bought a car for £250 and sold it after two years he would lose per annum on depreciation £62 10s, if he sold the car after three years his loss would be £50 per annum. He took exception to the figure given for depreciation in the I.A.C. rejoinder—namely, £75 10s per annum—and he argued that on the basis of the other figures given this amount of depreciation would mean that the average insurance practitioner sold his car and got a new one every twelve or eighteen months. In his view one could get 40 per cent of the original value of a car after three years' use, but if the average practitioner put aside £75 10s for his car yearly on account of depreciation it must be assumed that at the end of three and a half years a car purchased for £255 would have no sale value at all, whereas it should have a sale value of £100. The other side had no right to assume that a doctor was going to sell his car annually at a loss of something like £112 on a car costing £250, nor was it right to assume that any considerable number of practitioners would sell their cars within two years, because so far as repairs were concerned these during the first and second years were practically negligible. He thought it reasonable to assume that the fair period to take for the life of a car used by a doctor was not less than three years.

He also criticized the figures given by the Committee's expert for tyre cost. The Ministry had taken 15,000 miles as a very conservative estimate of the life of a modern tyre. He had been interested in Mr Scott Hall's statement with regard to maintenance, and he noticed that his costs provided for the vehicle to be thoroughly washed and polished three times in two weeks. He thought that with three washes a fortnight the doctors were "doing themselves well".

Mr HOWORTH a member of the Tribunal. Do you suggest that doctors should wash their own cars?

Mr BURNS. No Sir but at doctors premises one very frequently finds maids knocking the dust off the car.

The witness also criticized the figures given for 1924 costs as being too low. He had been unable to obtain from the expert who had spoken for the Committee a clear statement as to what was the life of a car in 1924.

There was some disagreement between the witness and Mr Scott Hall as to the cost of an Austin Twelve in 1924. The witness cited one compilation to show that it was £450, Mr Scott Hall suggested that it was £100 less.

Operating Costs

Mr BURNS further said that he considered the basis upon which the schedule of operating costs given in the Committee's rejoinder was constructed to be not sufficiently representative of the actual conditions of motoring among the medical profession. To assume that a doctor would change his car in less than every three years meant that he was not motoring in a reasonable fashion nor exercising prudence in conducting his motoring at

an economical cost, and that he was a devotee of changing fashions, for which the public should not be called upon to pay.

Dr DAIN protested that this was an expert witness on the cost of motoring and it was out of place for him to go into the ethics of motoring expenditure. The Committee's view was that the reduction in motoring costs was much less than the Ministry supposed. He elicited from the witness that he had no personal experience of the type of car used by doctors nor of how such a car compared with the car used by a civil servant on official duties. Dr DAIN pointed out that the doctor's car stopped and started a very great number of times to the mile, much more so than cars used by other sections of the public. The witness said that he could only take probabilities as disclosed by the use of cars by the general public.

We are not talking about the general public. We are concerned with the use of cars by doctors. You would not suggest that the class of doctors has changed in status or work or use of cars during this period of thirteen years?—I have no knowledge of any change of status.

Do you still consider five years a proper life of a doctor's car?—I do not know from my own knowledge what the life of a doctor's car may be.

If you were told that in fact doctors kept their cars for three years, the proper figure for cost of car in the Ministry's table would be £51, not £28 16s.—That latter figure assumes five years' life of a car.

Do you seriously suggest that a doctor can buy a car of the same type for 50 per cent. less than in 1924?—The trouble is that cars have so changed between 1924 and 1937 that you cannot get out a comparison at all. The 1924 car has very little relation to the 1937 car, and therefore you have to take the average over a large range.

Would you agree that the rate of depreciation of a 1937 car is greater than on a 1924 car?—Very slightly.

Mr Scott Hall, who was recalled, said that in his experience a small minority of doctors sold their cars at the end of one year, a considerable number at the end of two years, a somewhat smaller number at the end of three years, and a minority over three years. He also pointed out that the more expensive cars depreciated on the market more rapidly than the cheaper ones.

Actuarial Evidence

Mr J G KYD secretary of the Government Actuary's Department, gave evidence on the number of services given by the doctors. He said that he was not consulted by the Ministry of Health before it took out this sample but afterwards the Ministry did consult his department and it fell to his lot to examine the methods adopted by the Ministry in so doing. In his view the sample taken was of sufficient size to render the results deduced therefrom dependable, it was also of sufficient spread throughout the country in relation to the various factors that might affect the result of the sample. Information was obtained from each of the thirty three regions into which England and Wales was divided and from each region he understood twenty doctors were taken. The selection of these doctors was not left to the doctors themselves. The choice was made by the divisional medical officers and this had the result of spreading the sample adequately as between urban rural and mixed practices. It was very difficult to be quite sure that the result of a sample in any field of observation would give a satisfactory result but if the data were in any way biased the result was hardly worth publishing and he had felt it his duty to point out where there was in fact any bias in this sample. In view of the fact that the doctors chosen were definitely known to be good record keepers any bias would be likely to show itself in the direction of increasing the number of services. He had satisfied himself that there was no bias whatever in the other direction.

Fairness in Sampling

Lord Amulree asked whether the witness considered that the number of cards examined was a fair proportion in considering a case of this kind

Mr Kyd replied that judging by ordinary statistical methods the number of cards was ample. The deviation or probable error which might arise was absolutely insignificant in a sample consisting of one third of a million persons where the variable which was being examined was so harmonized as the number of services given by a doctor to a patient. On a sample of 330 000 the probable deviation from the mean was so small as not to matter. He referred for illustration to the statement put in on behalf of the Committee. The main statement related to one and a half million insured persons but a new statement had been put in relating to about 361 000 persons, and on comparing the results of the two computations he found that the results of the smaller sample exactly conformed to those worked out in the case of the larger. He merely mentioned that as a proof that, although the Ministry's sample was limited to one third of a million persons there was no likelihood that if the sample had been much larger the results would have been different. The proportion which the sample bore to the universe from which it was drawn was slightly greater in the 1936 sample than in that of 1924. But equally with regard to the 1924 sample there was no bias against the case of the doctor.

Mr Robertson pointed out that one of the respects in which the Ministry's count was said to be superior was in trying to take account of different types of practice whereas the I.A.C.'s count did not make that differentiation. What importance would the actuary attach to that? In the case of a bigger sample such as the Committee had brought forward was any importance to be attached to differentiation of this kind?

Mr Kyd replied that the Ministry had analysed the average number of services in various types of practice, and he was rather surprised to find how little difference there was between the average number of services given in urban in rural and in mixed practices and also how little difference there was as between practices of various sizes. The following were the number of services given in practices of five groups of sizes

500-750	3.6 services
750-1 000	3.6
1 000-1 500	3.6
1 500-2 000	3.9
Over 2 000	3.5

He also examined the figures for different types of practice with the following results

Urban	3.68 services
Mixed	3.70
Rural	3.41

Mr Robertson asked whether in theory the sample was so large that the distinction between types and sizes of practice ought not to matter.

Mr Kyd agreed that if the sample was sufficiently large and distributed over the country there would be no bias on account of different types and sizes of practice. Mr Harrison pointed out that the bias in the case of the I.A.C. sample arose not in this respect but on account of its selection bias.

Bias in Selection

Mr Kyd said that it had appeared to him as an actuary that there was a great probability of a certain bias in the selection of cases in the Committee's return. He said he did not see how he could select a doctor to give information which he knew would be used in a case which might benefit himself. He was not a doctor, but he was put down as a record of a case. He said the point was that the figures for the

two years 1936 and 1922, had been arrived at on the same basis.

Mr Robertson said that the percentage of insured persons treated had grown markedly as between 1924 and 1937, but not to a greater extent than the number of services. It suggested to him that the number of services per insured person had gone down.

Mr Kyd replied that possibly from a purely actuarial point of view he might be able to give a reason for that. In the Government Actuary's Department they investigated the rates of sickness. The rates of sickness were made up of two factors: the number of persons becoming sick and the duration of the sickness, and in recent years it had been found that a considerable change had taken place in the composition of the rate of sickness. A larger proportion of people were sick, but they were sick for shorter periods.

Dr Dain took up the criticism that the Committee's sample was a random one. A selection at random was a selection taken haphazard or by chance but a selection made from a limited field of doctors engaged in a particular type of practice, and again limited to those who were known to be good record keepers, could not in any sense of the word be a random selection.

Mr Kyd said that he was inclined to agree with Dr Dain. But there was probably a slight bias in favour of the doctors by reason of the fact that doctors selected for this purpose were good record keepers. The bias showed itself in an increase in the number of services recorded.

You think that the limitation to practices of a certain size does not vitiate the count?—The run of figures from 500 to 2 000 is so uniform that I cannot believe that the exclusion of practices with fewer than 500 persons on the list would vitiate the figures.

In a practice of 500 all the cards are counted. In a practice of 1 000 half the cards are counted, and in a practice of 2 000 one quarter. Is that likely to have any effect on the result?—So long as the cards are selected at random I do not think that statistically this makes any difference unless of course the people whose names begin with A or with B are more prone to illness than others.

The Chairman announced that the Court would, if necessary sit the whole of the following day to complete the evidence.

Fourth Day

Evidence of Ministry's Medical Staff

At the resumption of the hearing on May 29 Dr R. PATTERSON, senior medical officer of the Ministry of Health, gave evidence. He said that he was for a number of years an insurance practitioner afterwards spending nine years as regional medical officer and during the last eight years he had been concerned with the supervision of the regional medical staff among other matters. Being a professional man he did not want to give the Court or anyone else the impression that he was attempting to say anything derogatory of the medical profession anything he had to say was derogatory only of their excessive claims in certain directions.

It was claimed in the case put forward by the I.A.C. that the profession had an increasing responsibility for the prevention of disease. It was true that the whole future of the medical services in this country was subject to change and sooner or later there must be a linking up of all services in which the general practitioner would continue to play an important part. But the Court was asked to consider what the general practitioner did to-day for his patients and not what he might do under a co-ordinated public health service. Generally speaking, normal healthy persons did not visit the doctor and that

observation applied particularly to juveniles. It was claimed, and no one denied that the science of medicine was advancing rapidly, but here again, how far did these advances affect the work of the general practitioner? The case presented by the Committee mentioned ulceration of the stomach and duodenum. One of the saddest recollections of an old practitioner was the great amount of work thrown upon him by what was known then as chronic dyspepsia or gastritis. To-day the condition of these people was diagnosed quickly and they were operated on or treated medically and in the majority of cases made good recoveries. Modern advances, so far from adding to the practitioner's responsibility, had relieved him of much of it. He instanced the treatment of varicose veins. These persistent conditions gave great trouble in the old days, but modern treatment enabled the patient to be well and about within a short period. The practitioner here had been spared much distasteful and laborious work.

It was claimed that increased time was spent over the examination of patients, and he was astonished to notice the sphygmomanometer mentioned for that instrument was in use by careful doctors a quarter of a century ago. As for sera and vaccines, in 1935 there were dispensed by insurance chemists 25,760 prescriptions for these. He agreed that this did not tell the whole story, for an insurance doctor might purchase the material himself and claim repayment, but in the majority of cases this was not done, and the figures suggested, when compared with the total of the insured population, that the incidence of cases held to require this treatment in a particular practice was negligible. With regard to psychological treatment, also mentioned, a certain amount of psychotherapy had always entered into the work of the doctor, the "good bedside manner" was nothing else. But skilled psychiatric treatment was a matter for the specialist.

Medical Records

On the value of medical records, Dr Dain and he parted company. The contemptuous dismissal of medical records, ticks and so on in the I.A.C. case must have left an impression that doctors were having forced upon them some most disagreeable task. But these medical records were the result of the recommendations of a very important committee set up by the Ministry, with Sir Humphry Rolleston as its chairman, and numbering Sir Henry Brackenbury and Dr Dain among its members. The chief purpose of the record was to help the practitioner in the treatment of his patient. Dr Dain had claimed that even the most complete and careful clinical recorder did not take these cards out on every occasion he saw a patient. Then what was the record for? Any conscientious doctor would almost refuse to see a patient unless he had the notes of the case on the table before him. To say that doctors as a whole were not using records in that way was simply not true. When he was regional medical officer he found that the best records in every sense were kept by the men who made a rule of having the record out on every occasion of seeing a patient. He agreed that there were those among the profession who always objected to taking records. He had never understood that agitation. The Ministry had always claimed that the primary purpose of the record was a clinical one.

After clearing up a slight misapprehension with regard to the statistics of prescriptions Dr Paterson claimed that there was very little connexion between the amount of prescribing and the number of services. He pointed to what was happening in Lancashire. Why Manchester and Salford required apparently so much more drugging than Rochdale he could not say, but while the prescriptions in Manchester and Salford were about seven per insured person and those in Rochdale about four the number of attendances in both areas was about the same.

It was said that more people were coming to see the doctor. But for two reasons the Ministry believed that the doctor was not called upon to give more services. On the one hand more serious illness was treated in hospital,

and on the other more people were seeing the doctor for trivial illnesses, not necessitating more than one or two attendances. Therefore it was quite understandable that while the proportion of persons seen had risen considerably, the amount of work required of the doctors had not increased in anything like the same proportion.

With regard to juveniles he maintained that the number of attendances required must be very much less than that required for adults. He found it difficult to suppose that healthy boys and girls of 15 and 16 would on their own initiative go to the doctor for advice on health. It was agreed that mortality rates were not a good guide to morbidity rates, but it seemed evident that it must be the older people approaching the ages in which the death rate was highest who gave the doctor more work. He had tried to discover what were the complaints at the age 15-16 which, while not incapacitating the person for work, would require attendance from the doctor. These people were, generally speaking, beyond the age for infectious diseases, and they had not reached the age when more serious chronic ailments generally began.

A question being raised on the number of juveniles who would come in, Mr Kyd, actuary on the Ministry's side, said that the number of children of ages 14-16 who emerged this year was about one and a half millions. By 1948 it was estimated that it would have fallen to 1,200,000.

Dr Dain pointed out that very many of these children did not leave school until they were 14½, and the lag in many cases between leaving school and entering employment would further reduce the figures.

Mr Howorth, a member of the tribunal said that he had made some calculations based on prescription totals from which it appeared that there had been an increase in the number of 29 per cent between 1924 and 1935, from 34,624,000 to 44,650,000. During that same period the number of insured persons entitled to prescriptions had increased by 17.2 per cent. Allowing for that increase in the number of persons, it looked as if there had been a real increase of work, as indicated by prescriptions.

Dr Paterson replied that it was common ground that there was a very considerable amount of unnecessary prescribing, but he pointed out that in some parts of the country, notably Scotland despite the claim of increased services, there had actually been a fall in prescription frequency during these years.

Dr Paterson Cross-examined

Dr Dain put certain questions to Dr Paterson.

What is a good record keeper?—A man who takes his record out for every patient notes the fact of his attendance on the patient and makes a suitable clinical entry.

How do you know who the good record keepers are?—The regional medical officer is charged with the duty of routine inspection of the records of doctors.

How do they know that the doctors whose cards they are inspecting have taken the card out every time and made a tick on every occasion?—It is difficult to explain but I am prepared to examine any set of cards and say at once whether a man has done it in that way. There is a difference in appearance between a record made in that way and a record written up afterwards.

Is it claimed that the good record keepers are 100 per cent accurate?—No, but I could run my eye over hundreds of men whose records come mighty near 100 per cent.

If 100 per cent is not claimed what percentage of accuracy is claimed?—That is a question practically impossible to answer. To say whether a man was 100, 99 or 98 per cent accurate one would have to sit with him day by day and see him working. We have no standard of accuracy in meticulous detail.

You cannot get past 100 per cent accuracy?—Oh yes you can. We know of one man who got 200 per cent accuracy by the simple expedient of including every visit as an attendance at 0.

Can you give us an assurance that the error in recording is not more than 5 per cent in the practices you have taken?—I can give you no guarantee at all

When you were in practice were you a 100 per cent recorder?—I should say I was. I had a paid secretary to assist in the work

Would you agree that there are likely even in the most careful practices to be omissions?—Surely

I put it to you that in practice there would be such a number of omissions that 100 per cent would almost certainly not be obtained?—I said there was a risk of it not being obtained

Would you maintain that the count is more accurate to-day than in 1922?—I think on the whole yes. I would not press it very far

Are there not a large proportion of very large practices in the Ministry's computation?—Well there are none with fewer than 500 names

In fact it is the large practices that have been examined if 1,500 is the average. Would you not expect a larger error in recording in a larger practice?—I have always claimed the opposite

How many of these practices were partnerships and how many of the practitioners had assistants?—The 658 practices consisted of 824 practitioners not counting assistants

Would you not think it likely that there would be a greater error in recording in a practice in which two people were engaged?—That may be. There is some possibility of falling between two stools

Would you suggest that there is no possibility of bias in the regional medical officer in favour of selecting men whose records he knows are easy to count?—I could hardly admit that

Your figures show 52 per cent of insured persons treated during the year. Your figures show 60 per cent. The method in both cases was to count the cards with ticks on them. Is not that evidence that our men are better record keepers than yours?—I cannot agree. From what I know of many of your men who keep the records I should not admit that

Do you know who they are?—One or two. I will not mention names but I know the methods they admit having adopted. In one case the dispenser in another room merely counted the heads of people who came on insurance business during the day

Do you think there is any doctor on your list or ours who takes his card and puts a tick on it when he has not actually given the service?—I agree that the doctor himself would not put a tick when he had not himself seen the patient

You agree that if the first year of the comparison had been a year of low sickness and the last year one of high sickness it would have been good for us?—Oh yes

Are your methods of computing still the same as in 1922?—So far as counting is concerned quite the same

If you had found a source of error in your method as used in the first period you would have corrected it and then you would have had to have come before the Court with figures which were not comparable?—Yes

If we had found a better method than was used in 1922 should we not be right in using it?—Surely

Could you give us any idea of the frequency of prescription in relation to attendances and visits?—In the type of practice I used to follow I should say the margin was 10 per cent in the practice

And that 10 per cent would include all cases you visited to see a doctor and the patients who came even other days for a consultation?—Yes. You would not get a smaller margin than 10 per cent. I don't think so

Is it fair to say that the method of computing services by a regional medical officer is the best method of computing services by a regional medical officer?—I don't agree

medicine had added to or taken from the work of the insurance practitioner. Until 1934 he had a large mixed practice in the West of England, with a list of about 1,800 insured persons, which formed about one-third of his total practice. It was only in difficult and obscure cases that he had found it necessary to send patients to hospital for advanced methods of diagnosis. There were very few general practitioners who had the skill or apparatus to use these advanced methods and even if they had, unless they were doing the investigations regularly, the opinions they formed were not to his mind likely to be accurate

It was his experience that it happened very seldom that healthy people came to him and asked him how to keep well. During his twenty-four years in practice he could only remember three such cases. The Insurance Acts Committee stated that there had been an improvement in methods of diagnosis in cases but he maintained that these methods were mainly confined to the domain of the specialist and did not concern the general practitioner or add to his work. Pernicious anaemia had been mentioned. The number of cases of pernicious anaemia any doctor was called upon to deal with were very few. In twenty-four years he could remember having to deal with only six cases. The practitioner was helped by modern methods, for he immediately sent the patient to hospital for specialist diagnosis and the specialist advised the doctor how to treat the patient. The supervision of the case was often taken out of the hands of the general practitioner, for the practitioner had to send the patient back for a blood count. Apart from writing a prescription for a liver preparation or giving an injection the practitioner had little to do with the treatment of such cases as pernicious anaemia

The question of gastric ulcer had been raised. By using x rays the diagnosis could now be established and efficient treatment started at a much earlier date than formerly, and owing to the improved technique of the operation patients operated on in recent years had fewer sequelae. With regard to cases of neurosis in his practice the peak of such cases was just after the war, and it never appeared to him in later years that there had been any serious increase. The treatment of serious cases of neurosis was a matter for the specialist. In his experience vaccines were not used as frequently now as in 1924. The results obtained had not been up to expectation and by the end of his practice he had given up the use of vaccines. If they were used, however, they meant that the patient got better more quickly and to that extent the doctors had less work to do. Ante natal examination was seldom called for from the general practitioner, the women usually calling in a midwife or attending the ante natal clinic. In recent years the district nurses were better trained than formerly and doctors handed over very much more work to nurses—the dressing of wounds and the like—than they did ten or twelve years ago. Work in respect of old age pensioners had also greatly lessened

Cross-examination

Dr. Dain said that this witness had given such an extraordinary account of conditions in general practice that he proposed to counter many of his statements by calling a fresh witness on his own side. He put a few questions to Dr. Mackenna

Do you agree that the general practitioner is required to know what the new methods are?—Certainly

With regard to pernicious anaemia would it be true to say that such a case which is not diagnosed ends rather early in death?—Yes

With regard to gastric ulcer do you adhere to your statement that x rays will give you a diagnosis every time?—No. I did not say that. We know that modern methods are not always infallible

Would you agree that the number of cases submitted to operation to-day is very much smaller than ten years ago?—I could not tell you

Is not the sphygmomanometer more used to-day in general practice and over a larger range of cases than 12 or 15 years ago?—I cannot tell you

Suburban Practice

Dr F J HARVEY also a deputy regional medical officer, gave further evidence supporting the Ministry's case. He said that from 1920 to 1935 he was a practitioner with a mixed suburban type of practice. It was his experience, notwithstanding what was said in the IAC memorandum, that the science of pathology and morbid anatomy still formed the basis on which the average general practitioner based his reasoning and his diagnosis, leaving the more intricate and detailed investigations in the hands of those in charge of hospital departments which were so well equipped to deal with them. While it was still the primary duty of the family doctor to arrive at a diagnosis and advise as to the treatment of disease it was in the main the prerogative of the public health service to deal with its prevention and the adaptation of the individual to his environment. The occasions on which a healthy insured person came to consult him on the subject of how to keep fit were so few that the time entailed was negligible. It was his experience that there was an increased tendency on the part of the insured person to consult his doctor for minor departures from the normal but this was probably offset by the increasing tendency of those in towns to go into hospital for the treatment of the more serious forms of disease and to consult the specialists in the out-patient department when they were suffering from ailments or from diseases requiring special investigation or treatment. The general practitioner was thus relieved of many of the more serious cases and of much anxiety and responsibility in general.

With regard to the improvement in the treatment of catarrhal conditions, he thought again that to a great extent the treatment was in the hands of the hospital or the specialist. Most cases of serious illness such as pneumonia and rheumatic fever were treated in the acute stage in hospital, and the more serious and complicated cases of fracture were also sent into the wards. It was always his privilege to exercise to the full his opportunities to advise in the early stages of disease, but the conditions of his practice forced him always to wait until the patient consulted him. Undoubtedly there had been an improvement in, and elaboration of, methods of diagnosis and treatment, but these methods were, generally speaking, confined to the hospital and specialist, upon whom fell the work which was the lot of the general practitioner in years gone by.

It was a fact that there had been an increase in the incidence of peptic ulcer during the past ten years but the increase was probably more apparent than real, because by modern methods of diagnosis, including x-ray examination cases which had been overlooked in the past were now rightly classified. As for vaccines he could not remember that he was in the habit of using them to any greater extent in 1934 than he did in 1924 but if the work in the surgery was properly organized the injection of such preparations called for no more time than the case in which advice and treatment were given by more usual methods. The number of confinements among his insured patients was considerably less in 1934 than it had been ten years previously. There had been some increase in the number of people suffering from minor nervous disorders but the treatment of the severer cases of psychoneurosis required a consultant of wide experience. As for the ageing of the population it was evident that the proportion of elderly people was increasing but in his experience many of those who had been in regular attendance at the surgery up to the age of 65 ceased after attaining that age. The institution of old age pensions had meant a falling off in that branch of the work.

In reply to Lord Amulree, the witness said that although hospitals and clinics had made serious inroads on general practice, this did not affect the income derived from in-

surance practice, it did affect, of course the income from private practice. Dr Dain asked the witness if he seriously maintained that it was not more important to be able to diagnose the case of appendicitis when first seen than it was to be able to take the appendix out when the case came for operation. The witness replied that there had been no alteration in that respect. That principle had existed as long as the clinician had been at work. Dr Dain further asked if the witness maintained that no further treatment was required after a patient had had gastro-enterostomy done in hospital. The witness replied that he was not prepared to say that. He agreed that he had had cases which required continuous dieting and treatment for several years after gastro-enterostomy. He further agreed that any such case would require treatment for at least a year, but cases which had not been properly diagnosed and operated on would probably require it for many years.

Mr T LINDSAY of the Ministry's staff, answered a few questions by Dr Dain regarding the figures set out in the Ministry's case. Some of the questions were so complicated that the witness had to resort to a calculating ruler to arrive at the answers.

This concluded the Ministry's case.

IAC Case Further Evidence

Dr DAIN said that in view of the evidence given by the last two medical witnesses, he wished to call a practitioner at present in practice who could speak from experience on the points raised by the Ministry.

Dr D G GREENFIELD of Rushden, Northants gave evidence that he had been in practice in that district for 35 years, at first single handed, and now he had two partners. During the last three years his insurance practice had comprised a list of 3,400. When he was single handed, with a list of 2,000, he estimated his surgery hours in the morning to be an hour and a half now with 3,400 the morning surgery hours for all three doctors were two hours each. Dr Harvey had said that all his serious cases of rheumatic fever went to hospital. He did not suppose that he himself had sent a case of rheumatic fever to hospital for the last five years. For medical purposes other than diagnosis he had no hospital provision in his district. With regard to young people coming to the doctor for advice while in health, it was and was likely to be, the case increasingly that young people would come for counsel as to the sort of training they should undergo. The witnesses on the other side had referred to varicose veins. Since the new treatment was instituted and his partners started doing this work there were seldom fewer than four or five people in the surgery on a Sunday morning undergoing this treatment or resting after it. He had not encouraged Sunday morning surgery work at all, only emergency cases being seen as a rule but Sunday morning was a suitable time for dealing with these troublesome cases with the result that there were always four or five of them on hand. In this instance at any rate modern treatment had not saved the general practitioner work though its results of course might save his successor a good deal of work in ten years time.

He was astonished to hear from the other witnesses that pernicious anaemia in their experience was so rare. He had nine cases under treatment in his practice at the present time. It was not a very rare disease. It seemed to be assumed that these people invariably went to hospital for their blood and haemoglobin estimations, but in fact in his practice a considerable number of these blood counts were done by the doctors themselves. These patients remained under treatment for many years, previously the patient with pernicious anaemia died within possibly two years. It was much the same with diabetes. He disagreed that diabetes was entirely for the expert. The treatment of the diabetic, requiring visits to the surgery was carried out by general practitioners and called for a very considerable amount of expert work. These people again lived on indefinitely, whereas when he was

early in practice young people who contracted diabetes were dead in a matter of months. He had five or six cases of diabetes at the moment. With regard to gastric ulcer, to pretend that modern surgical treatment had eliminated the need for medical work was obviously wrong. It was far too optimistic to suggest that people who had undergone operations for this complaint would require only six months' or a year's after-treatment. They came up year after year. Another point was the use of the microscope, he found his juniors using it a good many times a week. As for old age pensioners, certainly if they ceased to require a certificate they did not come quite so often, but many of them required a club certificate which, though not an insurance obligation, was given them, on the advice of the British Medical Association, as a matter of grace. In his practice women were still attended by the doctors for their confinements and without undue fear.

Dr Dain pointed out that the Ministry had offered no evidence on the question of practice expenses, and on Mr Harrison remarking, 'I have concluded my case,' Dr Dain rejoined that it was evident the Ministry did not wish to submit any evidence on that point, and to that extent the position was made clear.

Joint Conference of Approved Societies

Mr STANLEY L. DUFF said that he had been asked by the approved societies to submit some observations to the Court. The matter before the Court was between the doctors, as represented by the B.M.A. and the Minister, and by direction of the Court the memoranda submitted by each of the parties were not made available until the Court opened. On this account those for whom he spoke had not been able to submit any written statement. He was speaking for the group of industrial insurance societies, trade union societies, friendly societies, and other groups covering virtually the whole of the insured population of the country. It was the members of these approved societies who were the patients of the doctors.

Attention was drawn in the statement by the Insurance Acts Committee to the improvements in the medical service rendered to insured persons. The standard of medical service to which the insured person was entitled was that which could reasonably be expected to be rendered by the practitioner. The range of service implicit in the contract had remained virtually unaltered from 1924 until the present date. Any treatment outside that range had still to be obtained by the insured person from some other source and paid for usually by the insured person himself. The improvements referred to in the Committee's case were in the opinion of those for whom he spoke, merely bridging over certain defects which had been admitted to exist in the medical services rendered to insured persons in the early stages of the administration of the scheme. The fact that the service did more nearly approach the standard which it was originally intended to reach ought not to be regarded as a reason for attracting additional remuneration. The approved societies' view was that the additional complexities referred to in that part of the statement were partially responsible for the increased number of insured persons referred to hospitals by insurance practitioners.

Attention was also drawn in the I.A.C. memorandum to the increased incidence of certain diseases. The approved societies could agree from their experience of their records that that change had occurred. At the same time there were certain other diseases and complaints which had greatly diminished in exactly the same period as these new diseases and new phases of old diseases had appeared. Reference was also made to the ageing of the population, but it was important to bear in mind that since 1925 certificates had not been required in respect of insured persons above 65. The pension

figures—and it was because of the Pensions Act that this change in the age of health insurance liability came about—at December 31, 1935, showed that the number of insured persons between 65 and 70 qualifying for pension was 475,000 men and 85,000 women. The number of persons of those ages entitled to medical benefit must necessarily be greater because the qualifying conditions for pensions were more onerous. Therefore it was safe to estimate that the number of persons between 65 and 70 in receipt of medical benefit who at one time had been entitled to medical certificates and did not now receive them exceeded 560,000. Whatever the Committee might choose to say the fact remained that at the last Court of Inquiry work in connexion with certification was heavily stressed. It was stated "There is nothing corresponding to this in private practice, and this important and burdensome service should be recognized by remuneration. Therefore as the result of the legislation of 1925 a definite relief had been afforded to the doctor.

References to R.M.O.s

Reference was made in the Committee's statement to the number of insured persons who were referred by approved societies to regional medical officers. It was true that there had been concerted action between the Committee and the approved societies with a view to reducing the number of these references. But it was the duty of the approved societies to determine the title to benefit on the evidence before it. The majority of references now occurring arose from dubiety in the minds of approved society officers as to the value or completeness of the medical certificates submitted by insured persons. From the experience of a number of approved societies he was bound to say that the doubt which prompted the reference had in a large number of cases been substantiated.

He wished to say a word or two about the attractiveness of insurance practice to doctors. In the Committee's statement it was said that young doctors found more attractive avenues elsewhere. But between 1924 and the present date the number of insurance practitioners had increased by 4,387. This increase was entirely disproportionate to the increase in number of insured persons during the same period. The security offered by insurance practice, containing as it did the nucleus of a reasonable competence, was proving attractive. It was not necessary to improve the remuneration in order to recruit or retain doctors of the type necessary to sustain the service at what was an improving level.

It was said that with regard to the juveniles the doctors' duties would be to a considerable extent preventive and advisory. If it were thought that that ideal would be realized no objection would be raised by the approved societies to the payment of a substantial fee in respect of such young persons. Unfortunately experience showed that there was no reality in the relationship portrayed. Young persons to an even greater extent than older ones would not in practice go to a doctor unless they had some illness or disability. In the group of insured persons within the contemplated new age the proportion who would encounter illness or disability was obviously considerably less than in the more advanced ages. The statement that employers would require notification as to the condition of health of their employees was not borne out by the facts. Large employers of labour who usually required a certificate of that kind had their own medical officers to deal with that type of case. It was said that it was not now disputed that one general capitation fee should be applied to all insured persons including the juveniles shortly to be brought into medical benefit. In the view of the majority of approved societies a markedly lower capitation fee should be associated with juveniles. The only merit of the uniform fee rested upon administrative consideration.

Tribute to the Service

Mr Duff added that despite anything he had said he must not be regarded as reflecting on the quality of the service rendered by insurance practitioners. On the part of approved societies there was no general dissatisfaction with the service. The tributes to the doctors which were set out at the beginning of the I.A.C. case could be multiplied many times over. The service generally deserved more commendation than was occasionally awarded to it in ill-informed quarters. He emphasized the fact that the basic capitation fee which obtained at the inception of the scheme in 1912 was 7s 3d. Various increases due to economic changes in the war resulted in the figure mounting spasmodically to 11s in 1920, and as the figure of 11s had been brought before the Court it was only right that the earlier figure of 7s 3d should not be absent from the Court's mind. The approved societies were satisfied that the opinion expressed in the Ministry's memorandum that a case existed for a reduction in the capitation fee on the grounds there set out and to the extent there mentioned was well founded.

At the end of his statement Mr Duff was asked some questions by Dr Dain, but he protested that he was not speaking as a witness and it had not been possible for the approved societies in the short time available to assemble the material they would have wished. In reply to Dr Dain Mr Duff agreed that it was not invariably the case that large employers had their own medical officer for the purpose of examining employees and giving certificates. Asked whether he had any knowledge of the extent to which young persons went to doctors he said that as secretary of the National Conference of Friendly Societies he was familiar with the operations of those societies which gave benefit to young persons of these ages, and the amount of benefit so given was less than at other corresponding age groups. He had no knowledge of the matter except in so far as related to sick pay.

You made a point that the doctor is liable to give a full general practitioner service. Do you agree that if that service takes longer time he might reasonably ask for more money?—If it is done as thoroughly and takes longer that is a legitimate point for you to advance.

If it requires a greater number of services would that entitle the doctor to ask for more money?—It is difficult to know how new services can arise when there is no change in the range of service.

National Association of Insurance Committees

Mr T. A. E. SPEARING said that the National Association of Insurance Committees had no statement to make. They were quite content with the submission by the Ministry of Health.

Closing Speech for the Ministry

Mr T. D. HARRISON, solicitor and legal adviser to the Ministry, delivered his closing speech on behalf of the Ministry and dealt with a number of detailed and technical points which had been presented in evidence. With regard to the nature of the services he said that contradictory evidence had been offered on the one hand by doctors for the Ministry and on the other by one doctor for the Committee and where doctors disagreed it would be foolish for him to intervene. He must leave the evidence before the Court. He dealt at length with the evidence given with regard to motoring costs and urged that the Ministry's case was based on more authentic figures than that of the other side. Unless it could be shown that doctors were such a peculiar class that they must not be assumed to be like the rest of the population in car usage, it was probable that the same change in the type of car had taken place in the medical profession as among the general public.

Closing Speech for the Insurance Acts Committee

Dr DAIN said that he wanted to take his case in two sections first to deal with figures and then to say a little about the service. There were three important numerical accessible factors. The first was the fall in the cost of living as to which there was no disagreement and which entailed possibly a reduction of the capitation fee by 5d. On the question of practice expenses, in 1924 there were only available certain suggestions as to what practice expenses probably were, and these were obtained from a few practices and related in part to a war period. Later a number of doctors were asked to submit their accounts for the period of three years. Then there was a gap and afterwards another period of three years was taken and it was found that the proportion of practice expenses remained about the same in the two periods. On the basis of these carefully collected statistics practice expenses were found to be about one third of the gross earnings of the practice, whereas they had previously expected them to be about one-fourth. Thus it was possible to correct the figures given under this head to the Court in 1924, and no other figures had been submitted. Although the sample was not a large one, it produced information which they thought was sufficient.

He hoped it would not seem rude to those who had given evidence on motoring costs if he took no further point on it, but left the information to the Court, saying only that the evidence on the side of the Ministry was of a theoretical character and bore no relation to the actual expenses of doctors. If practice expenses in general were taken as 33 per cent. instead of 25 per cent., and the proportion of motoring expenses was reduced to one third, he scarcely needed to point out that the effect on the capitation fee of a small alteration in the cost of transport would not be material in the final calculation. Accepting the increase from 25 per cent. to 33 per cent., which was not rebutted this would mean an addition of 9d on the 9s and would bring the figure of 8s 7d up to 9s 4d.

Coming next to items of work done he thought it had been established that the Ministry did not maintain that its figures were an accurate record of service given. They maintained that certain comparisons were possible but they did not maintain that by the method of calculation they could possibly represent the total amount of work. He wanted first to take what the Ministry agreed could be compared. He was very disappointed that practically they had had only two figures from the Ministry, one at the beginning and the other at the end of the period, with no intermediate figures. If a larger set of figures could have been produced to the Court it would have made it possible to discover whether there was a year-to-year fluctuation in services rendered owing to changes in the type of sickness and whether there was a change in the proportion of attendances to visits as between different types of practice and in different areas. The Committee's figures showed that there was such a change, and he had hoped they would be confirmed by figures from the Ministry.

The Argument from Figures

Dr Dain then addressed himself to the discrepancy between the Ministry's figure of 3.72 for items of service undertaken and the Committee's figure of just over 5, and after pointing out certain necessary adjustments of the Ministry's figure said that the Committee based its case on the accuracy of the recording of the services. What credit could be placed on the figures obtained as the Committee had obtained them? The Government actuary had stated in evidence that on the size of the sample which the Committee had taken it was a good sample and that on distribution it probably could not be challenged. When spread over such an area as was taken

it was not likely to be seriously wrong. No criticism had been raised, or at any rate substantiated, as to the Committee's sampling, and the only point of criticism was that the people who had collected the figures were volunteers who, knowing the purpose for which the statistics were being collected, were likely to set down the maximum services. But that was exactly what they wanted done—namely, the recording of every item of service—and he hoped they had obtained it. He believed that the volunteers for this job had done it very well, and that over this long period of years valuable and accurate results had obtained by the co-operation of a large number of doctors in busy practices, doing recording work which was uncongenial, irksome, and trying at the end of the day. The irksomeness of such a task might well be the reason why many did not volunteer. He agreed that there was the occasional danger, as in the case Dr Paterson had referred to, that a man might enter up as both an attendance and a visit the one item of service, but he could not expect that that was very likely to happen.

If it was admitted that their volunteers were more likely to record all the services than the "conscripted" men of the Ministry, then their figures were the very ones required for the present Inquiry. They had been criticized for comparing their 1922 figures with their 1936 figures on the ground that they were prepared according to a different method, but if a different method yielded greater accuracy it was perfectly justifiable to admit it frankly, and he believed the Committee was offering to the Court a more accurate analysis than it was able to offer to the Court of 1924. He believed indeed that the profession had suffered a heavy financial disability on account of the inevitable understatement made thirteen years ago, and they were now looking for its rectification.

The difference between the 3.75 average services in 1922 and the 4.69 in 1924 was partly due to improved methods, but also reflected increased work. Those of them who had been in practice at that period were particularly conscious of that jump long before any figures were available to prove it, and the later figures showed that it had been maintained at the higher level ever since, and had steadily tended to go upward. This was supported by a 24 per cent. rise in prescriptions between 1922 and 1924, while over the whole period of years it was only 80 per cent. The point had been made that there was something wrong about this increased frequency, and that the profession itself was engaged in an effort to stop it. But when regard was paid to the returns of work done it was found that the increase of work was greatest in the areas of high frequency of prescription which confirmed them in their argument that there was a definite relation between script frequency and work done.

On the evidence of the work done to-day he submitted that the claim had been established for an increase of 3s. or of 3s. 3d., according to whether the Ministry's method of weighting was adopted or not, bringing up the fee to 12s. 4d. or 12s. 7d. With regard to the 14-16 age group he agreed that it was very difficult to evaluate this service with any accuracy. Statistics really did not help. The profession was amazed at the "half-price" suggestion. When the Ministry made its offer it was immediately represented by a Press headline "Cut Rates for Juveniles." The only figures produced to the Court were from fifty-nine practices, and the only criteria were that these were the practices nearest the average for the Ministry's selection. Obviously no account had been taken of the very important fact that there were certain districts and practices in which there would be practically no juveniles, the houses in these areas being occupied mostly by middle-aged people, and there were other areas on the new estates where the numbers of these people would be comparatively very large. Unless there had been a proper weighting of the practices chosen to allow of this factor, he submitted that fifty-nine out of

18,000 doctors was an infinitesimal and possibly a very misleading sample. With what must be a diminishing group in an ageing population, it was not unreasonable to balance it up in a general way without attempting to fix any very accurate figure.

General Considerations

Dr Dain continued

But numbers are only numbers, and this is a service dealing with human beings. Numbers are no evidence of good service, and it is the service that matters. The medical profession is more interested in the good service of insurance practice than any other body of people. The insured persons who get the service should also be interested to get a good service. We regard this service as nearly the ideal method of providing medical attention for the people. The fact that the patient can choose his own doctor, that the relationship between doctor and patient is not interfered with, that there does not come between patient and doctor any monetary consideration to limit either the patient's access or the doctor's ability to work for the patient—all this makes the service a kind of key service. We agree that it is incomplete; we should like to see it completed in several ways, but it is the one big service in which medical knowledge, medical skill, and the progress won in clinical medicine is brought into contact with the individual. The family doctor is the person who can take new experiences and new knowledge to the individual. When the service is extended in scope so that it includes consultant services and procedures such as pathological examinations, blood counts, and x-ray investigations, it will be a complete health service. We have always stood for the best service we could give to the insured person. As a small example out of our own money we have provided a fund so that if a practitioner is getting old and incompetent we can on application get his practice disposed of and put him on a pension. He himself has contributed nothing to it, the Ministry has contributed nothing, we have done it out of our own funds. We have also made arrangements for doctors to purchase their practices—all with the idea of improving the status of the service.

On the question of relationship with our friends on the other side if there has been any alteration since 1924 it has been in the direction of improvement and we welcome the expression of appreciation with which Mr Harrison opened his original case. When I looked at the Ministry's case and found that while their advocate thoroughly appreciated our service he thought the way to recognize it was to take 1s. off the capitation fee, I wondered why he should pat us on the back with one hand and deplete our purses with the other. But I do not find that Mr Harrison pressed the demand for 1s. reduction.

We came to this Inquiry prepared to offer the Court all the information at our disposal and we think that we have advanced arguments which will appeal to those who constitute this tribunal and who are not themselves concerned in the service. I said that the standard of work is up. I do not claim any more money on the standard but it should not be depreciated in any way. The number of complaints against the service is certainly very low. There is one other factor to which I referred in my opening speech—namely the economic position of the country. We have chosen this moment to bring forward our case because as I explained before we have been prevented from doing so earlier on account of the economic crisis of a few years ago and its repercussions. But we have seen the condition of the country improving and it has improved to a point at which we think that our remuneration might well be reconsidered. We are content to leave our case to the Court's decision. We hope we have argued it fairly and that we have not put forward any statement which we have not supported. We have made no extreme or extravagant claims but have given reasons for every factor we have advanced. I put it to you that it is as important to the public as it is to us that a service of this size and importance should be properly paid and I ask with

confidence that you will encourage the sound and wholesome development of this service and our further efforts in that respect by the amount of your award

Close of the Inquiry

Lord AMULREE expressed to the parties the Courts high appreciation of the cases they had presented so fairly and of the evidence of the witnesses who had been called. He could only at this stage express the hope that the decision the Court would presently announce would give satisfaction

GENERAL MEDICAL COUNCIL

DISCIPLINARY PROCEEDINGS

Motor Car Offences

The Council considered the case of ERNEST STANLEY O'SULLIVAN registered as of Dunowen Gardens, Cliftonville Belfast who was summoned on the charge that he was convicted at the Stockton Police Court in 1933 of being under the influence of drink whilst in charge of a motor car, and at the City Police Court, Newcastle on Tyne in May, 1936 of the following offences: driving a motor car while under the influence of drink, driving a motor car in a manner which was dangerous to the public and using a motor car when the brakes were not in good and efficient working order. In each instance he had pleaded guilty.

Consideration of the case had been postponed from the winter session the solicitor having been unable to establish communication with Dr O'Sullivan or to serve the notice of inquiry.

Mr Oswald Hempson for the Medical Defence Union on behalf of Dr O'Sullivan expressed his regret that he had not notified his change of address and that his wife while he was away ill had, out of mistaken kindness kept from him all knowledge of the first warning received. Since 1936 Dr O'Sullivan had been a total abstainer and he now gave an assurance that this would continue. At the time of the 1936 convictions he had been worried and unwell. He was but a young man and he hoped the Council would decide to give him another chance.

Testimonials as to character were submitted from a resident magistrate, a medical practitioner, two ministers of religion and a solicitor, with a number of testimonials as to his professional standing.

The President, in announcing the decision of the Council said the convictions indicated habits which were a discredit to the doctor and to the profession. To give him an opportunity of reconsidering his attitude and changing his habits the case would be adjourned to May 1938 and before that meeting he would be required to produce the names of persons of standing who could testify as to his habits in the interval.

The next case concerned WILLIAM DALE LAWTON registered as of Princess Road Moss Side Manchester. The charge listed seven misdemeanours in respect of which he had been convicted between August 1922, and December 1936 of obstructing the highway by a motor car without lights of being drunk whilst in charge of a motor car of driving in a manner dangerous to the public and of being drunk.

Mr Oswald Hempson defending, asked for the indulgence of the Council on behalf of Dr Lawton who was 75 years of age and had been in his present practice for thirty three years although, owing to advancing years and ill health he had given up a good deal of that practice. He emphasized that during the period in question there was a gap of eleven years during which there had been no offence by Dr Lawton. Mr Hempson was not prepared to give an undertaking of total abstinence on behalf of Dr Lawton because although he was not a heavy drinker he had been in the habit of taking a certain amount of alcohol and those who were looking

after him had advised that it might be detrimental to his health if he broke it off altogether. Dr Lawton was maintaining the practice in the hope that his son who would sit for his final examination in September next might be able to succeed him. Indeed that would be the only chance the son would have of securing a practice except by means of a loan because Dr Lawton had been unable to make provision to assist his son further. If the Council took the extreme step of removing Dr Lawton's name from the Register he would be ruined and the chances of his son would be prejudiced.

Letters to show that Dr Lawton was held in high esteem by his patients were read also a letter from a practitioner in Manchester who had attended him during his illnesses, and who stated that he seemed to benefit by a little stimulant.

Dr Lawton undertook that if the Council would extend clemency there would be no further cause for complaint. He would not touch alcohol outside his private house and that which he did take would be in accordance with medical advice.

The President announced that the convictions alleged against Dr Lawton had been proved to the satisfaction of the Council but the Council was willing to exercise leniency and to postpone judgement until May 1938. Before that date Dr Lawton would be required to send to the Registrar for the use of the Council the names of persons of standing who would testify to his habits and conduct in the interval.

Other Convictions

The Council considered the case of DAVID WILLIAM JONES registered as of Belsize Lane London N.W. the charge against him being that in October 1936 he was convicted at the City of Birmingham Police Court of obtaining credit to the amount of £29 5s 6d from the London Midland and Scottish Railway Company by fraud and was sentenced to four months imprisonment in the second division and that his appeal on December 1 1936 against the conviction was dismissed.

The defendant was not represented by counsel.

The solicitor to the Council explained that the credit was obtained by fraud other than false pretences. There was a female defendant in the proceedings and at the Queen's Hotel Birmingham she presented a "dud" cheque which Dr Jones it was alleged knew to be such. When a question was raised Dr Jones said they would call on the following day and settle the account but they were not seen again. The defendant had said he was financially embarrassed at the time and if he could get the money due to him the account could be paid.

Dr Jones asked that the evidence of a lady witness the lady friend mentioned in the case might be taken *in camera*.

The President asked why the witness should not be called in the ordinary way.

Dr Jones: If you decide not to hear her *in camera* I am afraid I cannot call her.

The Council having heard the evidence *in camera*.

The President addressing Dr Jones said: The Council does not propose to-day to pronounce judgement but you will be required to attend here twelve months later in the May session of 1938 to furnish for the information of the Council the names of professional persons and other persons of standing in order to testify their knowledge of your habits and conduct in the interval. You will receive notice of the date of the meeting and the Council will proceed to pronounce judgement.

A charge was considered against ALFRED EDWARD LAWSON registered as of Redcot March that after pleading guilty he was convicted at Uxbridge Petty Sessions of having obtained from a firm of jewellers by means of false pretences two diamond rings valued at £52 with intent to defraud. He was sentenced to two months imprisonment in the second division and that subsequent appeals to the Middlesex Sessions and High Court respectively were dismissed.

The Council's solicitor handed in the records of the conviction and other particulars, which showed that Dr Vawser was formerly a medical officer of the Royal Air Force and that at one time he had suffered from a motor accident which had affected him ever since.

Mr Oswald Hempson defending referred to the appeals the last one of which was dealt with purely on the technical ground that Dr Vawser had pleaded guilty at the petty sessions. Dr Vawser had pleaded guilty as the result of a suggestion made to him that it would be to his advantage but Mr Hempson had no hesitation in suggesting that had he been legally advised at the time he would not have done so. It was the first occasion on which he had ever been before a tribunal and previously he had borne an unimpeachable character. He had not fully appreciated that the charge to which he had pleaded guilty involved fraud. He had secured the rings from Messrs Waddington and Sons, which were said to be valued at £52, and had intended them for his wife. In order to secure a valuation, and having understood that pawnbrokers gave a third of the value, he had pawned them and had received £20 for the two rings, from which he had assumed that they were worth about £60. Following a serious motor accident in Irak in 1929 in which he had sustained a fractured skull, he had since been subject to a little muddleheadedness in times of stress. At the time of the alleged misdemeanours his wife was ill, he was attending many cases in an epidemic, and he himself became ill and had to remain in bed for some days. Owing to the conviction against him he had had to resign his commission. Since then he had tried to earn a living as a locum tenens' testimonials to his abilities were submitted. At the moment he was seeking to build up a practice. He had already lost one career which had been full of promise and if his name were erased from the Register it would mean the end of everything for him. At the time he had obtained the rings he was in uniform and had given his proper name and address as he had done when he had pawned them. Could it be assumed from that that he was trying to defraud somebody, particularly having regard to the fact that at this time he had money behind him?

The Council found the conviction to be proved to its satisfaction but did not direct the Registrar to erase the name.

Alleged Irregular Certification

The Council considered the case of JOSEPH SHIBKO registered as of Prince of Wales Road, Swansea who appeared to answer the charge that being a medical practitioner he on four dates in 1936 signed and issued a certificate of incapacity for work for a person described as William Ward, whereas he had not seen or examined the said William Ward on any of such dates or at all, which certificates were untrue misleading, and improper.

The Council's solicitor supported the charge and the defendant was represented by Mr W. A. Macfarlane instructed by Messrs Le Brasseur and Oakley on behalf of the London and Counties Medical Protection Society.

Mr Harper outlined the facts of the case. He said the wife of William Ward had produced certificates saying her husband was suffering from neuritis and she received a considerable sum of money from the authorities. In her statement she said she went to Dr Shibko for the certificates and he, without any questions gave them to her. Dr Shibko in reply to this, denied that he gave any certificate without having first seen the person whom he took to be the person named on it. Mrs Ward had been charged at the police court with obtaining £33 wrongfully and she had pleaded guilty.

Mrs Ward was called and said she had attended Dr Shibko's surgery for herself and her children. She called on the doctor and asked him to give a certificate that her husband was unable to work. He did so without asking any questions and on the other dates mentioned he gave further certificates. The doctor did not visit her house at all and he never saw her husband. She went to the surgery by herself, unaccompanied by her husband or any other man.

In cross-examination the witness said her husband was not an insurance patient of Dr Shibko. She admitted that

William Ward had not had an illness for about nine years. On one of the certificates the doctor wrote that William Ward was suffering from neuritis and bronchitis. She gave no particulars and did not even mention that her husband was coughing.

Asked by Mr Macfarlane if she had told her husband anything about the certificates she replied: "No, I am the bad one, and I have suffered for it. Nobody besides myself knew I was getting the certificates." Counsel suggested that the witness had got someone to go with her to the doctor impersonating her husband, and that when she was found out she kept quiet about that. She denied this saying there was nobody who could go with her. She admitted that she herself wrote a statement to show to the relieving officer, signing it with the name of a person who had been dead some time.

William Ward in the witness box said he had not lost a day's work through sickness for nine or ten years. All that time he had not seen a doctor and he had never visited Dr Shibko's surgery, neither had he authorized anybody to call there on his behalf. He had received unemployment relief in 1935, but he was not sick. The first time he saw Dr Shibko was at the police court during the proceedings against his wife, and then Dr Shibko said, "I feel sure I have seen you in my surgery." His reply was, "You're a liar."

Dr Shibko examined by Mr Macfarlane said he had been interested in local government work for many years and was quite familiar with the way in which the Poor Law work was done by the public assistance authorities. He had on his list in Swansea between 1800 and 1900 insured persons and he had about 300 families under the Public Medical Service. In addition he had a private practice, which was worth about £500 a year made up of small fees.

He explained his methods of dealing with the various forms of certification in use and the keeping of records. He emphatically denied that the four certificates in question were given without his having seen the person named on them. He had never done such a thing, and would never think of giving a certificate without examination. Asked whether it was practicable to prove the identity of a person coming for a certificate he admitted that this was not possible. He had a large practice and he at first assumed that William Ward was one of his insured patients but the fact that he was not would be discovered by his clerk when he went through the entries for record purposes. At the police court he thought he recognized William Ward, and he had a vivid recollection concerning one of the dates mentioned in the charge because he had then asked why the applicant should come to him, seeing that his surgery was three and a half miles from the applicant's home. He had already mentioned that point to Mrs Ward. If the man on that occasion was not William Ward it was somebody remarkably like him. He repeated that he never gave a certificate to Mrs Ward for her husband without seeing him or somebody who was represented to be him. It was his invariable rule. People sometimes asked him for certificates without his having seen the person concerned but they never got them. He had never been under any misapprehension as to the legal or professional consequences of doing otherwise. There was some conversation at the police court as to whether he had sufficient evidence to establish a charge of personation, but his recollection was not clear enough for that.

In reply to Sir George Newman, the defendant said he kept no clinical records in cases where he gave ordinary certificates without treatment. There was no such record in any of the four instances mentioned in the case. He added in answer to Mr Macfarlane that medical practitioners were not bound to keep a record of certificates except national insurance certificates.

Statements were read to the Council from influential gentlemen in Swansea and district all of which contained evidence of Dr Shibko's very high character and his exemplary professional conduct. One was from an ex-mayor of Swansea and chairman of the Unemployment Assistance Advisory Committee another from a clergyman who had met Dr

Shibko frequently in the homes of his patients, and four were from members of the medical profession. They included the assistant physician in charge of the out-patient department at Swansea General Hospital, the public medical officer and public vaccinator of Swansea and an honorary surgeon to Swansea Hospital; they referred to the great understanding and sympathy with which he treated his patients and his high regard for medical ethics.

Mr Leonard Williams, relieving officer in Swansea since October, 1935, gave evidence. He said that Dr Shibko was still the Poor Law medical officer for the district with which witness was concerned. He added that sometimes he acted on certificates by doctors which were not on the proper relief forms. Replying to questions he said that if a husband was not fit to make an application for relief he would accept an application from a wife. Mrs. Ward had said that her husband was not fit to make application.

Mr Macfarlane, addressing the Council on behalf of Dr Shibko, emphasized the high reputation of his client, and said that the charge against him was based on evidence which, to say the least, was from a very unreliable source. Those who had written to support him had referred specifically to his regard for the ethics of the profession, the fact that he kept most careful records and the care which he devoted to his patients. Dr Shibko had a considerable insurance service and a private practice, and he kept records of treatments and prescriptions. In the case before the Council a man had visited his surgery and had said that he was William Ward, living at a certain address. Dr Shibko happened to know that address, and had assumed that the man was on his list—quite a reasonable assumption. The man complained of a pain in his arm, which was said to be neuritis, and said that he could not go to work. In a district such as Swansea a man ran the risk of losing his job if he stayed away. The question was whether he had a reasonable excuse for not attending his work. It might be difficult for a doctor to be sure about neuritis. At any rate the certificate was to the effect that the man was at present unable to follow his employment. That certificate appeared to have been regarded as good for three months, whereas it should have been regarded as good merely for that particular day. Dr Shibko had said that the form of the certificate was not the form which he used in cases of application for relief. On the other hand Mrs. Ward said she had specifically stated that it was an application for relief. The account she had given was so fantastic as to be incredible. She had said that she had merely asked the doctor to be kind enough to give a certificate to say that her husband could not work, that she had not said what was the matter and that the doctor had not asked questions but apparently had accepted that the trouble was neuritis. Subsequently other certificates were alleged to have been given. Did it seem credible that the doctor should have made out such certificates to a man he had never seen and at the request of a woman to whom he was under no obligation whatever? Was it likely that he would imperil his position in that way?

The Council deliberated in private after which the President announced that the statements alleged against Dr Shibko in the charge had not been proved to the satisfaction of the Council.

Sequel to Divorce Proceedings

The next case considered was that concerning BARDWELL ERDEN TENISON MOSSE, registered as of King Street, Kings Lynn, who was charged that being a registered medical practitioner he had committed adultery with Ethel Gregory Johnson, a married woman of which adultery he had been found guilty by divorce decrees which had been made absolute in the case of Johnson v. Johnson and Mosse and Tenison Mosse v. Tenison Mosse in which he was co-respondent and respondent respectively, and that he stood in professional relationship with Mrs. Johnson and/or her husband.

The Council's solicitor read extracts from some of the divorce court proceedings and other facts dealing with the case. He also put forward a list of professional attendances

on Mr and Mrs Johnson between 1929 and June 1935 and said that for August and September 1935 there were records of three attendances which were not admitted by Dr Mosse.

Mr J. A. Parsons, the senior partner of a firm of solicitors of Kings Lynn who had acted for Dr Humphreys and Dr Tenison Mosse during their partnership at Kings Lynn, recognized Dr Mosse's handwriting in record books showing attendance on Mr Johnson on three occasions in 1935. In cross-examination Mr Macfarlane suggested there was nothing to show that the entries in the books were made on the actual day on which the patient was given attention. Witness replied that he could only speak of what the books showed. He added that the partnership between Dr Mosse and Dr Humphreys was dissolved as from September 23, 1935 by a transfer from Dr Mosse to an incoming partner.

Dr Mosse then gave evidence and said he was living at Wells, Somerset. The divorce proceedings referred to having been made absolute, he had married the lady who was previously Mrs. Johnson on December 23, 1936. His evidence was that there had been no adultery while he was practising as a doctor. Since he had dissolved partnership with Dr Humphreys in September 1935, he had not been engaged in the practice of medicine but had been selling motor cars. He had had a conversation with Mr Johnson in September 1935 and shortly afterwards had given up his practice. More recently he had engaged solicitors to write on his behalf to the Registrar of the General Medical Council because he had another medical partnership in view, and considered that it would not be fair to his prospective partner to enter into that partnership without having an inquiry by the Council, in view of the reports of the divorce proceedings.

He had first met Mrs. Johnson in 1927 socially but not professionally, when acting as locum tenens for his brother. Neither he nor Mrs. Johnson was a patient of his brother. In March 1928 he went into a partnership in Kings Lynn of which Mr and Mrs Johnson were partners and he had subsequently attended them professionally. He had also continued to meet them socially a great deal. In July 1935 he realized that he was in love with Mrs. Johnson. He had discussed the matter with her, the attraction was mutual and he had said at once that he must not attend her or her husband professionally. He had himself immediately taken steps to dispose of his share of the practice. It was his and his partner's custom to enter up the books from notes made by both of them and though some of the entries relating to the Johnsons were in his handwriting he had not given the attendance.

Replying to questions by members of the Council Dr Mosse agreed that it was merely coincidence that his partner was on duty at the surgery on the three occasions in August and September on which Mr Johnson had called there.

Mrs. Mosse, who was previously Mrs. Johnson, gave corroborative evidence.

Mr Macfarlane, in his address to the Council, emphasized that the only adultery ever alleged was from February 1936 onwards when Dr Mosse was not practising medicine. In his submission Dr Mosse had acted correctly in the matter so far as the profession was concerned. When he had desired to resume practice he had behaved with exemplary fairness to his prospective partner by refusing to enter into the partnership before having an inquiry into his matter.

The President, after the Council had deliberated in private, announced that the facts alleged in the charge had been proved to the satisfaction of the Council but that the Council had not judged Dr Mosse to have been guilty of infamous conduct in a professional respect.

Erasures from Dentists Register

On May 25 the Council considered reports and findings of the Dental Board in regard to five cases of dentists.

WILLIAM LAIRD, registered as of Gray's Hill, Bangor, Co. Down, Dentist 1921, was charged with having systematically canvassed either personally or by means of an agent for the purpose of procuring patients. Mr Laird did not appear.

JAMES SHARPLES HOPWOOD registered as of Flinton Road Urmston Lancs Dentist 1921 was charged in two cases with having transmitted a dental letter containing untrue and improper certificates to an approved society and wrongfully obtaining payment of the society's grant Mr Hopwood did not appear but a letter was read from him pleading mitigation on the ground of ill health and domestic difficulties He said that he had made full reparation

ALBERT EDWARD LLOYD registered as of North Drive, Cleveleys, Blackpool, Dentist 1921 was charged with having transmitted a dental letter containing untrue and improper certificates and wrongfully obtaining payment of the society's grant also with accepting a dental letter and carrying out certain work after he knew that he had been declared unsuitable for service in connexion with dental benefit A letter was read from Mr Lloyd in his absence but the Council's solicitor said that the points it raised were irrelevant to the charge

EDWIN SPENCER TEBBUTT registered as of Finsbury Square London, L.D.S.R.C.S.Eng. was charged with having been convicted on September 4 1936 at Hastings police court of being drunk, on September 17 at the same court of being guilty while drunk of disorderly behaviour, and on February 10 1937 of being drunk and disorderly Mr Tebbutt did not appear, but by the Council's permission he was represented by a friend who pleaded on his behalf that he had not practised for the last five years and that he had sustained heavy financial losses through no fault of his own. Reference was also made to much voluntary service in years gone by

JOHN KENNEDY SCOTLAND registered as of Millbrae Crescent Langside, Glasgow L.D.S.R.F.P.S.Glasg. was charged with having been convicted at the Sheriff Court of Lanarkshire of the following offence that on twenty occasions between May 26 and September 29 1936 he had presented to various chemists fabricated prescriptions and obtained from them quantities of morphine sulphate which he had not been duly authorized to procure Mr Scotland who did not appear but was represented by a solicitor sent a letter in which he pleaded war injury He declared that it was a bitter commentary on the four and a half years service he had given to his country and the blood he had shed that he should not be allowed as he wished to do to withdraw voluntarily from the Register but should be compelled to this fresh publicity

After a brief session *in camera* in each case the President announced that the Registrar of the Dental Board had been instructed to erase the names of these five practitioners from the Register

Restoration

The President announced after a further session *in camera* that the name of Thomas Ross Graham had been restored to the Dentists Register

Cases Postponed from Previous Sessions

The case was considered of Dr WILLIAM MERVYN CROFTON registered as of Park Square London who at a previous session in May 1935 had been found to have made a speech at a meeting of ophthalmic opticians in which he had made claims of an extravagant nature as to the benefits likely to result if the method of therapeutic immunization practised by him at an establishment known as the Antego Laboratory were generally practised and had accented the inability of other members of his profession to obtain comparable results also to have thereby advertised for the purpose of obtaining patients and promoting his own professional advantage or in the alternative to have sanctioned or acquiesced in the publication of notices commending or directing attention to his professional skill knowledge, services or qualifications and/or depreciating those of others The Council had postponed judgement for two years and at the end of one year expected testimonials as to his conduct with special reference to advertising, and further testimonials at the end of the second year An account of the hearing appeared in the Supplement of June 8 1935

Dr Crofton now appeared and was also represented by a solicitor who said however that he had nothing to add to the testimonials which had been put in These testimonials from Dr J F Halls Dally Dr Archibald G Buchanan and others stated that to the knowledge of the writers Dr

Crofton's professional conduct had been without reproach The Medical Defence Union which had brought the complaint in the first instance, did not appear

After a brief consideration *in camera* the President announced that the Council did not see fit to erase Dr Crofton's name from the Medical Register Thereupon Dr Crofton remarking Then I am a professionally free man walked up to the President's table and handed the Registrar a document which he said was a formal complaint about the way in which the Council had dealt with his case He was understood to declare that it had shown bias of a heinous and unprofessional kind and I am prepared to maintain that The President said The case is closed

The case of Dr WILLIAM DOUGLAS registered as of Goldhawk Road Shepherd's Bush W., who had been found to have been convicted twice in 1935 for driving a motor car whilst under the influence of drink (Supplement June 13 1936 p 320), came up for judgement Dr Douglas put in three testimonials as to his conduct in the interval, and the Council did not see fit to erase his name

The same course was taken with Dr DAVID DAVIDSON WATSON registered as of King Street Wakefield, who had had two convictions, one in 1933 for driving a motor car whilst under the influence of drink and the other in 1936 for being in charge of a motor car in a like condition Dr Watson put in four testimonials and the Council did not see fit to erase his name

The Council considered the case of Dr WALTER CAMPBELL, registered as of Jeffrey Street, Edinburgh who was summoned to appear on the charge that in 1931 he had been convicted at Cupar of being in charge of a motor car whilst under the influence of drink and in the same year at Dunfermline of a technical offence with regard to a motor car that in 1935 he had been convicted at Hull of driving a car without due care and attention and in 1936 at Leeds of driving a car whilst under the influence of drink and of driving a car in a manner dangerous to the public This case came forward at the previous session, when as Dr Campbell did not appear it was adjourned (Supplement December 12 1936 p 319)

The Council's solicitor (Mr Harper) said that Dr Campbell was not present and he could not prove that he had had the notice of inquiry served on him. Four letters had been returned through the Dead Letter Office and he had been unable to ascertain Dr Campbell's whereabouts. The offences were of a kind which the Council generally dealt with by putting the offender after hearing what he had to say on probation but there was no opportunity of learning what was Dr Campbell's answer to the charge

The Council decided to hear the case in the absence of the respondent, and the certificates of the convictions were put in

After a long deliberation *in camera* extending over an hour and a quarter, the President announced that the charges had been proved to the satisfaction of the Council but as Dr Campbell was not present it was not possible to say anything directly to him The Council had postponed judgement until November next, before which date Dr Campbell would be required to furnish for the information of the Council evidence as to his conduct in the interval, and he would be well advised to appear

Election of Committees

The following were elected members of the Executive Committee

Sir Robert Bolam Sir H. Brackenbury Mr Eason Mr Edington Mr Johnstone Mr Miles Sir T. Myles Sir George Newman, Mr Sinclair Dr Stopford Dr Sydney Smith, and Dr Tidy The Dental Executive Committee was the same as above with the addition of Mr Sheridan.

The Finance Committee was elected as follows

Mr Eason Mr Miles Dr Magennis Sir George Newman

The following were elected to constitute the Pharmacopoeia Committee

Dr Bone Dr Brocklehurst, Sir Farquhar Buzzard, Dr Campbell Dr Kidd Mr Leathes Sir Kave Le Fleming Dr Matthew Dr Magennis Dr Moorhead Dr Sydney Smith, Dr Tidy

The following constituted the Dental Education and Examination Committee

Mr Bishop Harman, Dr Coffey Mr McGowan, Mr Rilot Mr Sheridan Dr Waterston

GENERAL MEDICAL COUNCIL EXECUTIVE

A meeting of the Executive Committee of the General Medical Council on February 22 resolved that the diplomas in medicine and surgery granted by the Punjab University on or after February 25, 1930, should be recognized for the time being under Section 13 of the Medical Act, 1886, and the holders of these diplomas (L M S M B, B S, M D M S) be entitled to registration in the Colonial List. Any qualification granted on or after January 7, 1918, must have been registered in the province.

At the same meeting of the Committee letters from the Home Office were reported notifying the withdrawal from five practitioners of the authority granted by the regulations made under the Dangerous Drugs Act, 1920. Amended rules of the Central Midwives Board regulating the procedure of the Board on complaints relating to the conduct of midwives were before the Committee which did not however, desire to make any representations on the proposed amendments.

The expenditure of the General Medical Council during 1936 was £10,031, of which £2,709 represented the fees and expenses of members.

Correspondence

THE CAPITATION FEE

SIR.—A point which so far has not been raised at the present inquiry is the remuneration per attendance with the present capitation fee. I kept records for the Panel Committee some time ago and I had the curiosity to work this out. Without distinguishing between surgeries and visits but adding up everything received for capitation fee dispensing and mileage I found that every time I saw a panel patient whether at the surgery or at his home say six miles away I received roughly one shilling. If the Government or anyone else thinks that this is adequate the sooner they are left to their own devices the better. With a little advertisement we could make a better living by selling a mixture of peppermint and coloured water guaranteed a cure for all human ills. Nor would this entail a long and costly training—I am etc.,
South Godstone May 30 H E GIBSON

DISPENSING CAPITATION FEE

SIR.—I was very glad to see Dr Burt's letter in the *Supplement* of May 22 (p. 308). I have not seen any county with the average dispensing fee so low as that allowed to rural practitioners for supply of drugs to insured persons. Several factors seem to have been overlooked.

If all those carrying out panel practice had to supply the drugs and accessories such as cotton wool lint bandages etc. themselves there would have been an outcry long ago. It is because we are in the minority so scattered and so isolated that we are unable to make a combined effort to correct this lamentable state of affairs. Nor can we purchase our drugs at anything like the prices available to chemists who not only buy in bulk but receive a greater discount. Every practitioner who has to supply medicines to his insured patients is usually far from the source of supply thus involving extra freight charges. In addition there is often the cost of delivery to the patients themselves which is very rarely paid by the latter. The fee does not cover the cost of drugs let alone the time for dispensing them often of far more consideration than anything else. In addition to the foregoing, the primary cost of drugs has been steadily increasing the last few months, many of the commoner and essential ones being over 50 per cent. higher to-day than they were six months ago.

At the Annual Panel Conference on October 22 last Dr Jonas replied to two members who brought up this subject. 'The question of the capitation fee must take precedence of any question of the rural practitioner's remuneration for his drugs whereat the two members gracefully crept back into their shells. The two fees are entirely different matters the one being for services rendered the other for products supplied. It would be quite useless for me to inform my druggists that I will only pay them 1s 2d per lb for glycerin even though the present price is 1s 9d (1s 2d is the drug tariff rate).

As there are no chemists in the majority of rural areas I wonder if the G M C would sanction the sale of cosmetics etc. by country doctors to make up for what they lose as a chemist friend once told me on the medicines supplied to insured persons—I am, etc.,

N Devon May 25

RURAL PRACTITIONER.

BOOKS ADDED TO THE LIBRARY

The following books were added to the Library of the British Medical Association during May

- Abbutt M E Atlas of Congenital Cardiac Disease 1936
Abrahams, M., and Widdowson E M Modern Dietary Treatment 1937
Atkinson D T Ocular Fundus in Diagnosis and Treatment 1937
Bagnall O Origin and Properties of the Human Aura 1937
Baldwin E Introduction to Comparative Biochemistry 1937
Bigger J W Handbook of Hygiene 1937
Butler C S Syphilis Sive Morbus Humanus 1936
Chiray M, Pavel I and Lomon, L La Vésicule Biliaire Second edition 1936
Cumberbatch E P Diathermy Third edition 1937
Dryerre H Aids to Physiology Second edition 1937
Dyson J N Practice of Ionization 1936
Emerson C P Textbook of Medicine 1936
Fischer N Christian R Holmes Man and Physician 1937
Grüneberg S M, et al Parents Questions 1936
Holmes E Metabolism of Living Tissues 1937
Howard C Physic and Fancy 1937
Howe E G War Dance 1937
Jelliff H Short Practice of Midwifery for Nurses Tenth edition 1937
Jenkins G L and DuMéz A G Quantitative Pharmaceutical Chemistry Second edition 1937
King M T Mothercraft Revised edition 1937
Kopkin B A Dental Surgery for Medical Practitioners 1937
Kuczyński, M H Alimentary Factor in Disease 1937
Lyle K and Jackson, S Practical Orthoptics in the Treatment of Squint 1937
MacLeod J J R and Seymour R J Fundamentals of Human Physiology Fourth edition 1936
Mayes M Handbook for Midwives and Maternity Nurses 1937
Mustard H S Rural Health Practice 1936
Noyes A P Textbook of Psychiatry Second edition 1936
Oakley C A and Macrae A Handbook of Vocational Guidance 1937
Orr Sir J B et al What Science Stands For 1937
Plesch J Physiology and Pathology of the Heart and Blood vessels 1937
Risak E Der Klinische Blick 1937
Rolleston J D History of the Acute Exanthemata 1937
Saint C F M Surgical Note taking Second edition 1937
Scott G R Sex Life of Man and Woman 1937
Silburn J A Nutrition and Sex 1937
Sindoni A M Diabetes A Modern Manual 1937
Smith E Right Way with Children 1936
Vaughan K Safe Childbirth 1937
Weymouth A Who'd be a Doctor 1937
Zumpt F Die Tseitseliegen 1936

Among the recipients of knighthood in the Coronation Honours List is Mr William Marchbank Marshall secretary to the Scottish Association of Insurance Committee. Mr Marshall has been closely associated with the medical services in Scotland since the inception of the National Health Insurance Act. He is clerk to the Lanarkshire Panel Committee, secretary of the Lanarkshire Medical Practitioners' Union and clerk and treasurer to the Insurance Committee for the County of Lanark. He is also chairman of the Advisory Distribution Committee of the Department of Health. As a member of the Government Committee on Scottish Health Services he played an influential part in the deliberations of that body. Mr Marshall is a well known figure in the public life of the West of Scotland and his many friends in the medical profession will be glad to see this signal recognition of his services.

British Medical Association

OFFICES, BRITISH MEDICAL ASSOCIATION HOUSE,
TAVISTOCK SQUARE, WC 1

Departments

SUBSCRIPTIONS AND ADVERTISEMENTS (Financial Secretary and
Business Manager Telegrams Articulate Westcent, London)
MEDICAL SECRETARY (Telegrams Mediscera Westcent London)
EDITOR BRITISH MEDICAL JOURNAL (Telegrams Autology Westcent
London)

Telephone numbers of British Medical Association and British
Medical Journal Euston 2111 (internal exchange five lines)
B.M.A. SCOTTISH MEDICAL SECRETARY 7 Drumsheugh Gardens
Edinburgh (Telegrams Associate Edinburgh Tel 24361
Edinburgh)
Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare
Street Dublin (Telegrams Bacillus Dublin Tel 62550
Dublin)

Diary of Central Meetings

JUNE

- 4 Fri Subcommittee *re* Remuneration of Non professional
Medical Teachers Laboratory and Research Workers
2.30 p.m.
11 Fri. Journal Committee Foods and Drugs (Advertisements)
Subcommittee, 11.30 a.m.
Journal Board 2 p.m.
Science Committee Scholarships and Grants Subcom-
mittee 2.30 p.m.
16 Wed Joint Committee of B.M.A. and T.U.C., 11.15 a.m.
Health Services Committee 2 p.m.
18 Fri. Science Committee 2 p.m.

Proposed Alterations of Areas of Berks, Bucks, and Oxford, Gloucestershire, Dorset and West Hants, Southern, and Surrey Branches

Notice is hereby given by the Council of the Association to
all concerned of the following proposed alterations of
areas, which have been approved by the Branches and
Divisions concerned

Berks, Bucks, and Oxford Branch

To cede to the proposed new Aldershot and Basingstoke
Division of the Southern Branch that part of the rural
district of Kingsclere and Whitchurch at present in the
area of the Reading Division

To cede to the Gloucestershire Branch the eastern part
of the County of Gloucester at present in the area of
the Oxford Division

BUCKINGHAMSHIRE DIVISION

(No change)

OXFORD DIVISION

To cede to the Gloucestershire Branch the eastern part
of the County of Gloucester at present in the area of
the Oxford Division

READING DIVISION

To cede to the proposed new Aldershot and Basingstoke
Division of the Southern Branch that part of the rural
district of Kingsclere and Whitchurch at present in the
area of the Reading Division

Dorset and West Hants Branch

To cede to the Southampton Division of the Southern
Branch that part of the rural district of New Forest at
present in the area of the Bournemouth Division of the
Dorset and West Hants Branch

WEST DORSET DIVISION

(No change)

Gloucestershire Branch

To receive the eastern part of the county of Gloucester
at present in the area of the Oxford Division of the Berks,
Bucks, and Oxford Branch

Southern Branch

To receive the following additional areas

(a) That part of the rural district of New Forest at
present in the Bournemouth Division of the Dorset and
West Hants Branch,

(b) that part of the rural district of Kingsclere and
Whitchurch at present in the area of the Reading Division
of the Berks, Bucks, and Oxford Branch,

(c) municipal borough of Aldershot, the urban districts
of Farnborough and Fleet, and that part of the rural
district of Hartley Wintney lying east of and including
the civil parishes of Crondall, Crookham, Elvetham, and
Eversley—at present in the area of the Guildford Division
of the Surrey Branch

ALDERSHOT AND BASINGSTOKE DIVISION

New Division to be formed of area as follows

(a) Municipal borough of Aldershot, and urban dis-
tricts of Farnborough and Fleet—at present in the area
of the Guildford Division of the Surrey Branch,

(b) municipal borough of Basingstoke, and rural dis-
trict of Basingstoke—at present in the area of the
Winchester Division of the Southern Branch,

(c) rural district of Hartley Wintney—at present in the
areas of the Guildford Division of the Surrey Branch and
the Winchester Division of the Southern Branch,

(d) rural district of Kingsclere and Whitchurch—at
present in the areas of the Reading Division of the Berks,
Bucks, and Oxford Branch and the Winchester Division of
the Southern Branch

GUERNSEY AND ALDERNEY DIVISION

(No change)

ISLE OF WIGHT DIVISION

(No change)

JERSEY DIVISION

(No change)

PORTSMOUTH DIVISION

To receive the following additional areas

(a) Those parts of the rural districts of Droxford and
Petersfield which are at present in the area of the Win-
chester Division of the Southern Branch

(b) that part of the urban district of Fareham which is
at present in the area of the Southampton Division of
the Southern Branch.

SOUTHAMPTON DIVISION

(1) To receive the following additional areas

(a) Municipal borough of Romsey, and those parts of
the municipal borough of Eastleigh and the rural district
of Romsey and Stockbridge which are at present in the
area of the Winchester Division of the Southern Branch

(b) that part of the rural district of New Forest which
is at present in the area of the Bournemouth Division of the
Dorset and West Hants Branch.

(2) To cede to the Portsmouth Division of the Southern
Branch that part of the urban district of Fareham which
is at present in the area of the Southampton Division

WINCHESTER DIVISION

To cede the following areas

(a) Municipal borough of Basingstoke rural district
of Basingstoke and those parts of the rural districts of
Hartley Wintney and Kingsclere and Whitchurch which
are at present within its area—to the proposed new Alder-
shot and Basingstoke Division of the Southern Branch

(b) those parts of the rural district of Droxford and
Petersfield which are at present within its area—to the
Portsmouth Division of the Southern Branch,

(c) municipal borough of Romsey, and those parts of the municipal borough of Eastleigh and the rural district of Romsey and Stockbridge which are at present within its area—to the Southampton Division of the Southern Branch

Surrey Branch

To cede the following areas

(a) Municipal borough of Aldershot, urban districts of Farnborough and Fleet, and that part of the rural district of Hartley Wintney lying east of and including the civil parishes of Crondall, Crookham, Elvetham, and Eversley which are at present within its area—to the proposed new Aldershot and Basingstoke Division of the Southern Branch

CROYDON DIVISION

(1) To receive that part of the urban district of Coulsdon and Purley which is at present in the area of the Reigate Division of the Surrey Branch

(2) To cede those parts of the urban district of Banstead and of the rural district of Godstone which are at present within its area—to the Reigate Division of the Surrey Branch

GUILDFORD DIVISION

To cede the following areas

(a) The urban district of Walton and Weybridge—to the Kingston-on-Thames Division of the Surrey Branch,

(b) municipal borough of Aldershot, urban districts of Farnborough and Fleet, and that part of the rural district of Hartley Wintney lying east of and including the civil parishes of Crondall, Crookham, Elvetham and Eversley, at present within its area—to the proposed new Aldershot and Basingstoke Division of the Southern Branch

KINGSTON-ON THAMES DIVISION

(1) To receive that part of the urban district of Walton and Weybridge which is at present within the area of the Guildford Division of the Surrey Branch

(2) To cede that part of the urban district of Banstead which is at present within its area—to the Reigate Division of the Surrey Branch

REIGATE DIVISION

(1) To receive the following additional areas

(a) Those parts of the urban district of Banstead which are at present within the areas of the Croydon and Kingston-on-Thames Divisions of the Surrey Branch,

(b) that part of the rural district of Godstone which is at present within the area of the Croydon Division of the Surrey Branch

(2) To cede that part of the urban district of Coulsdon and Purley which is at present within its area—to the Croydon Division of the Surrey Branch

RICHMOND DIVISION

(No change)

Any member affected by these proposals and objecting thereto is requested to write to the Medical Secretary by July 5 stating the objection and the ground therefor

G C ANDERSON
Medical Secretary

June 5 1937

Branch and Division Meetings to be Held

BORDER COUNTIES BRANCH CUMBERLAND DIVISION—At Butlermere Hotel Sunday June 6 11.45 a.m. Summer meeting, including a rock climb a fell walk and boating or fishing on the lake. Tea will be provided at the invitation of the retiring chairman Dr Elizabeth McKerrrow

DEVONSHIRE BRANCH BUXTON DIVISION—At Devonshire Royal Hospital Buxton Thursday June 10 8.15 p.m. Annual general

meeting Consideration of Annual Report of Council election of officers etc

HERTFORDSHIRE BRANCH BARNET DIVISION—Tuesday June 8 Annual meeting Election of officers To be followed by a visit to the Ford Works Dagenham

KENT BRANCH—At City of London Mental Hospital Stone House Dartford, Wednesday June 16 2.45 p.m. Annual meeting Election of officers Presidential Address by Dr C M Ockwell "Pedestals" Preceded by a luncheon at 1 p.m. and followed by a garden party at 3.30 p.m.

LANCASHIRE AND CHESHIRE BRANCH—At Newton le Willow, Thursday, June 24 Annual meeting

LANCASHIRE AND CHESHIRE BRANCH BLACKBURN DIVISION—At Blackburn Town Hall, Wednesday and Thursday June 9 and 10 8.45 p.m. Lectures on air raid precautions by Dr L T Challenor, Home Office Lecturer for the Liverpool Centre

LANCASHIRE AND CHESHIRE BRANCH ROCHDALE DIVISION—At Bailie Street Council School Rochdale Monday June 7 8.45 p.m. Lecture on air raid precautions by Dr L T Challenor Home Office Lecturer for the Liverpool Centre

LANCASHIRE AND CHESHIRE BRANCH WIGAN DIVISION—At Rendezvous Café Standishgate Wigan Tuesday June 8 8.30 p.m. Consideration of Annual Report of Council and Ministry of Health Report on Maternal Mortality election of representative and deputy representative

METROPOLITAN COUNTIES BRANCH—At B.M.A. House Tavistock Square W.C. Friday July 2 4 p.m. Eighty-fifth annual general meeting Agenda Report of Branch Council and financial statement report of representatives of Branch on Central Council report as to election of officers for 1937-8 presidential address by Dr William Paterson

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital Kingsland Road E, Friday June 11 4.40 p.m. Clinical Meeting

METROPOLITAN COUNTIES BRANCH KENSINGTON DIVISION—At British Post-Graduate Medical School Ducane Road, W., Wednesday June 9, 8.30 p.m. Lecture on air raid precautions by Colonel J Mackenzie, Home Office Lecturer for the London Centre

METROPOLITAN COUNTIES BRANCH ST PANCRAS DIVISION—Tuesday June 8 8.45 p.m. Summer meeting Mr S R K. Glanville Ancient Egyptian Medicine

SOUTHERN BRANCH—At Gloster Hotel West Cowes Isle of Wight, Saturday June 12 A boat leaves Southampton at 11.40 a.m. and arrives at Cowes at 12.40 p.m. 1 p.m. council luncheon at the invitation of Dr Ivor L. Tuckett 2.30 p.m. Branch Council meeting at Victoria Hall Osborne House East Cowes 3 p.m. sixty-fifth annual meeting 3.30 p.m. address by in-coming president Dr Tuckett Faith and Suggestion 4.15 p.m. tea at Osborne House 6.45 p.m. annual Branch dinner at Shanklin Towers Hotel Shanklin 8.15 p.m. visit to Summer Theatre Shanklin Sunday June 13 2.30 p.m. Meet at Town Hall Newport for a coastal drive All functions except the annual meeting are open to members ladies

SOUTH WESTERN BRANCH CORNWALL DIVISION—At Royal Cornwall Infirmary Truro Tuesday June 7 3.15 p.m. Annual meeting election of officers instruction of representative etc Friday June 11 Golf competition

STIRLING BRANCH—At Dunblane Hotel Hydro, Wednesday June 16 4 p.m. Annual meeting and tea

TABLE OF OFFICIAL DATES

June 19 Sat.	Publication of Supplementary Report of Council in <i>BMJ Supplement</i>
June 29 Tues	Other items for inclusion in A.R.M. printed Agenda must be received at Head Office by this date
July 16 Fri	Annual Representative Meeting Belfast
July 17 Sat	Annual Representative Meeting Belfast
July 19 Mon	Annual Representative Meeting Belfast Council Belfast
July 20 Tues	Annual Representative Meeting Belfast Annual General Meeting Belfast Presidential Address
July 21 Wed	Council Belfast Conference of Honorary Secretaries Overseas Conference Belfast Meetings of Sections etc Belfast
July 22 Thurs	Meetings of Sections etc. Belfast Annual Dinner of the Association Belfast
July 23 Fri	Meetings of Sections etc., Belfast

Sir Charles Hastings Clinical Prize

The Sir Charles Hastings Clinical Prize, which consists of a certificate and a money award of fifty guineas, is again open for competition in respect of 1938. The following are the regulations governing the award.

1 The Prize is established by the Council of the British Medical Association for the promotion of systematic observation research and record in general practice. It includes a money award of the value of fifty guineas.

2 Any member of the Association who is engaged in general practice is eligible to compete for the Prize.

3 The work submitted must include personal observations and experiences collected by the candidate in general practice, and a high order of excellence will be required. If no essay entered is of sufficient merit no award will be made. It is to be noted that candidates in their entries should confine their attention to their own observations in practice rather than to comments on previously published work on the subject, though reference to current literature should not therefore be omitted when it bears directly on their results, their interpretations, and their conclusions.

4 Essays or whatever form the candidate desires his work to take, must be sent to the British Medical Association House, Tavistock Square, London, W.C.1 not later than December 31, 1937. The Prize will be awarded at the Annual General Meeting of the Association to be held in July 1938.

5 No study or essay that has been published in the medical press or elsewhere will be considered eligible for the Prize and a contribution offered in one year cannot be accepted in any subsequent year unless it includes evidence of further work. A prizewinner in any year is not eligible for a second award of the Prize.

6 If any question arises in reference to the eligibility of the candidate or the admissibility of his or her essay the decision of the Council on any such point shall be final.

7 Each essay must be typewritten or printed, must be distinguished by a motto and must be accompanied by a sealed envelope marked with the same motto, and enclosing the candidate's name and address.

8 The writer of the essay to whom the Prize is awarded may on the initiative of the Science Committee be requested to prepare a paper on the subject for publication in the *British Medical Journal* or for presentation to the appropriate Section of the Annual Meeting of the Association.

9 Inquiries relative to the Prize should be addressed to the Medical Secretary.

Katherine Bishop Harman Prize

The Council of the British Medical Association is prepared to consider an award of the Katherine Bishop Harman Prize, of the value of £75, in the year 1938. The purpose of the prize, founded in 1926, is the encouragement of study and research directed to the diminution and avoidance of the risks to health and life that are apt to arise in pregnancy and child bearing. It will be awarded for the best essay submitted in open competition competitors being left free to select the work they wish to present, provided this falls within the scope of the prize. Any medical practitioner registered in the British Empire is eligible to compete.

Should the Council of the Association decide that no essay submitted is of sufficient merit, the prize will not be awarded in 1938 but will be offered again in the year next following this decision and in this event the money value of the prize on the occasion in question shall be such proportion of the accumulated income as the Council shall determine. The decision of the Council will be final.

Each essay must be typewritten or printed in the English language, it must be distinguished by a motto and accompanied by a sealed envelope marked with the same motto and enclosing the candidate's name and address. Essays must be forwarded so as to reach the Medical Secretary (to whom inquiries may be sent), B.M.A. House, Tavistock Square, London, W.C.1, not later than December 31, 1937.

Meetings of Branches and Divisions

KENT BRANCH EAST KENT DIVISION

At a joint meeting of the East Kent Division and the Isle of Thanet Public Medical Service at Cliftonville on April 29, with the chairman of the Division Mr W. E. C. WYNNE in the chair, Dr R. W. DURAND (Assistant Medical Secretary) gave an address on "Public Medical Services: Their Influence on the Future of General Practice." He said that the public was becoming increasingly health-minded. There was a growing tendency for State intervention in medical matters in response to demands from the lay public. A public medical service which could offer a full and complete service including preventive measures would help to combat unnecessary duplication of medical services. Anyone in receipt of a living wage could afford a public medical service subscription. The service should not attempt to cater (by low subscription rates) for persons entitled to public assistance. To do so was merely to offer charity to the local authorities who were responsible for the medical care of such persons. It was most important, if an efficient public medical service was to be provided, that the subscription rates should not be too low. They should if anything, be slightly above the national health insurance capitation fee, with which the profession had expressed its dissatisfaction. It had to be remembered that a public medical service was a voluntary organization and the patients would therefore include a higher proportion of bad risks than under a compulsory scheme such as the national health insurance scheme. The friendly societies should be invited to co-operate with the service but preferential rates should not be granted to their members. Dr Durand deprecated also the acceptance of juveniles at lower rates than adults and pointed out that the juvenile was on the whole a greater contract risk than the adult. On economic grounds it might be argued that there should be a lower subscription rate for juveniles but the fairest arrangement to meet this would be the adoption of a graduated scale of subscriptions varying according to the number of subscribers in the family whether juvenile or adult. He offered constructive criticism of the rules and organization of the Isle of Thanet Public Medical Service and made concrete suggestions for their improvement. This advice was amplified in the course of a long discussion in which members of the Division and of the service took part. The meeting closed with a hearty vote of thanks to Dr Durand for his interesting address and for his valuable help and advice.

SOUTH WALES AND MONMOUTHSHIRE BRANCH SOUTH WEST WALES DIVISION

At a meeting of the South-West Wales Division held at Carmarthen on April 28, Dr DANIEL T. DAVIES delivered a British Medical Association Lecture on "The Influence of the Mind in Organic Structural Disease." He pointed out that the division of disease into two classes, organic and functional was inadequate because a number of diseases such as peptic ulcer and high blood pressure existed which should not be assigned to either category. Dr Davies maintained that peptic ulcer was an example of a disease in which the mind acting through the central nervous system might perhaps be the originator. Experimental ulcer formation in animals which had not been possible until recently had held up investigations but it was now known that ulcers could be made to appear in animals in forty-eight hours and to heal in three weeks. This knowledge had now been applied to the human in whom it could be shown that ulcers formed often within a few days of the occurrence of an anxiety even where ulcers had been removed by operation previously. Similarly ulcers which were healing might relapse if the patient underwent some fresh mental strain. An interesting and instructive lecture closed with a hearty vote of thanks to Dr Davies for his address on the motion of Dr ABRAHAM THOMAS seconded by Dr ERNEST JONES.

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

Section of Therapeutics and Pharmacology—Tues, 5 p.m. Annual General Meeting Election of Officers and Council for 1937-8 Paper by Dr A Loeser (Freiburg) Hyperthyroidism and the Thyrotropic Hormone of the Pituitary

Section of Ophthalmology—Fri 5 p.m. Annual General Meeting Election of Officers and Council for 1937-8 Paper by Mr E F King Epithelial Growths of the Conjunctiva and Cornea

HARVEIAN SOCIETY OF LONDON—At Connaught Rooms, Great Queen Street, WC Thurs 7.30 p.m. Buckton Browne Annual Banquet

MEDICAL SOCIETY OF INDIVIDUAL PSYCHOLOGY—At 11 Chandos Street W Thurs 8.30 p.m. Dr T A Ross The Psychological Approach.

POST-GRADUATE NEWS

A post graduate course of weekly lectures in urology began at St Paul's Hospital for Urological and Skin Diseases Endell Street Holborn WC on May 19 and will be continued on Wednesdays, June 9, 16, 23 and 30 at 4 p.m. Registered medical practitioners and students are invited to attend any branch of the work in which they are interested. Details of the remaining lectures will be published week by week in the post graduate diary column of the *Supplement*.

A lecture on the theory and practice of contraception will be given to medical practitioners and medical students who have completed their gynaecological course at the Walworth Women's Welfare Centre 153a East Street SE 17 on Friday June 11 at 6 p.m. Practical demonstrations will be given on Friday June 18 at 6 p.m. and 7 p.m. Those attending a demonstration should bring rubber gloves.

WEEKLY POST-GRADUATE DIARY

BRITISH POST GRADUATE MEDICAL SCHOOL Ducane Road, W—Daily 10 a.m. to 4 p.m. Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations Refresher Course for General Practitioners Tues 4.30 p.m. Dr D Hunter Occupational Diseases Wed 12 noon Clinical and Pathological Conference (Medical) 2 p.m. Dr Janet Vaughan The Reticulocytes 3 p.m. Clinical and Pathological Conference (Surgical) 4.30 p.m. Prof Major Greenwood Experimental Epidemiology Thurs 2.15 p.m. Dr Duncan White Radiological Demonstration 3 p.m. Operative Obstetrics 3.30 p.m. Mr A. K. Henry Demonstrations on the Cadaver of Surgical Exposures Fri 2.30 p.m. Mr Russell Howard, Diseases of the Breast 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology)

HOSPITAL FOR SICK CHILDREN Great Ormond Street WC—Thurs 2 p.m. Clinical Lecture Mr T Twistington Higgins Examination of the Urinary Tract 3 p.m. Clinical Pathological Lecture Dr Alan Moneroff The Purpura Out patient Clinics mornings 10 a.m. to 12 noon Ward Visits afternoons 2 p.m. to 3.30 p.m.

INSTITUTE OF PATHOLOGY AND RESEARCH St Mary's Hospital W—Thurs 5 p.m., Dr Wilson Smith Influenza Problem.

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE Keppel Street WC—Mon 5.40 p.m. Heath Clark Lecture by Mr J A Edgell Time and Movement Study

ST PAUL'S HOSPITAL Endell Street WC—Wed 4 p.m. Dr H N Webber Anaesthetics in Urology

SOUTH WEST LONDON POST-GRADUATE ASSOCIATION—At Westminster Pier Wed 11.30 a.m., Visit to Ford Motor Works Dagenham

TAVISTOCK CLINIC Malet Place WC—Thurs 3 p.m. Dr H Crichton Miller Frigidus 4.30 p.m. Dr Cedric Shaw Sexual Difficulties

WEST LONDON HOSPITAL POST-GRADUATE COLLEGE Hammersmith W—Daily 2 p.m., Operations Medical and Surgical Clinics Mon 10 a.m., Dr Post A Ray Film Demonstration Skin Clinic 11 a.m., Surgical Wards 2 p.m. Surgical and Gynaecological Wards Eve and Gynaecological Clinics 4.15 p.m. Mr Green Armistage Abortion Tues 10 a.m. Medical Wards 11 a.m. Surgical Ward 2 p.m. Throat Clinic 4.15 p.m. Dr Hugh Gordon Treatment of Acne Wed 10 a.m. Children's Ward and Clinic 11 a.m. Medical Wards 2 p.m. Eve Clinic Gynaecological Operations 4.15 p.m. Mr Harvey Jackson Diseases of the Rectum Thurs 10 a.m. Neurological and Gynaecological Clinics 12 noon Fracture Clinic 2 p.m. Eve

and Genito-Urinary Clinics 4.15 p.m. Mr Simmonds, Pyloric Stenosis Fri 10 a.m. Medical Wards, Skin Clinic 12 noon Lecture on Treatment 2 p.m., Throat Clinic 4.15 p.m. Mr Vlasto Hoarseness Sat 10 a.m. Children's and Surgical Clinics 11 a.m. Medical Wards The lectures at 4.15 p.m. are open to all medical practitioners without fee

ABERDEEN MEDICAL SCHOOL—At Aberdeen Royal Infirmary Tues and Thurs 3.15 p.m. Mr William Anderson and others Minor Surgery of Fingers Toes Skin etc with demonstrations

MANCHESTER ROYAL INFIRMARY—Tues 4.15 p.m. Dr E W Twining Radiology of Intrathoracic Suppuration Fri 4.15 p.m. Dr Norman Kleitz Demonstration of Medical Cases

OSWESTRY ROBERT JONES AND AGNES HUNT ORTHOPAEDIC HOSPITAL—Fri 3 p.m., Clinical Demonstration

Naval, Military, and Air Force
Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Commanders E B Pollard to the *Arctura* G S Rutherford to the *Pembroke* for Royal Naval Hospital Great Yarmouth
Surgeon Lieutenant F Bush has been transferred to the Emergency List

Surgeon Lieutenant B O'Neil to the *Ramillies*
The following Surgeon Lieutenants have been transferred to the Permanent List, with seniorities in parentheses H J Bennett (February 7 1932) J W Caswell (May 5, 1932) L G Yendoff (May 31, 1932) D B Jack (November 1 1932) J G V Smith (December 14 1932) G S Thomas (March 21 1933) W B Taylor (April 4 1933) J E Davenport (April 16 1933) W D Gunn (July 13 1933) E J Littledale (August 1 1933) G D Wedd, E James, and W S A Grant (September 20, 1933)

ROYAL NAVAL VOLUNTEER RESERVE

Surgeon Lieutenant Commander D M Craig to the *Revenge*
Surgeon Lieutenant C M Lamont to the *Caledonia*
Probationary Surgeon Lieutenant J Ronald to the *Iron Duke*

ROYAL ARMY MEDICAL CORPS

Lieut-Col G H Dive D.S.O. having attained the age for retirement has been placed on retired pay
Major W E Tyndall M.C., to be Lieutenant-Colonel

ROYAL AIR FORCE MEDICAL SERVICE

Squadron Leader F P Schofield to R.A.F. General Hospital Palestine and Transjordan Sarfand
Flight Lieutenants R F Wynroe to R.A.F. Hospital Cranwell
J F Sandow to No. 1 (Indian Wing) Station Kohat India
J L Walsh to No. 20 (Army Co-operation) Squadron Peshawar India
A W Callaghan to R.A.F. Station, Biggin Hill C 1 R.
Brigs to R.A.F. Station Honington
Flying Officers J P Brazil C D Clements A W St C Greig F V MacLaine A Muir, J R McWhirter to Medical Training Depot Halton on appointment to short service commissions
J H L Newham and P A Wilkinson to Special Duty List on appointment to short service commissions J H Preston to R.A.F. Station Debden W T Buckle to R.A.F. Station Church Fenton D W J Thomas to R.A.F. Station Donibristle

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Lieutenant B B Hosford to be Captain

INDIAN MEDICAL SERVICE

Lieut-Col B H Kamakaka M.C. has been posted as Residency Surgeon and Chief Medical Officer in Baluchistan as from March 31

Captain W J Shipsey to be Major
Captain C K Lakshmanan has been appointed as officiating Port Health Officer Bombay as from April 3

Captain S Annaswami has been transferred to the Jail Department Bengal

Captain M Jafar has been appointed as officiating Port Health Officer Calcutta as from March 31

Captain J R Dogra has been appointed to officiate as Asst Director Central Research Institute Kasauli

As from January 28 Captain Michael Gerard Kelly was known as Captain Gerard Kelly

The seniorities of the following Lieutenants have been added to the dates indicated in parentheses C H Bliss (November 1 1932) W A H Mitchell (March 1 1936) P B Davis (June 12 1936) Lieut enant (on probation) W Laurie has relinquished his temporary appointment

VACANCIES

- ABERDEEN ROYAL INFIRMARY—Senior CO to the Out patient Department Salary £200 p.a.
- ASHTON UNDER LYNE DISTRICT INFIRMARY—Casualty H.S. Salary £180
- AYLESBURY ROYAL BUCKINGHAMSHIRE HOSPITAL—Senior R.M.O. (male) Salary £200 p.a.
- BARNLEY BECKETT HOSPITAL AND DISPENSARY—H.S. (male) Salary £200 p.a.
- BARROW IN FURNESS NORTH LONSDALE HOSPITAL—R.C.O. (male) Salary £150 p.a.
- BATH AND WESSEX CHILDREN'S ORTHOPAEDIC HOSPITAL—H.S. Salary £120 p.a.
- BATH ROYAL UNITED HOSPITAL—(1) Hon Assistant to Fracture Service (2) H.P. (male, unmarried) Salary £150 p.a.
- BATTERSEA GENERAL HOSPITAL Battersea Park, SW—H.P. and CO (female) Salary £120 p.a.
- BEDFORD COUNTY HOSPITAL—Second H.S. (male, unmarried) Salary £150 p.a.
- BEESTON AND STAPLEFORD URBAN DISTRICT COUNCIL—Medical Practitioner to conduct Infant Welfare Clinics at Beeston and Stapleford Fee £1 11s 6d per session
- BIRMINGHAM CITY—(1) J.M.O. (male) for Dudley Road Hospital Salary £200 p.a. (2) J.M.O.s (males) for Selly Oak Hospital Salary £200 p.a.
- BOLTON ROYAL INFIRMARY—(1) H.P. (2) H.S. Salaries £200 p.a. and £150 p.a. respectively
- BRADFORD CHILDREN'S HOSPITAL—H.S. (female) Salary £150
- BRADFORD ROYAL EYE AND EAR HOSPITAL—Two H.S. (females) Salaries £180 p.a. each
- BRIDGE OF WEIR SANATORIUM—R.M.O. Salary £200 p.a.
- BRIGHTON COUNTY BOROUGH—Third R.A.M.O. (male) for Brighton Municipal Hospital Salary £300 p.a.
- BRIGHTON ROYAL ALEXANDRA HOSPITAL FOR SICK CHILDREN—H.P. (male) Salary £120 p.a.
- BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL—(1) Casualty H.S. (male unmarried) Salary £120 p.a. (2) Hon Surgical Registrar
- BRISTOL GENERAL HOSPITAL—(1) Casualty H.S. Salary £100 p.a. (2) Two H.P. (3) Three H.S. (4) Resident Obstetric Officer (5) H.S. to the Special Departments Salaries £80 p.a. each
- BRITISH POST-GRADUATE MEDICAL SCHOOL Duncane Road W—Three H.S.s to the Surgical Unit. Salaries £150 p.a. each
- BROMSGROVE WORCESTERSHIRE MENTAL HOSPITAL, Barnsley Hall—Deputy Medical Superintendent Salary £450-£25 £550 p.a.
- BURNLEY COUNTY BOROUGH—J.R.M.O. (male) to the Municipal General Hospital Salary £160-£200 p.a.
- BURY INFIRMARY—CO (male) Salary £150 p.a.
- CANTERBURY KENT AND CANTERBURY HOSPITAL—Hon S to take charge of the Genito-Urinary Department.
- CARLISLE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION—Tuberculosis R.A.M.O. (male unmarried) for Sully Hospital Salary £500-£25-£700 p.a.
- CHELtenham GENERAL AND EYE HOSPITALS—H.P. (male unmarried) Salary £150 p.a.
- CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL—H.S. (male) Salary £150 p.a.
- CHILDREN'S HOSPITAL Hampstead NW—R.M.O. Salary £150 p.a.
- CITY OF LONDON MATERNITY HOSPITAL City Road E.C.—A.R.M.O. (male) Salary £80 p.a.
- COLCHESTER ESSEX COUNTY HOSPITAL—H.S. (male) Salary £175 p.a.
- COLONIAL MEDICAL SERVICE Richmond Terrace SW—(1) Associate Professor of Medicine, College of Medicine Singapore Straits Settlements Salary £1 190-£35-£1,260 p.a. (2) Medical Superintendent of the Lunatic Asylum Jamaica Salary £750-£50-£850 p.a.
- COVENTRY AND WARWICKSHIRE HOSPITAL—(1) R.H.S. (2) CO Salaries £150 p.a. each
- CRYSDEN COUNTY BOROUGH—A.M.O. (male, unmarried) for Crysden Mental Hospital, Upper Warrington. Salary £400-£25-£500 p.a.
- DERBY DERBYSHIRE ROYAL INFIRMARY—CO and Orthopaedic H.S. Salary £150 p.a.
- DERBYSHIRE HOSPITAL FOR SICK CHILDREN—R.H.S. (female) Salary £130 p.a.
- DEVON COUNTY COUNCIL—(1) Assistant County M.O. (2) School Dentist Salary £500-£25 £700 p.a. and £500-£25 £650 p.a. respectively
- DORSET COUNTY—(1) Assistant County M.O. and M.O.H. to the Portland Urban District. Salary £800 p.a. (2) Assistant County M.O. (male) Salary £500-£25-£700 p.a.
- DOWNPATRICK DOWN COUNTY MENTAL HOSPITAL—J.A.M.O. (male) Salary £350-£25 £450 p.a.
- DREDAUGHT HOSPITAL Greenwich S.E.—(1) Non resident Receiving Room Officer (male) Salary £200 p.a. (2) H.P. (3) H.S. Males unmarried Salaries £110 p.a. each
- DUBLIN CHILDREN'S HOSPITAL—R.M.O. Salary £120 p.a.
- DURHAM COUNTY COUNCIL—(1) Deputy County M.O.H. (male) (2) Assistant Welfare M.O. (female) Salaries £960 p.a. and £500-£25 £700 p.a.
- EAST HAM MEMORIAL HOSPITAL Shrewsbury Road E.—(1) Hon S to the Orthopaedic Department (2) Two Anaesthetists Honorariums £1 1s per session each
- ECCLES AND PATRICKROFT HOSPITAL—R.H.S. Salary £200 p.a.
- ESSEX COUNTY COUNCIL—Whole time Venereal Diseases M.O. (male) Salary £750-£25 £937 10s p.a.
- GARTHAVEL GLASGOW ROYAL MENTAL HOSPITAL—Junior Assistant P Salary £300 p.a.
- GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION—H.P. (male) Salary £150 p.a.
- GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL W.—(1) House Anaesthetist (2) H.S. (male) Salaries £150 p.a. and £100 p.a. respectively
- GREENWICH METROPOLITAN BOROUGH—Public Vaccinator
- HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL, Haverstock Hill NW—(1) Casualty Surgical Officer (female unmarried) for the Out patient Department Salary £100 p.a. (2) H.S. (male, unmarried) Salary £100 p.a.
- HEREFORD HEREFORDSHIRE GENERAL HOSPITAL—(1) R.S.O. (2) H.P. Males Salaries £150 p.a. and £100 p.a. respectively
- HERNE BAY COTTAGE HOSPITAL—Secretary
- HERTFORD COUNTY HOSPITAL—R.S.O. Salary £250 p.a.
- HESTON AND ISLEWORTH BOROUGH—Assistant M.O.H. and School M.O. (male) Salary £500-£25 £700 p.a.
- HOLLAND (LINCOLNSHIRE) COUNTY COUNCIL—Assistant M.O.H. (male) Salary £600-£25 £700 p.a.
- HOSPITAL FOR TROPICAL DISEASES Gordon Street, WC—H.P. (male) Salary £120 p.a.
- HOVE LADY CHICHESTER HOSPITAL FOR FUNCTIONAL NERVOUS DISEASES—(1) Senior H.P. (female) (2) J.H.P. Salaries £100 p.a. and £50 p.a. respectively
- HUDDESFIELD COUNTY BOROUGH—R.M.O. for St Luke's Hospital Salary £200 p.a.
- HULL ROYAL INFIRMARY—(1) H.S. to the Branch Hospital. Salary £160 p.a. (2) Second H.P. (3) H.S. to the Ophthalmic and Ear, Nose and Throat Departments Salaries £150 p.a. each
- ILFORD KING GEORGE HOSPITAL—Two H.S. (males) Salaries £100 p.a. each
- INSTITUTE FOR THE SCIENTIFIC TREATMENT OF DELINQUENCY Portman Street W.1—Part time Medical Registrar Salary £300
- IPSWICH EAST SUFFOLK AND IPSWICH HOSPITAL—(1) CO (2) H.S. to the Orthopaedic and Fracture Department. (3) H.S. to the General S. and Genito Urinary S. Males Salaries £144 p.a. each
- JERSEY GENERAL HOSPITAL AND POOR LAW INFIRMARY—CO Salary £175 p.a.
- KENT COUNTY COUNCIL—(1) R.A.M.O. for Chatham Public Assistance Hospital Salary £250 p.a. (2) R.A.M.O. for Dartford Public Assistance Hospital Salary £250 p.a.
- KETTERING AND DISTRICT GENERAL HOSPITAL—(1) R.M.O. (2) Second R.M.O. (male) Salary £160 and £140 respectively
- KING'S LYNN WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL—H.P. Salary £125 p.a.
- LANCASHIRE COUNTY COUNCIL—Second R.M.O. (male, unmarried) for Park Hospital Davyhulme Salary £225 p.a.
- LEICESTER ROYAL INFIRMARY—Resident Radiologist. Salary £200 p.a.
- LIVERPOOL COUNTY BOROUGH—Two Assistant School M.O.s. Salaries £500-£25 £700 p.a. each
- LIVERPOOL HAHNEMANN HOSPITAL—R.M.O. Salary £120 p.a.
- LONDON COUNTY COUNCIL—(1) A.M.O.s (Grade I) for (a) New End Hospital Hampstead N.W., (b) Paddington Hospital, W. (c) St. Allege's Hospital Greenwich, S.E., (d) St. Mary Abbots Hospital Marlow Road W. Salaries £350-£25-£425 p.a. each (2) A.M.O.s (Grade II) to (e) Archway Hospital N. (f) Hackney Hospital E., (g) Highgate Hospital N. (h) Paddington Hospital W. (i) St. Benedict's Hospital, Tooting, S.W. (j) St. George in the East Hospital Wapping, E., (k) St. James Hospital Balham S.W., (l) St. Nicholas Hospital Plumstead S.E. (m) St. Pancras Hospital, N.W. Salaries £250 p.a. each Unmarried only (a) (c) (d) (e) (f) (g) (h) (i) and (m) are male appointments (3) Part time M.O. for Ashford Residential School Salary £285 p.a.
- LONDON JEWISH HOSPITAL Stepney Green E.—R.CO (male) Salary £100 p.a.
- MAIDENHEAD HOSPITAL—R.M.O. (female) Salary £150 p.a.
- MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES—H.S. Salary £150 p.a.
- MANCHESTER CITY—(1) Resident Obstetrical Officer and (2) R.A.M.O. for Withington Hospital Salaries £350-£25 £450 p.a. and £200 p.a. respectively (3) R.S.O. for Booth Hall Hospital for Children Salary £400-£25 £450 p.a.
- MANCHESTER EAR HOSPITAL—R.H.S. Salary £120 p.a.
- MANCHESTER ROYAL MANCHESTER CHILDREN'S HOSPITAL—Full time Senior M.O. (non resident) Salary £300 p.a.

- MANCHESTER ST MARY'S HOSPITALS**—(1) Two H.S. for the Whitworth Street West Hospital (2) Three H.S. for the Whitworth Park Hospital Salaries £50 p.a. each
- MIDDELBROUGH NORTH ORMSBY HOSPITAL**—H.S. (male, unmarried) Salary £135 p.a.
- MIDDELBROUGH NORTH RING INFIRMARY**—(1) Senior H.S. (2) Third H.S. Males unmarried Salaries £175 p.a. and £140 p.a.
- MIDDLESEX COUNTY COUNCIL**—(1) Visiting Ear, Nose and Throat S. to Central Middlesex County Hospital, Willesden Salary £3 3s per session (2) Two R.A.M.O.s and (3) Casualty R.M.O. for Central Middlesex County Hospital Willesden Salaries £400 £25 £475 p.a. each and £350 p.a. respectively
- NEWCASTLE UPON TYNE CITY AND COUNTY**—(1) Two H.S.s (2) H.P. Salaries £150 p.a. each (3) Resident Medical Assistant to Barrasford Sanatorium Salary £250 p.a.
- NEWPORT ROYAL GWENT HOSPITAL**—Two H.S. (males) Salaries £135 p.a. each
- NORWICH JENNY LIND HOSPITAL FOR CHILDREN**—R.M.O. Salary £120
- NORWICH NORFOLK AND NORWICH HOSPITAL**—Two General H.S. (males unmarried) Salaries £120 p.a. each
- NOTTINGHAM CITY**—H.S. (male, unmarried) for the City Hospital Salary £250 p.a.
- NOTTINGHAM GENERAL HOSPITAL**—(1) H.S. for the Ear, Nose and Throat Department (2) R.C.O. (male) Salaries £150 p.a. each
- PADDINGTON GREEN CHILDREN'S HOSPITAL W**—H.S. (male unmarried) Salary £150 p.a.
- PENSHURST CASSEL HOSPITAL FOR FUNCTIONAL NERVOUS DISORDERS** Swaylands Medical Director (Male) Salary £1,200 £1,500 p.a.
- PLYMOUTH CITY**—Deputy Medical Superintendent (male) for the City Hospital Salary £450 p.a.
- PLYMOUTH PRINCE OF WALES'S HOSPITAL** Devonport—J.H.S. Salary £120 p.a.
- PONTEFRAC T GENERAL INFIRMARY**—J.R.M.O. (male, unmarried) Salary £150 p.a.
- PRESTON COUNTY BOROUGH**—Assistant School M.O. (female) Salary £500-£25 £700 p.a.
- PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN** St Quintin Avenue, W—H.S. (male) Salary £120-£150 p.a.
- PUDSEY BOROUGH**—Medical Officer of Health Salary £800 p.a.
- PUTNEY HOSPITAL** Lower Common SW—J.M.O. (male) Salary £100 p.a.
- RAINFHILL COUNTY MENTAL HOSPITAL**—(1) Second A.M.O. (2) A.M.O. (female) Salaries £650 p.a. and £7 7s per week respectively
- READING ROYAL BERKSHIRE HOSPITAL**—C.O. (male) Salary £150 p.a.
- RICHMOND ROYAL HOSPITAL**—J.H.S. (male) Salary £100 p.a.
- ROTTERHAM HOSPITAL**—H.S. to the Ophthalmic and Ear, Nose and Throat Departments and to administer anaesthetics Salary £120 p.a.
- ROYAL NORTHERN HOSPITAL** Holloway N—H.S. Salary £70 p.a.
- ST HELENS COUNTY BOROUGH**—Assistant M.O.H. (female) Salary £500-£25 £700 p.a.
- ST PETER'S HOSPITAL FOR STONE ETC** Henricella Street, WC—Clinical Assistants
- ST THOMAS'S HOSPITAL S.E.**—P
- SALFORD CITY**—(1) A.R.M.O. for the Hope Hospital (2) J.A.R.M.O. for the Infectious Disease Hospital Males Salaries £200 p.a. each
- SALISBURY GENERAL INFIRMARY**—(1) R.M.O. (male) Salary £250 p.a. (2) H.P. (male unmarried) Salary £125 p.a.
- SHEFFIELD CHILDREN'S HOSPITAL**—H.S. (male unmarried) Salary £100 p.a.
- SHEFFIELD JESSOP HOSPITAL FOR WOMEN**—(1) Assistant in the Hospital Laboratories Salary £300-£150 p.a. (2) R.M.O. (1) Senior Resident Officer (male unmarried) Salaries £150 p.a. each (4) Three H.S. (male unmarried) Salaries £100 p.a. each
- SHEFFIELD ROYAL INFIRMARY**—(1) H.S. (2) Aural H.S. (3) Ophthalmic H.S. Salaries £80-£100 p.a. £80-£100 p.a. and £120 p.a. respectively
- SOUTH LONDON HOSPITAL FOR WOMEN** Clapham Common SW—Surgical Registrar (female) Honorarium £75 p.a.
- SOUTH EASTERN HOSPITAL FOR CHILDREN** Sundenham S.E.—(1) Hon Assistant P. (2) Two R.M.O.s Honorariums £100 p.a. each
- SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL**—(1) C.O. (2) Resident Anaesthetist and H.S. to Ear, Nose and Throat Department Males unmarried Salaries £140 p.a.
- SOUTHEND-ON-SEA GENERAL HOSPITAL**—Resident Obstetric Officer (male) Salary £100 p.a.
- SOUTH LANCASHIRE MEDICAL SERVICE**—Government M.O. (male) Salary £600-£25 £750 p.a.
- STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS**—J.A.M.O. (male) for Prestwood Sanatorium Salary £300 p.a.
- STOKE-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL**—R.H.S. Salary £175 p.a.
- STOKE-ON-TRENT LONOTON HOSPITAL**—H.S. Salary £160
- STOKE-ON-TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY**—H.S. for Aural and Ophthalmic Department Salary £150 p.a.
- SURREY COUNTY COUNCIL**—(1) J.A.R.M.O. for the County Sanatorium, Milford Salary £350 p.a. (2) R.A.M.O. for Kingston and District Hospital Salary £375 p.a.
- SWANSEA CEFN COED HOSPITAL**—A.M.O. Salary £400-£25 £500 p.a.
- SWANSEA GENERAL AND EYE HOSPITAL**—H.S. (male unmarried) Salary £150 p.a.
- TAUNTON SOMERSET AND BATH MENTAL HOSPITAL**—Second R.A.M.O. Salary £450 p.a.
- TILBURY HOSPITAL**—H.S. (male) Salary £140 p.a.
- WAKEFIELD CLAYTON HOSPITAL**—(1) Senior H.S. (2) Fourth H.S. Males Salaries £250 p.a. and £150 p.a. respectively
- WATFORD AND DISTRICT PEACE MEMORIAL HOSPITAL**—H.S. (female) Salary £150 p.a.
- WEMBLEY URBAN DISTRICT COUNCIL**—Assistant M.O.H. (female) Salary £500-£25 £700 p.a.
- WEST LONDON HOSPITAL** Hammersmith Road W—(1) J.A.M.O. for the Venereal Diseases Department Salary £350 p.a. (2) H.P. (3) Two H.S.s Salaries £100 p.a. each
- WILLESDEN GENERAL HOSPITAL** Harlesden Road, NW—C.O. (unmarried) Salary £100 p.a.
- WINCHESTER ROYAL HAMPSHIRE COUNTY HOSPITAL**—H.S. (male) Salary £125 p.a.
- WORKSOP VICTORIA HOSPITAL**—Junior Resident Salary £150 p.a.
- YORK BOOTHAM PARK MENTAL HOSPITAL**—Medical Superintendent Salary £800 p.a.
- CERTIFYING FACTORY SURGEONS**—The following vacant appointments are announced Plympton (Devonshire) Folkestone (Kent) Applications to the Chief Inspector of Factories, Home Office, Whitehall SW 1 by June 15

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 48 49 50 51 52 53 54 55 56 57 and 60 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 58 and 59

APPOINTMENTS

- ALPORT A. CECIL M.D. Ed. F.R.C.P.** Professor of Clinical Medicine and Director of the Medical Unit University of Egypt Cairo
- HALDANE FREDERICK P. M.B. Ch.B.** Assistant Physician Runwell Hospital for Nervous and Mental Disorders near Wickford Essex
- ROBERTSON A. M.D.** Medical Referee under the Workmen's Compensation Act 1925 for the Oban Sheriff Court District (Sheriffdom of Argyll)
- SHEPHERD ANDREW M.B. Ch.B. D.P.M.** Medical Superintendent Worcestershire Mental Hospital Barnsley Hall Bromsgrove
- STEWART H. C. M.D. B.Ch.** Sir Halley Stewart Research Fellow and Honorary Demonstrator in the Department of Physiology, St Mary's Hospital Medical School
- TIPPETT G. O. F.R.C.S.** Assistant to the Orthopaedic Department Croydon General Hospital
- ADMIRALTY SURGEONS AND AGENTS**—L. A. HINCKOC M.B. B.S. for Emsworth J. R. J. BEDDARD M.R.C.S. L.R.C.P. for Frome T. McMI SHARP M.B. Ch.B. Glas., for Rothway

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 6s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

BIRTH

WALSH—On May 31 to Dr Isabel Taylor Walsh wife of John Connaby Walsh Redcliffe Ashton-on-Abbey Preston 2

J EDGAR WALLACE TREATMENT OF LUPUS VULGARIS BY INTRADERMAL INJECTION OF HYDNOCARPATES



FIG I—Case 1 Lupus vulgaris of neck and face of 10 years duration Before treatment

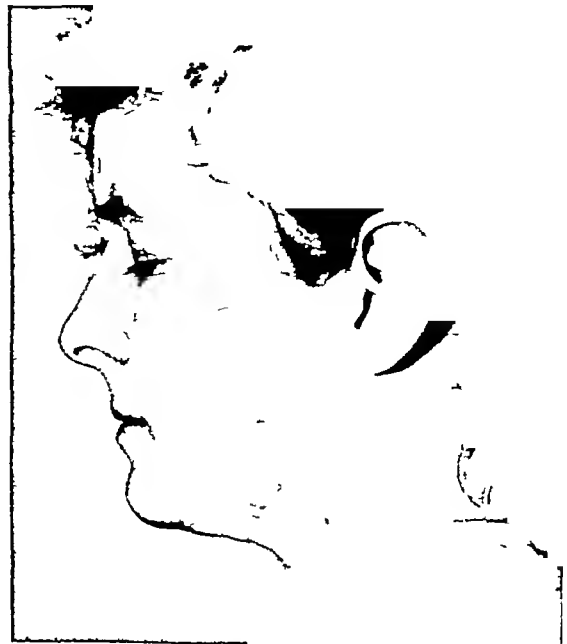


FIG II—Case 1 The same 12 months after treatment



FIG III—Case 2 Lupus vulgaris in region of old tuberculous elbow 14 years duration. Before treatment in 1933



FIG IV—Case 2. The same in 1936 after treatment.



FIG V—Case 10 Lupus vulgaris of thigh of three years duration Before treatment, June, 1933

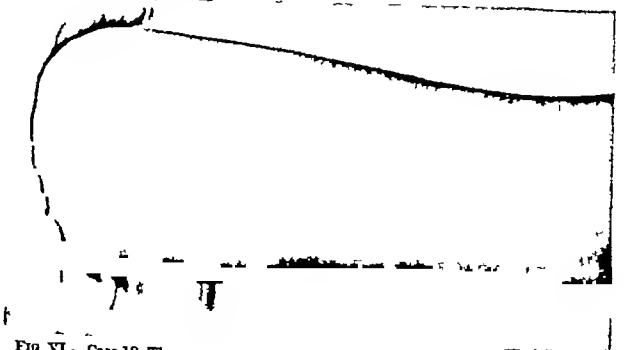


FIG VI—Case 10 The same in 1936, nearly two years after cessation of treatment

JAMES L BROWN INTRAPLEURAL PRONTOSIL IN STREPTOCOCCAL EMPYEMA



FIG 1—March 1 1937 Very large left basal empyema



FIG 2—April 1 1937 No sign of any fluid

A PATRICK ADVANCED EXTRA UTERINE PREGNANCY



Photograph showing the fetus and on the left the greatly enlarged Fallopian tube with the placenta attached

EDGAR P WATERS PARTIAL EXTRA UTERINE PREGNANCY



Anterior view of the uterus, showing the wide gap of which the neck of the uterus had become adherent to the parietal peritoneum

standards recommended in the report of the Technical Commission, and of the differences observed as regards the state of nutrition of people in different countries or regions, and how far such differences are due to climate.

The work of the Technical Commission on nutrition has aroused the greatest interest in the medical world and beyond its borders. Its report will inspire to a great extent the work of the forthcoming intergovernmental conferences on rural hygiene, as well as various other activities, and the Health Committee feels that the procedure followed up to the present in the study of nutrition has produced valuable results in a comparatively short time. The Technical Commission will remain the pivot of all activity in this field, and for specific studies it will have the benefit of the collaboration of groups of specialists, or can apply for authoritative opinions to national authorities, leading scientific institutions, learned societies, and institutes and schools of hygiene, which last are carrying out certain field studies on the Commission's behalf.

DISSOCIATION AND REPRESSION

LECTURE BY PROFESSOR McDougall

'The Relations between Dissociation and Repression' was the subject of a lecture delivered by Professor WILLIAM McDougall, professor of psychology, Duke University, N.C., before the Medical Section of the British Psychological Society at a meeting held at Tavistock Clinic on May 26. Dr H. CRICHTON-MILLER was in the chair.

Professor McDougall began by saying that the words "dissociation" and "repression" were widely used, but in the main by different authors. He had no doubt that both were needed, each standing for phenomena of a different order. Janet's doctrine of dissociation had had a very wide influence, being propagated by William James and by many Harvard teachers. To these and other psychologists dissociation remained the master principle of all psychology, and they were sceptical about repression. Others, however, pointed to repression as a process which seemed to lie at the back of many neurotic symptoms. Freud had never admitted the need for the word 'dissociation,' either as a term descriptive of neurotic symptoms or as standing for an explanatory theory, and in this he seemed to be followed by most of those who called themselves psychoanalysts in the stricter sense as well as others like Jung and Adler, who had derived their doctrines from Freud by way of emendation of his teaching. This continuing division of opinion was in part a consequence of personal antagonism between Janet and Freud, it might properly be regarded as a symptom of the sickness of psychology.

The lecturer himself regarded both conceptions—dissociation and repression, as necessary and a considerable number of the more eclectically minded psychologists, who seemed to be more abundant in this country than in any other, used both words as descriptive terms and recognized the need for at least two corresponding theories of interpretation of the facts. At the time he wrote his *Outline of Abnormal Psychology* he confidently assumed the reality and importance of dissociative symptoms and the need for some adequate theory of dissociation. That was natural considering his affiliations with Harvard. He was frankly a disciple of William James. He had read Janet intensively before he had ever heard of the work of Freud, but when he came to study Freud he did not hesitate to recognize that in his doctrine of repression Freud had got hold of something of vast importance that had almost if not entirely escaped the penetration of Janet and others. He attempted in his book to hold the balance true and to give due recognition and weight both to dissociation and repression, treating repression as a dynamic factor which in many cases prepared the way and led to dissociation, but he was very conscious at that time that

he had not got to the bottom of a very complex problem of fundamental importance. He had gradually come to realize that under the one term 'dissociation' he, like almost all who had used the word, had been confounding at least two things which required to be distinguished—broadly, dissociation and disintegration.

Processes of Mind Organization

The first step towards the clearing up of this complex problem must be to distinguish as clearly as possible the various different meanings of 'dissociation' as used by different writers, and in disentangling the meanings he was helped by keeping before his mind the distinguishable conditions of mental integrity. In the main the study of the abnormal went forward without regard of an explicit kind to the principles of harmonious integration. If one regarded the development and structure of the mind as the product of the operation of the all-powerful principle of association, as the nineteenth century psychologists did, then one naturally saw in dissociation the one all-prevailing principle of mental disorder. Some such logic as that seemed implicitly to have pervaded Janet's doctrine of dissociation.

Few were content nowadays with the old association doctrine of mental organization, but there was much uncertainty as to what principles must replace or accompany association as the organizing processes by which the sound mind became a harmoniously working entity or unity. He had distinguished two great aspects of mind organization. The first was the logical structure, growing in two ways, mainly by the differentiation of the germs of mental structure or mental dispositions, but occasionally also by the fusion of such systems achieved by acts of synthetic apperception. The second aspect was what he called the historical aspect of the total structure of the mind, consisting of innumerable acts of association resulting in the formation of links between those units of structure which grew in the two ways just described.

If there were, then, these three distinct processes of mind growth—differentiation, fusion, associative links—logically one ought to look for three corresponding processes of failure or breakdown. He thought such breakdowns did occur, resulting from the undoing of these processes, but the one he wished especially to deal with was the breakdown of the historical structure resulting in what he understood by dissociation. He had come across cases of complete absence of memory of any particular past experience, complete amnesia so far as concrete facts were concerned, but complete retention of the use of language and the understanding of things. Such an individual found his chief trouble in practical life that he did not know the names of things, and names, of course were attached to things by associative processes. On the other hand there were also rare cases of arrest of function of the logical structure of the mind as well as the associative structure, and in such cases the individual became like a newborn babe understanding nothing. The structure was not destroyed in either type of case, but somehow ceased to function, ceased to be flooded with energy.

Relation of Dominance and Subordination

Under this view of dissociation mind was not regarded as made up of aggregations of atoms of sensation or feeling or any 'stuff' of consciousness, but rather as consisting of distinguishable units of structure which might be described most conveniently as mental dispositions. These units of structure became linked with one another with a multitude of links of association. It was a fair assumption that the structure of the mind as he had described it hitherto could be validly translated into terms of neural or cerebral structure, these 'dispositions' being regarded as functional groups of neurons and naturally one could assume that mental dissociation

meant some kind of impairment or locking, partial or complete, of these neural cross-connexions

This was combined with a much more questionable assumption—namely, that neural continuity was the ground of the unity of consciousness. This might be valid, and it was so natural an assumption that it had been made by a number of authors apparently without realizing that it was speculative. This last assumption was perhaps better stated in a more modern form—that one condition of the unity of consciousness was continuity of the field of energy changes going on in the brain at any one moment—and it was in that form that the assumption was commonly made by the latest school of German psychology, which put forward the very questionable doctrine of isomorphism.

Professor McDougall went on to say that when he came to write his *Outline of Abnormal Psychology* he found it necessary to mention a fourth kind of functional relation between various parts of the total structure of the mind, one which clearly obtained in normal functioning—the relation, namely, of dominance and subordination. This relation made of the total structure not merely a vast complex system of units reciprocally influencing one another, but a unity in a further and higher sense. It was the maintenance and functioning of these relations of dominance and subordination which integrated the whole organization of the mind and made it a harmoniously working unity.

These relations were strictly dynamic ones. It was difficult to suggest any adequate picture of corresponding relations between neural systems. They were essentially moral relations, or at any rate mental. Perhaps they had no neural equivalents. It was because of this that he had felt compelled to describe the mind as made up of monads, meaning mental units, relatively independent psychic entities. The integration of a personality must be regarded as consisting in the main in the maintenance in one harmonious whole of the system of dynamic relations of dominance and subordination. The other structure relations might then be properly regarded as adjuvant, as instrumental aids to or conditions of integration or the functioning of the whole personality.

A Military Analogy

At this stage the theory of dissociation and the theory of repression began to be connected. It could not be impossible to reconcile and combine these two ways of thinking. Professor McDougall took the analogy of an army, and used it several times during the remainder of his lecture. He imagined a great army spread over a wide front with many compact units, each of which had its own internal organization. Such was the multiple structure. These units in turn were organized within larger units to be likened to the mental systems. Then he supposed that for routine communications between these units and systems a multitude of field telephones would be installed; these would represent what he had called the historical structure, the multitude of associative links. So long as the units maintained their normal internal organization and the telephone wires were in good condition the army was a whole, each unit playing its part. It exemplified so long as those conditions obtained the principle of holism as set forth so elegantly by General Smuts or what was called in America "organicism." But if for any reason such as an electrical storm the telephone system was impaired it would represent what happened in the mind during relative dissociation as in sleep, hypnosis, anaesthesia, alcoholic influence and fatigue. Actual rupture of the wires between the systems would represent local cerebral dissociation cutting out some special function or allied group of functions.

But the more effective function of the telephonic system did not make the army a unitary thing. If the wires carried only information about the state and doings of each unit or gossip or backchat or argumentation as

might be imagined in an army run on communistic principles, no high form of unity would be attained. Such unity in a highly complex structure could perhaps only be found in the hierarchical system of dominance and subordination. The telephonic system might function well even though the army was in a state of anarchy that would mean extreme disorder resulting from the breakdown of the hierarchical system. The lower form of unity represented by free communication between units would be there; the higher form of unity would be lacking. In other words, there would be disintegration and disharmony without dissociation.

What was it in the mind that corresponded to the hierarchical organization in the army? It was a moral relation of authority on the one side and obedience on the other. The best example of this dynamic relation was that between the hypnotist and his subject. It had no physical compulsion, nor even the threat of it, it was purely a moral compulsion, and yet a dynamic relation of the most effective kind. The authority of the higher members of the mind system implied communication with the subordinate units. Did the higher members control the lower through the associative mechanisms? He was strongly inclined to the view that that was not the whole case. He liked the idea as expressed in Upton Sinclair's phrase "mental radio" or, in more familiar terms, telepathic communication, as indicating the means whereby these moral relations were maintained. But if that seemed too speculative there were various possibilities in more ordinary modes of communication.

Maintenance of the Mental Hierarchy

Given some means of communication through which these relations of dominance and subordination were maintained, how was the authority or 'prestige' to be conceived? Here again a modification of the military analogy would help. A commander-in-chief or warrior king was endowed with his power, in part as a result of his individual qualities, but also in part by reason of tradition which in the human organism might be paralleled by heredity, and in part by custom, which might be paralleled by habit. The commander-in-chief represented or symbolized the force or energy of the whole system and could bring it to bear upon any one part. Perhaps a soviet army with its hierarchy of officials, afforded a closer analogy of the hierarchical organization of the mind. The main point he wished to insist on was the reality of the double system: first the associative links which maintained the communication between all parts and, secondly, the dynamic relations of dominance and subordination which alone secured integration of all the mental functions.

When these relations broke down there appeared in one form or another, not mere dissociation but other disintegrations or possibly it would be better to use the term disharmony as more descriptive. These two very different forms of disorder—dissociation and repression—each comprising a multitude of minor forms—were commonly classed together and both were called dissociation by one party and conflict or repression by the other. But the units of an army might disagree or refuse to obey orders—that was conflict without loss of contact—such units might be overwhelmed and rendered ineffective and that was repression. Such rebellion or mutiny might result in the breakdown of communications, the rebels becoming isolated physically as well as morally, which was repression leading to dissociation, with consequent disintegration. In either case the isolated unit might continue to struggle as well as it could against the forces which had overwhelmed it or might be spurred to renewed activity by favourable circumstances. He rejected Janet's original use of the term "dissociation" as descriptive of the falling away of mental atoms in the whole of consciousness. He accepted localized cerebral dissociation underlying various functional defects but he admitted that there was a case to be made out against

this form of dissociation, and he distinguished between disharmony and disintegration, the latter in many cases bringing in dissociation as a secondary result of conflict and repression.

In conclusion, Professor McDougall said that he was inclined to support the view that, although conflict and repression played a part in bringing about all such symptoms as amnesias and anaesthesias, actual cerebral dissociation was produced in all such cases, he went further, and argued that in some cases dissociation was directly produced without proceeding to conflict or repression. He also claimed that the clear distinction of the three forms of structural relation which he had mentioned, and of the fourth or dynamic relation of dominance and subordination which he had stressed, might possibly furnish a clue to the interpretation of all functional disorders.

Reports of Societies

AIR CONDITIONING

At a combined meeting of the Sections of Epidemiology and State Medicine and Medicine of the Royal Society of Medicine on May 28, with Surgeon Captain S. F. DUDLEY in the chair, the subject of air conditioning was dealt with from various points of view.

Ventilation

Mr R. FREDERICK, a specialist research worker in the Admiralty, discussed ventilation and its investigation. The study of ventilation in naval establishments and on H.M. ships, he said, was centralized at the Royal Naval Medical School, Greenwich to which samples of air and appropriate records were sent. Sometimes however, these samples had to be examined at their place of origin, and for this purpose a transportable laboratory was used, the various equipment of which he described and exhibited to the meeting.

The determination of carbon dioxide gave a reliable and quick means of finding out the respiratory impurity. A proportion of 12 parts per 10,000 was quite harmless. Even if the respiratory carbon dioxide in a room increased to 200 parts per 10,000 he was quite sure nobody would be conscious of it. At 250 parts it might be noticed a little. Only when the carbon dioxide exceeded 300 parts did the effect become appreciable, and experience of an atmosphere in which the respiratory impurity was 500 parts per 10,000 was not likely to be forgotten. The amount of air which must be supplied in an enclosed space to maintain a satisfactory condition was from 2,000 to 3,000 cu ft per man per hour, but this was being more and more regarded as only one factor in ventilation and it was realized that the question of floor space was no less important. The first requisite in air comfort was to have a moderate temperature and a moderate humidity. So far as temperature was concerned, in temperate climates the dry bulb was of chief interest, and in hot climates the wet. It had been suggested that the ideal was a temperature of 60° F. with a relative humidity of 50 per cent., but most people would find that too cold. The greatest agreement would be reached with temperatures of, for hard manual work 60° to 62° F., for sedentary work 62° to 64° F. for leisure conditions 64° to 66° F., with a relative humidity of 70 to 75 per cent. With regard to the wet bulb the figures of Haldane had been widely accepted in the still air a limit of 88° F. for sedentary work and 78° F. for hard work and in moving air corresponding limits of 93° and 85° F. Personally he thought these temperatures could be placed considerably higher.

The beneficial effect of air movement was due to its continual dispersal of the envelope of hot air between the clothes and the skin and the increased effect of convection currents. Apart from respiratory impurity, ventilation

conditions were assessed by the dry-bulb and the wet-bulb temperatures, the relative humidity and the air movement. In America the combined effect had been termed the "effective temperature," and a 'comfort zone' had been worked out, but for various reasons the use of such a combined method would be inapplicable in this country.

Air Conditioning in Factories

Mr C. W. PRICE of the Home Office referred first to the variety of conditions in industry. One ship's cabin was very like another, but "factory" was a comprehensive term, including all manner of works and mills in which the type of occupation imposed special conditions. While a proportion of factories could be air-conditioned, in any large number complete air conditioning was not within the realm of practical politics. A large number of plants for the partial conditioning of the air supply in factories had been installed, including plenum systems for supplying warm air in cold weather or cool air to furnace workers and the like. In addition, many exhausting plants were in service for extracting deleterious products in manufacturing processes. These extraction installations might be responsible for the whole of the ventilation in the rooms concerned, since the air extracted must be replaced.

The regulation of humidity in this country had not so far been adopted in the ordinary factory, thus there was nothing comparable with the more complete air-conditioning practice in the United States and Canada. If ordinary factories were adequately ventilated as the law required the problem of humidity was and would be regarded as of little significance. There was no requirement dealing with the cleanliness, the temperature, or the humidity of the air supplied, there must, however, be sufficient ventilation. The new Factories Bill would assist in bringing about some more efficient air conditioning in many workrooms. It was proposed to require the extraction where practicable of any dust whatsoever evolved in a manufacturing process if produced in substantial quantities, the present provisions were limited to harmful dusts. In not a few factories the advances made had already been very far-reaching, even in workrooms where peculiar conditions had to be overcome. Such good conditions might be found even where dangerous processes were carried on. Employers had been helpful, and had agreed to the necessary provision of higher standards of ventilation, while not neglecting temperature requirements. Attention had also been given to rates of air movement in particular positions in factories. Radiation was not an air-conditioning factor, but it was one, nevertheless, to be taken into account in any relative temperature evaluations. To what extent in factories should complete air conditioning be adopted or recommended? As regards workrooms where it might be adopted with advantage, it was doubtful whether the regulation of humidity as in complete conditioning was in general necessary. Mr Price briefly discussed the guidance given by recent physiological research.

Allergic Conditions and Air Purification

Professor E. M. FRAENKEL said that pollution of the air was of importance in different types of allergic complaints such as hay fever, asthma, and some cases of urticaria and eczema. The types of allergens which were effective were either outdoor or indoor impurities. The latter might be brought in by air or clothing or might consist of allergen-forming material already present (horsehair, feathers, woollen carpets, moulds, rugs, and the like) or of breakdown products formed by the action of moulds from innocuous indoor material. Air purification in the case of allergic patients was not identical with air conditioning. The walls and the contents of rooms air-conditioned for this purpose must be constructed of suitable material as indoor allergens were a more frequent source of trouble than those from outdoors. Impurities

from outside might be solid particles, fine droplets of moisture or even gases or vapours but were mostly a combination of two or more of these. Various methods such as filtration, freezing, washing or the influence of an electrostatic field had been devised for air purification. By means of a cinematograph film a special method of chemical and physical filtration devised by Professor Fraenkel for use in the diagnosis prophylaxis and treatment of suitable allergic cases was demonstrated. It was used in connexion with masks, sleeping bags, and cubicles, and the effect on an asthma subject sensitive to dog hairs was very strikingly shown.

The Psychological Factor in Ventilation

In the course of some informal discussion, in which Dr CLARK TROTTER and Surgeon Captain DUDLEY took part, Sir WELDON DALRYMPLE-CHAMPNEYS drew attention to the very considerable psychological factor in ventilation. In the Tropics it was found that white people stood up to moist heat badly, not only because they did not sweat satisfactorily, but because they were depressed by the idea that the atmosphere in which they were living was too hot and too moist. He had been struck while in tropical countries with the reactions of his companions to increasing heat and humidity, suggesting a psychological factor, and not to be accounted for on the basis of the purely physical condition. People of a more phlegmatic temperament stood up much better to increasing heat. The same thing was noticed in dug outs during the war. Some men could not endure them not owing to any claustrophobia, but because they thought the place was getting unhealthy. He had also noticed that in the cabins of ships in hot weather when the portholes had to be kept closed many people felt they were being suffocated. The importance of odours must also be remembered. Odours gave some people the impression of suffocation and made them acutely uncomfortable, though the actual physical conditions might be comparatively satisfactory.

Local News

ENGLAND AND WALES

Occupational Therapy

The Ladies Guild of the Hospital for Epilepsy and Paralysis Maida Vale W., organized a sherry party at Chester Terrace on May 26 when Dr Wilfred Harris gave an address on the subject of occupational therapy, mentioning that this hospital was one of the first in England other than mental hospitals to adopt this form of treatment. Dr Harris said that although occupational therapy was as old at least as Galen the great war brought about a revival of interest in the treatment on account of the large numbers of shell shocked patients and others wounded in mind and body for whom it offered a restoration of self-confidence stimulating a desire for renewed health. Occupational therapy was a system of devising occupations such as various handicrafts for patients who otherwise would have nothing to do and in whom idleness would aggravate the condition of depression or insomnia and weaken their already weak muscles and mental processes by disuse. In recent years occupational methods of treatment had been greatly developed and systematized in many of the large mental hospitals. Dr Harris mentioned in particular the hospital at Santpoort near Haarlem under Dr Kraus which he had recently visited and Chester County Hospital under Dr Grills where the recovery rate had gone up 43 per cent since the treatment was instituted. At both these large hospitals of from 1,500 to 1,700 patients from 95 to 98 per cent of the patients were constantly employed in handicrafts such as weaving, mat or rug making, knitting, sewing and embroidery, bookbinding, making paper flowers and bags

wood carving, basketry and raffia work besides kitchen and laundry work and outdoor occupations in the garden and on the farm.

TRAINED SUPERVISORS

As a result of this intensive system of occupational treatment, Dr Harris said it was found that noisy trouble, some, and destructive patients became quiet, social and productive, and hypnotics and other sedative drugs were much less required. It was not only for mental hospitals however, that occupational treatment was valuable for it had already been developed in Canada at the Toronto General Hospital and at the Astley Ainslie Convalescent Institution in Edinburgh. In America and Canada and in Scotland associations of occupational therapists had been formed, one was now being formed in England and schools were being started such as the Dorset House School at Clifton and that of Miss Tarrant and Miss Rivett in London where girl students attended lectures and were trained in the various handicrafts for two years before obtaining a diploma as teachers. A new profession was thus opening up for educated women for it was necessary to have trained supervision of the patients at their work to teach them and the nurses the handicrafts and to select occupations suitable to the different types of patients, some of whom required sedative and others stimulating methods or exercises for certain groups of muscles. Co-operation between the medical staff and the nurses on the one hand with the occupational therapist on the other was essential and the therapist should be supplied with details of the patients' ailments and their special needs. Games for small classes with the medicine ball and rhythmical physical exercises to music were an added feature of value to patients able to walk about. The essence of occupational therapy was to exercise the limbs in various ways and also to exercise the mind without the patient realizing that he was doing work or was being set a task. Thus it became recreation and instead of hours of boredom recurring daily which led to increasing depression and misery of outlook for the future the patients slept better and more naturally became brighter and happier, and felt that they were accomplishing something definite making something useful and perhaps might presently be started in a profitable trade.

The Maida Vale Hospital (whose new title is to be the 'St Marylebone Hospital for Nervous Diseases') is finding the system very advantageous. There are initial expenses in providing looms and materials but once started the treatment will more or less pay its way, even a small shop could be stocked or outside shops supplied with articles not retained in the hospital. Although the salary of a professional occupational therapist has to be paid an item on the other side is the not inconsiderable saving in the cost of hypnotic drugs. Dr Curran, psychiatrist at the Maida Vale Hospital added a few words on his experience in the psychiatric clinic attached to the Johns Hopkins Hospital and Miss Tarrant gave a demonstration of the work that was being and might be done. Over a hundred guests were present including several members of the committee of management of the hospital and the majority of the medical staff.

The London Bus Strike Health Aspects

The report of a Court of Inquiry concerning the stoppage of the London Central Omnibus Services 1937 has been issued as a White Paper (Cmd 5464 price 4d). It is signed by all three members of the Court—Mr John Forster, Sir Arthur Pugh and Mr Basil Sanderson—and paragraph 42 of their conclusions is devoted to the effect of working conditions upon the health of the men.

"The claim for the adoption of a maximum 7½ hour day was based fundamentally upon the contention that the work of the busmen is injurious to their health. Upon this question there was put before us in addition to certain statistics the evidence of three medical men. Neither the statistics nor the oral evidence convinced us that the claim of injury to health

was proved. If the medical evidence is examined it will be seen that both Dr S J Woodall and Dr H B W Morgan stated that the views which they held that there was a high incidence of illness among busmen were based more on general impressions than on any statistical evidence. Professor Culpin frankly admitted that he was not prepared to draw any conclusion from the results of the investigations he had made. Although we could not regard the evidence as affording any conclusive proof that the busmen's occupation is injurious to health we feel that a *prima facie* case was made out for further and immediate investigation by a properly qualified body specially constituted to deal with this important matter. We also feel that such a body should include experienced representatives of employers and of workers as well as medical men and other persons with the necessary technical qualifications to enable the matter to be freely explored. We are aware of the fact that there is already in being a subcommittee of the Industrial Health Research Board which is investigating the question whether gastric disease among busmen is greater than among other similar classes of workers. It is therefore necessary to point out that the question raised by the present dispute is one of the causation of disease among busmen rather than the question of comparative incidence of disease which is the question before that subcommittee."

Bristol Tuberculosis Conference

The twenty third annual conference of the National Association for the Prevention of Tuberculosis will be held in the physics classroom of the University of Bristol on Thursday, Friday, and Saturday, July 1, 2, and 3. The chief subjects for discussion are 'Propaganda and Publicity Methods,' to be opened by Dr Harley Williams,

Preventive Institutions, with Special Reference to Open-air Schools. (a) 'Environment,' to be opened by Dr Ralph P Williams and (b) Nutrition, to be opened by Professor J A Nixon. 'Equipment and Activities of a Tuberculosis Dispensary,' to be opened by Dr C J Campbell Faill. The discussions will take place on the first two days of the conference and will be followed by the annual meeting of the National Association, when it is hoped that Dr N D Bardswell will speak on the association's inquiry into tuberculosis in Cyprus. The third day will be devoted to visits to various institutions. Full particulars of the conference may be obtained from the acting secretary general, N.A.P.T., Tavistock House North, Tavistock Square, London, W C 1.

Queen Charlotte's Hospital

The annual report for 1936 of Queen Charlotte's Hospital records further satisfactory progress in the use of prontosil. In a series of eighty five cases of haemolytic streptococcal infection, sixty four of which were treated with this drug there were only three deaths. The mortality rate of 3.5 per cent in this series compares with a rate of 22.2 per cent from the opening of the Isolation Block to the end of 1935. Laboratory research demonstrated that the action of prontosil was probably due to the formation in the body of a simpler derivative. Clinically it was found that this substance produced a greater resistance to haemolytic streptococci, and for this and other reasons it is now being used in the wards. The report states that laboratory methods evolved to distinguish potentially dangerous streptococci from relatively harmless types have now become part of the ordinary routine, and that the hospital is prepared to undertake such investigation for any medical practitioners or public authorities who may require it. There has been a gratifying response from many parts of the country and large numbers of swabs have been received. By this means it is possible to determine whether a doctor or nurse in whose throats there may be reason to suspect the presence of haemolytic streptococci may safely attend a confinement. In the course of the year under review 3004 in patients were treated at the hospital, the largest number in the history of this institution. Of these patients 130 were single women with their first child.

SCOTLAND

Anti-tuberculosis Campaign in Scotland

The report of the Royal Victoria Hospital Tuberculosis Trust, which was summarized in the *Journal* of May 29 (p 1132), was presented to the annual meeting of subscribers to the Trust on May 26. Mr T J Carlyle Gifford, who presided, said that the Edinburgh tuberculosis scheme was now celebrating the fiftieth anniversary of its foundation by Sir Robert Philip in 1887, and it was a matter for regret that for the first time since the work of this Trust began Sir Robert Philip was unable to be present owing to illness. To-day a considerable amount of the Trust's resources was devoted to research. The chairman in referring to the Trust's dairy farm at Gracemount said that some other countries were far ahead of Britain in the provision of clean milk, and it might be said that under present conditions in Great Britain milk was one of the most dangerous foods. The Trust would therefore continue to press for improved conditions of milk production throughout the country. Professor Stockman, Glasgow, spoke of his early collaboration with Sir Robert Philip in research on tuberculosis and said that there had been many difficulties at first on account of prejudice, apathy, and wrong teaching. In considering the great work that had been done they must think not only of the decrease in the death rate from the disease but also of the accompanying decrease in suffering and impoverishment. Only two diseases were comparable with tuberculosis, one of these being scurvy and the other small-pox and both of these were rare now in this country. It was to be hoped that in another fifty or hundred years tuberculosis would be just as rarely encountered as these two were at the present time.

Research into Causes of Mental Illness

In the fifth annual report of the West of Scotland Neuro-Psychiatric Research Institute, Glasgow, it is stated that owing to the prior claims of other researches anaerobic bacteriological investigations were curtailed during the latter half of 1936. The study of flocculation reactions and their use in the serological diagnosis of syphilis has been actively pursued, and the production of a flocculation test which will be especially suitable for both sera and fluids is anticipated in the near future. Since July a systematic investigation of leucocyte activity in a patient suffering from the manic-depressive psychosis has been in progress. At the time of the preparation of the report, 429 examinations had already been made, covering a short normal phase followed by two months' depression and a gradual recovery of equilibrium. It is hoped to extend the observations over the whole cycle of the disease with a view to recording whether significant changes take place in the blood from one phase of the mental illness to another. Certain bacteriological and biochemical examinations have also been made on this case. Reviewing research activities in associated mental hospitals and institutions the report states that considerable progress has been made in the study of calcium metabolism in mental diseases. Investigations of the absorption rate of calcium as gluconate, administered intravenously, show encouraging results. At the conclusion of the report, the director, Dr W M Ford Robertson stresses the need for expansion of research into the causes of mental illness.

Glasgow Post Graduate Courses

A summer session for post graduate teaching has again been arranged under the auspices of the Glasgow Post-Graduate Medical Association. The facilities will fall chiefly into two divisions (a) general medical and surgical course and (b) clinical assistantships. During the last two weeks of August and the first two of September a whole time course for which an inclusive fee is charged,

will be conducted in some of the general and special hospitals. The course will include most of the subjects of interest to the general practitioner—the mornings being occupied with general medicine and surgical diagnosis and minor surgery in the Royal Infirmary and the Victoria Infirmary, and the afternoons with special subjects in the special hospitals or departments of the general hospitals, two subjects being dealt with each afternoon. In a number of the institutions taking part in the work of the association, clinical assistantships are available in the summer months as well as at other times. Full particulars may be had from the secretary, Glasgow Post-Graduate Medical Association, The University, Glasgow.

Correspondence

Trachoma from Spain

SIR—We are fully aware of the dangers of any infectious disease which could arise in a camp of 4,000 children, whether these diseases are those common to this country or peculiar to Spain.

Efficient co-operation exists between this camp and local authorities in Southampton and Winchester under supervision from the Ministry of Health. A completely equipped isolation unit was ready the day after the children arrived here, and is used as a diagnosis centre. Specimen material for bacteriological examinations is sent from here to local public health authorities for prompt investigation. There are five resident medical officers, who carry out a camp inspection daily at 7 a.m., when every child is seen. All sick children are referred immediately to a special medical tent.

With regard to ophthalmic examinations, one member of the staff has had a wide experience of trachoma as medical officer to the Royal Mail Company for examination of immigrants from Central Europe. He has not yet discovered any evidences of trachoma. As an extra precaution an ophthalmic surgeon from Southampton has kindly consented to see any special case.

It is so easy to rush into print and point out dangers which all medical men know to exist. It would be a matter of professional courtesy if Mr. A. F. MacCallan would communicate with me before disseminating his remarks. His letter to the *British Medical Journal* would not then have been necessary.—I am, etc.,

RICHARD W. TAYLOR

North Stoneham Camp, Eastleigh
Hants. May 29 Senior Medical Officer

SIR—As President of the International Organization against Trachoma Mr. A. F. MacCallan is clearly in a position to make *ex cathedra* statements as to the dangers of introducing this disease into England and to warn the Ministry of Health against so doing. It is unfortunate however that before a question was asked in the House of Lords about the matter with its inevitable repercussions and alarms Mr. MacCallan should not either have got in touch with any one of those directly concerned with the medical examination and care of the children or have made some inquiries as to the incidence of trachoma in the Basque district. He also appears to have assumed a trifle uncharitably that because the gentlemen who examined the children before embarkation in Bilbao were without special knowledge of ophthalmology they were therefore also lacking in the elements of common sense. We did in fact make it our first duty on arrival in Bilbao to inquire from the public health authorities as to the

incidence of trachoma in the Basque district, and found that of recent years it has been extremely low. This was confirmed by a Spanish ophthalmic surgeon of many years experience in Bilbao, who accompanied the children to England.

Mr. MacCallan's statement that trachoma is "practically universal" in certain provinces of Spain is apparently based on the report of Professor Soria (*XIII Congreso Ophthalmicum* 1929, 3, 113), and refers to the districts of Murcia, Almería, Valencia, and Castellón. It is, however, so exaggerated that it is surely based on a misunderstanding of Professor Soria's statistics. The figure 90 per cent which he gives refers not to the incidence of trachoma in the whole population, but to the percentage of eye cases which are trachomatous. Actually the highest incidence of trachoma in any province was 2 per cent of the population. The same source shows that the incidence in these districts was from twenty-five to fifty-five times as high in the neighbourhood of Bilbao, so that Mr. MacCallan's whole quotation is liable to be profoundly misleading.

It is hardly realized in this country how widely different from South and South East Spain are the circumstances both as regards climate and public health in the Basque district. Details of the medical care and examination of the children in England are given by Dr. Taylor.

We need hardly add that all those concerned are fully aware of their responsibility, and anxious to co-operate in necessary measures to prevent the spread of any infection that may occur.—We are, etc.,

RICHARD W. B. ELLIS

AUDREY E. RUSSELL

London, W.1 June 1

Treatment of Pharyngeal Carcinoma

SIR—I am much indebted to Mr. Musgrave Woodman (*Journal* May 22, p. 1089) for calling my attention to his experience in the use of inserted plaques. There must, however, be some fundamental difference in the technique we employ, for in the method which I described the plaques are at some distance from the skin wound, which is in fact, not exposed to any appreciable radiation. In my own cases the healing of the skin wound has been perfect, a very important consideration in patients of this class.

As to the radiosensitivity of pharyngeal carcinoma I am afraid that I must dissent from him entirely. The work of Berven and of Coutard fully confirms my own experience that growths in the oral pharynx, including those of the tonsil and the base of the tongue, are peculiarly sensitive to radiation and it is in these cases that the method of inserted plaques is specially applicable. The exact construction of the plaque and the arrangement of the radium within it are however, of considerable importance if good results are to be obtained.—I am, etc.,

London W.1 May 27

H. S. SOUTAR.

Influenza and Industry

SIR—The article of Dr. William Blood in your issue of May 22 (p. 1079) calls for some comment. The average incidence of fresh visits to insured persons as compared with fresh visits to their dependants is usually in the ratio of 1 to 3 or 1 to 4. At the outbreak of the recent epidemic this rose abruptly for a few days to a ratio of 2 to 1. This bears out Dr. Blood's observation that the chief cause of initial spread was through the workmen, but if reference be made to the *Journal* of October 25, 1919 an article will be found on the Spread of Influenza

in an Industrial Area," which I contributed. It was shown that of the three great waves of the 1918-19 epidemic only in the first and mildest wave did infection appear to be associated with the workshops. In the two later waves, and it was in those that most of the serious cases occurred, there was a slow spread throughout the area in which neither church, school, place of entertainment, nor workshop could have played any integral part. Infection through the workshop appears to be to the advantage of the worker. His illness is less serious than when it follows that of some other member of the household. Furthermore, as he usually comes earlier under observation than a dependant it enables the risks associated with household infection to be dealt with sooner. Since 1919 only two insured persons under my care have died from influenza, and the circumstances surrounding their deaths testified, even from the point of view of treatment, to the paramount importance of attention to the atmosphere of the sick-room and the home.

Dr Blood draws attention to the lower incidence of the epidemic among "the female members of the office staff" as compared with "the female factory hands, and expresses surprise. An explanation based on the observations of the late Sir William Hamer and given to the Royal Society of Medicine might be suggested. He divided a group of his intimate friends into vagotonics, normals, and sympatheticonics. This was based on a classification suggested by the writings of Eppinger and Hess. He found the vagotonics the most susceptible to influenza. The study of his arguments led to the belief that he had furnished a valuable clue to many of the problems of influenza. Certain of these I had indicated in the paper of 1919. He kindly afforded me the opportunity to meet some of his friends whom he had classified. It is true that in his argument he had made use of Hering's biological conceptions, which are somewhat out of date. Also the recent discovery of the dual action of the vagus in digestive processes must modify the accuracy of the terms which he had used in his classification, but there is little doubt that the clinical picture he presented is characteristic of any influenzal epidemic, and the apparently well nourished by whatever name they may be called, are the most susceptible to influenza. I write as a student of six epidemics in one area. One can hardly blame Sir William Hamer for having presented his observations under cover of complicated theories because of the surprising deductions which may be drawn from them, but it is probable that Dr Blood's observation in regard to the office girl can be explained by the modern fashion of the slim figure. The office girl pays more attention to this than the factory girl and the single girl more than the married woman—I am, etc.,

Halifax May 29

A. GARVIE.

Malaria Control

SIR—In the last epidemic of malaria in Ceylon there were 1,500,000 cases, 70,000 deaths in six months, and 30,000 lb of quinine and large quantities of atabrin and plasmoquine were used—a terrible admission of the failure of the measures adopted.

Whenever the destruction of adult mosquitos is advocated as a measure of malaria control experts immediately rise up in arms to defend anti-larval measures. The two stock arguments invariably brought forward are (1) that anti-larval control is the proved and accepted method and that it is infinitely superior to the destruction of infected mosquitos and (2) that as swarms of mosquitos are daily flying from the breeding grounds to

the houses it is impossible to destroy them all and therefore useless to destroy any.

This is precisely the same criticism that was raised in regard to the utility of anti-larval measures, but experience proved that a reduction of the number of mosquitos by larval control reduced the incidence of malaria, and it is equally certain that by reducing the numbers of mosquitos in infected houses we can effect a very great reduction in the incidence of malaria at present increased, by mosquitos which have escaped the anti-larval methods.

1 (a) No one would disagree with the great value of anti-larval measures but very few places can afford to spend the vast sums that are necessary in order to carry out these measures efficiently. In poor countries like the West Indies the effects are small and disappear when the measures cease. (b) Anti-larval measures require time and while they are getting under way swarms of anopheles mosquitos are breeding daily flying to adjacent houses, and spreading malaria. (c) During wet weather the effects of anti-larval measures are greatly diminished.

I am not suggesting that anti-larval measures should be discontinued or lessened, but I am advocating the destruction of adult mosquitos, not as an alternative but as a valuable adjunct to anti-larval measures.

2. If mosquitos are not destroyed in the houses where there are acute cases of malaria sooner or later gametocytes will appear and will infect these mosquitos. Surely that is one way in which epidemics of malaria develop and as long as swarms of mosquitos are breeding in adjacent pools and swamps the more urgent it is to destroy the adult mosquitos which are likely to become infected. Carry on the anti-larval measures in every possible way but carry on also the daily destruction of adult mosquitos as an important secondary measure.

The people can be taught to destroy adult mosquitos in their houses by swatting, fumigation and trapping. These methods of destroying them are of great value in any campaign against malaria. Public health authorities who are entrusted with the lives and health of the people living in malaria zones assume a very great responsibility when they neglect any method which will afford protection additional to that provided by anti-larval measures, especially when this could be done at such a relatively small cost—I am, etc.,

W M McDONALD OBE

Antigua Leeward Islands May 3 MRCS L.R.C.P.

Enuresis in Children

SIR,—The article by Dr H G McGregor in the *Journal* of May 22 is of great interest. The self-help plan which I introduced into our Homes about ten years ago has been so good that belladonna bromide, etc., are used only for the very few more persistent cases.

DRY NIGHT SHEET

For the month	193	Name	Age				
	1st week	2nd week	3rd week	4th week			
Sunday							
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
Saturday							

A red star to be entered for a dry night

Above is a specimen of the "dry night sheet" used in the Homes. The object is to encourage the child to see how many red stars he can get in a week and whether he can score over the previous week—I am, etc.

Dr Barnardo's Homes E.I. May 24

A H MACDONALD
Chief Medical Officer.

SIR—It would add to the interest of Dr H G McGregors paper on this subject (*Journal* May 22, p 1061) if he would add the cases which he failed to cure, and his views of the causes—I am, etc,

London, SW 3 May 24

W S A GRIFFITH

[Dr MCGREGOR writes in reply I believe that the failures in my series of enuresis were in most instances due to my own inability to capture the child's interest in a treatment which is more in the nature of a pleasant game than anything else. The child achieves a dry night and is made much of at the next consultation, the record that he keeps merely serves to fix his dry nights as a personal achievement. Ten of my failures were obviously bored with the whole procedure, and in no way could I move them. I regard this, however, as a failure in my application of the principle and not as a failure in the principle itself. The remaining four cases, as indicated, had some physical concomitant to their enuresis, which presumably was too powerful an aetiological factor to be overcome by a purely mental attitude. Although I do not wish to leave the impression that this is the only method of treating enuresis, I do believe that in the absence of organic cause a great many cases can be relieved if they can be persuaded to take a lively interest. The method I reported is only one of many that might be used to secure it. The success of any such method depends on the individual clinician.]

Technique in Knee-joint Surgery

SIR,—Professor Graham Simpson, in your issue of May 22 (p 1088), raises some interesting points on the above subject, and criticizes my recent lecture in kindly terms. He suggests that a preparatory dressing from the toes to the groin is distinctly fussy, and that a soap and water bath from the sole to the vertex would be more rational. If the skin preparation does not extend to the groin it is impossible when scrubbed up to apply the tourniquet high, and this is very necessary for the proper application of the wool compress at the close of the operation, before the tourniquet is removed.

Professor Simpson seems to doubt both the possibility of wound infection from within and the necessity for any sort of preliminary skin preparation before operation. These are subjects which might well be debated in your columns, but which were beyond the scope of a post-graduate lecture—I am, etc,

London W 1 May 31

ERIC I LLOYD

Blood Transfusion in Obstetrics

SIR—Mr Owen Jones in his letter published in the *Journal* of May 22 (p 1090) reiterates a principle which I have emphasized for some years—namely, that when a patient is so ill as a result of haemorrhage that intravenous infusion is necessary delay is dangerous, and a stock solution should be introduced into the venous system immediately whether or not a blood transfusion will be required later.

Although I favour an ephedrine glucose gum solution for this purpose I should like to reassert that I consider the principle involved to be even more important than the actual composition of the solution provided that the latter is of a colloidal nature. My preparation proved to be the most efficacious of the several mixtures I tried out during the five years preceding 1935 and I have not since been able to improve the formula. A secondary serious fall in blood pressure following a good response to the primary infusion is seldom met with, provided that

1 The warmed fluid is introduced very slowly into a vein. I now look upon forty minutes as the minimum time for intravenous infusion of one pint of solution.

2 A liberal supply of glucose water is given by the mouth and when necessary tap water is given per rectum to supplement and maintain the fluid level in the body.

3 The introduction of fluid into the vascular system in excess of requirements is avoided during the stage of recovery of the capillary endothelium.

4 Overheating of the patient, causing excessive fluid loss by perspiration is guarded against.

5 Sedatives are administered for uneasiness or frank restlessness.

6 Inessential obstetrical manipulations and transport to hospital are postponed as recommended by Professor Claye (*Journal* May 15 p 1044) until the condition of the patient is satisfactory. Transport from the patient's home to hospital is less frequently necessary where a 'flying squad' scheme is in operation.

7 A blood transfusion is given after the simple infusion as soon as a donor can be obtained when a cataclysm of haemorrhage has been preceded by recurrent minor haemorrhages and when in addition recurrent syncope attacks, sighing respiration or slow recovery follow the primary infusion.

With regard to the method of infusion, I feel that the simpler the apparatus and technique the less likely are delays and difficulties to be encountered. For this reason I support the view put forward by Dr Malcolm Black that the gravity method is most satisfactory for routine use—I am, etc,

WM HUNTER M.D., M.C.O.G.

Newcastle upon Tyne, May 22

SIR—In his letter (May 22, p 1090) Dr R Owen Jones gives as avoidable causes of post partum haemorrhage too free use of unsuitable anaesthetics such as chloroform and, most important of all, faulty management of the third stage. He continues "It is disheartening to find so many attendants—midwives and doctors—grasping and kneading the uterus. The hand control 'ling' the uterus cannot resist that fatal reflex kneading with resultant incomplete recovery of uterine tone and irregular and unnatural separation of the placenta. Does Dr Owen Jones mean all this, or are these just words, learned-like in sound, and no doubt written with puckered brow and sternly set mouth? What is his proof, experience or statistics behind the "fatal reflex kneading" "the resultant incomplete recovery of uterine tone, and "the irregular and unnatural separation of the placenta"? It is these irritating meaningless phrases that make one fed up with so much that is written upon obstetrical subjects. I fully realize that chloroform is not loved by many obstetrical specialists. But who said that it caused post partum haemorrhage? From May 1 1915, until April 30 1936 I used it in 475 cases and I never saw it cause post partum haemorrhage. My only cases of post partum haemorrhage had no anaesthetic. I acknowledge that these are not very many cases but surely, being a headstrong Highlander I would, in at least a few cases have made 'too free use' of this unsuitable anaesthetic and Nature would have inflicted her reprisals upon my poor victims. In spite of all Departmental reports and the lectures and warnings of multitudes of my specialist friends long experience has convinced me that chloroform used in the cases which do not contraindicate it is the best of all obstetric anaesthetics for the rural physician and the chloroform capsule one of the greatest boons of modern times. I now rarely use the chloroform bottle. I manage the majority of manipulative procedures including the use of forceps without hurting my patient with the chloroform capsule alone.

Then we come to the third stage I differ entirely from Dr R Owen Jones, and regret to write that I belong to the disheartening class of doctor. My advice is to control the uterus by having your own hand, or that of the nurse, in touch with the fundus until the placenta is in the dish. Two of the worst cases of post-partum haemorrhage that I have seen were those in which the nurse left the patient to Nature, turned her back upon the bed, and proceeded to bath the baby. I arrived late, but just in time. In both cases I found the patient pulseless, the bed flooded, and the nurse in blissful ignorance with the skirling bairn in her arms. Femergin and coramine quickly put the patient right, but it might well have been otherwise had I been a few moments later. I was once caught napping myself. I hope the Central Midwives Board will not adopt Dr Owen Jones's suggestion of an hour glass, if it does he will have to run a sort of police car transfusion service in Denbighshire.

I think success in the third stage depends a great deal upon a proper management of the first two stages of labour. I was glad to note, in reading of a recent discussion at the Edinburgh Obstetrical Society, that even eminent authorities no longer hold the 'unruptured membranes' sacrosanct. Nature is often far from right, she will rupture the membranes in a breech or an occipito-posterior case when she might well leave them alone, and she leaves them whole when they are a source of delay and fatigue. In both types of case her behaviour is responsible for trouble in the third stage, but then she is Nature, and according to authority your fingers should be in your mouth and not in the vagina where they can do some good. In a normal presentation with a normal pelvis I rupture the membranes in a multipara, when the os is about three quarters dilated, or, to put it more accurately, when experience and instinct tell that the head will be a better dilator than the bag of waters. In a primipara this is done a little later, but I never delay when I feel the bag of waters are hindering the head from coming down through the os. In a multipara I give 1/2 c.c. pituitrin whenever I rupture the membranes, but in a primipara I delay this until the head is distending the perineum. Once the pituitrin is given I feed my patient with chloroform capsules. In a primipara, if the vaginal passage and the perineum are tight, before rupturing the membranes or giving pituitrin I dilate them by carefully and gently under a chloroform capsule anaesthesia inserting my hand into the vagina, closing my fist, and withdrawing it with rotatory motion. This is a useful procedure in a breech presentation also going on through the os if need be. In doing this I can, to the ultimate advantage of mother and child, put the breech in the position suggested by Dr Alec Bourne, not bringing the legs outside the os. By these procedures I have saved many perineums and rarely have trouble with the placenta. I have had to remove the latter manually in twenty-seven out of 1279 cases—that is in just over 2 per cent of cases—and I have had only five cases of post partum haemorrhage these giving practically no trouble in spite of the fact that I always guard the fundus after the birth of the child and push out the placenta once I am sure that it is in the vagina. All this may seem terrible and fill some minds with horror that it should be permitted in a civilized country, but it is a procedure which long experience has taught me to be correct. In conclusion I would again impress upon Dr Owen Jones and those like minded that it is during the first and second stages of labour and by the ante natal checking of toxæmia that a successful third stage is achieved—I am, etc.

J. J. CRAIG

E. K. MACLEZIE

Medicinal Kaolin in Food Poisoning

SIR,—I was interested in the letter from Dr Nathan Mutch in the *Journal* of April 24 (p. 886), and would like to suggest that if anyone considers the desirability of working out dosage tables applicable to the use of medicinal kaolin as an antidote for food poisoning he might at the same time study the comparative evaluation of activated carbon.

There is a wealth of references to this substance in recent medical literature. Its value as an adsorbent of bacterial and alkaloidal poisons has been fully established. Lucas and Henderson for instance, quote twenty-one cases of poisoning in which death would presumably have occurred and in which recovery followed the administration of charcoal. The cases cited include seven cases of phosphorus poisoning, three cases of morphine poisoning, two cases each of corrosive sublimate, chlorate of potash, and lysol poisoning, and one case each of arsenic, mercury, veronal, omnopon, and absinthine poisoning.

Strychnine poisoning is particularly well treated with activated charcoal. It is important to ensure that the charcoal used is of the activated type. There are several reliable proprietary brands of the product available, and a monograph on them is included in the current edition of the *British Pharmaceutical Codex*. H. Brindle, F.I.C., of the University of Manchester has shown that one of these activated charcoals, Chardox (E. Griffiths Hughes, Ltd.) has an adsorptive power on strychnine as follows: 30 per cent is adsorbed in one minute, 34 per cent in ten minutes, 34.5 per cent in fifteen minutes, and 36.5 per cent in thirty minutes. The first figure is of course the most important one when considering its use as an antidote. It should be borne in mind, however, that ordinary non-activated medicinal charcoal possesses only about one-fiftieth of the adsorptive capacity of Chardox.—I am, etc.,

J. J. CRAIG, L.R.C.P. & S.E.D.

Alderley Edge, May 27

Intra-epidermic Vaccination

SIR,—I can confirm the claims of Dr E. R. Peirce (*Journal* May 22, p. 1066) as to the advantages of intra-epidermic vaccination over the ordinary method, as I have been using it for a number of years in Burma, but we had not then learned the procedure, so well described by Dr Peirce, of economizing the lymph. There is one point which I have noticed quite often in connexion with what Dr Peirce termed the vaccinoïd reaction and that is the tendency for the vesicle to persist for as long as a fortnight before gradually drying up. I regard this as a proof of success in revaccinations.—I am, etc.,

MIN SEIN

London, W.1, May 23

Treatment of Peptic Ulcer

SIR,—Dr Sandweiss's article (*J. Amer. med. Ass.* 1937, 108, 700), referred to in an annotation in your issue of May 8, may well be taken to mark a notable advance in the approach to treatment of the general condition liable to culminate in gastric or duodenal ulcer, in the evidence he puts forward as to the purely illusory effects of alkalis, diet, vaccines, injections, or surgery, as being of lasting or curative value.

In this country too vast numbers of people who have been treated by these methods have not derived more than temporary benefit and in spite of the conviction of medical and surgical specialists who have written much

on the subject to the effect that the methods have in their hands proved satisfactory, many of their patients have not been able to share this conviction that anything in the way of permanent relief has been reached

It has thus come about that the invidious task of sorting out results commonly falls to the lot of the general practitioner, of whom there must be many who can add their testimony to the value of the observations so clearly summarized by Dr Sandweiss, and which, moreover, are so plainly reflected in the drawn, starved, soured faces of those who, sometimes for years on end, have submitted to the regime imposed. That the relief afforded by the chemical assault on natural juice is but momentary is the avowal of all. The entire frame betrays the devitalizing effects of a restricted diet based on apprehension, while the stultifying action of dope is by no means negligible. Finally, when all these measures, patiently carried out, have failed, the scar of a knife too often betokens the fact that the last hope of recovery of the victim of despair has, in his judgement, been inadvertently severed.

Now that Dr Sandweiss has made it so clear to us that it is useless, and perhaps we can now see quite irrational, to attempt to "cure" peripheral manifestations of central disturbance by local means alone, it may be judged not amiss to look at the matter from the angle of the general practitioner, who in the long run has to deal with the majority of such failures.

While it is generally recognized that the controlling centres of visceral activity are largely represented by the autonomic system, it does not appear that much attention has been paid in practice to this essential point, although disturbances in this system have proved clinically to be a dominant factor in the chronicity of such states as conduce to haematemesis or ulceration in a visceral area, and local lesions to respond to general measures even in the complete absence of any local treatment.

In submitting the general hypothesis that the most rational line of treatment of the peptic ulcer diathesis is afforded by control of central disturbances of the autonomic system, popularly referred to as 'emotional,' there is ample clinical evidence to support the view that, provided that a patient is sufficiently well orientated to exercise his own volition in maintaining control of his feelings either with or without the subsidiary aids commonly made use of to lessen peripheral disturbance, permanent cure may be looked for with confidence in every patient of stable character. It stands to reason that both the patient's and his medical advisers' difficulties are in no way lessened when the former has become excessively body conscious through insistence that his gastro-duodenal failure is still primarily at fault, and particularly when volition has been impaired by morphine—I am etc.,

London May 20

F A HORT

Insulin Therapy in Psychiatry

SIR.—An Association of Insulin Therapists in Psychiatry has been formed with Dr G W B James as president. The objects are to hold meetings to discuss all matters arising from insulin treatment to catalogue and make available the international literature and to discover by discussion and correspondence the most efficient foundations of prognosis and after-care. The association welcomes all workers in this method. I shall be able to answer any inquiries from those interested—I am etc.

EDWARD LARKIN

Secretary Association of Insulin
Therapists in Psychiatry

West Ham Mental Hospital
Goodman's Field Essex.
May 27

Reform of the Medical Curriculum

SIR.—A hopeful sign for the progress of the movement for reform of medical education in this and other countries is the interest in the subject revealed by the instructive letter in your issue of May 29 from Professor G A Clark, Dean of the Faculty of Medicine of Sheffield University. From his reference to the present Edinburgh movement I venture to suggest that Professor Clark is under a grave misconception as to the real issues. He states that as a result of the far-seeing enlightened policy adopted by the Sheffield Medical School no adjustment is necessary to satisfy the new requirements of the General Medical Council. That may quite well be, but the real crux of the Edinburgh movement was the recognition of the fact that the 'requirements' of the GMC and its power to see them effectively in operation are not in keeping with present-day needs.

Professor Clark's letter recalls to my mind two facts which I think have some relevance in answer. In the course of a recent discussion on the reform of medical education at the Society of Medical Officers of Health in London, Professor Picken referred to the answer commonly given by university and other teachers to the charge that the teaching of preventive medicine using that term in its widest sense, is too systematically overlooked—namely, 'We are doing that already.' In the opinion of the increasing body of reformers this answer has little relation to facts. Again, over two years ago I got a letter from a well known medical teacher in a university informing me that its curriculum had just been fully revised a satisfactory feature being the rapidity and ease with which the necessary changes had been amicably arranged. A few months ago the new Principal of the said university publicly condemned the present system of medical education as the worst system that had ever been devised, consisting largely of a peculiarly costly kind of cramming.

The question of priority in discovery is of no real importance or value. But if it is to be raised, the analogy of the pioneer Vikings led by Christopher Columbus now smiling indulgently in Valhalla over a recent Edinburgh discovery should advantageously be replaced by one in which Hippocrates and other great masters of the past are sitting chuckling over the fact that the value of much of the neglected teaching of the past masters is now slowly being recognized—I am, etc.,

Drem May 29

CHALMERS WATSON M.D.

Maternity Services

SIR.—The British Medical Association's preference for a national maternity service as distinct from what is termed 'variable local arrangements built up more or less haphazard at the option of local authorities' (Supplement May 8 p 271) is not shared by some of us who also have given thought to the subject. My own views were stated two years ago in these words:

If my observation is correct I would not expect a powerful nor prolonged protest if it was considered desirable that the midwifery of a city should be organized and placed in the hands of men who are generally recognized as keen and competent obstetricians. Such a panel would be responsible to a central authority would undertake all institutional work and I would assume a relationship to the private patient similar to that now occupied by the operating surgeon. Such well-ordered and co-ordinated service would demand a high level of individual skill a deep sense of personal responsibility and for the patient a very thorough supervision.

Furthermore there would be available in a few years a mass of valuable clinical data which would guide the future.

policy and perfect the existing machinery of such a service in any given locality, for this at least is apparent that the solution of the problem of maternal morbidity and mortality in the black areas is not necessarily to be sought and may not be found in methods which may be applied successfully outside these areas, but will result from keen observation and an intelligent perception of economic industrial social and any other factors which have a direct or potential bearing on the issue in its local interpretation

It is with some satisfaction that I now detect a movement in official quarters towards such a service—I am, etc.,

Bradford May 25

W SUTHERLAND, M D

Good Milk and Fresh Vegetables

SIR,—It is a serious reflection on Great Britain that the death rate among Maltese children should be the highest in Europe. A high death rate of this sort is now recognized as due to defects of feeding caused by an insufficiency of good milk and fresh vegetables. The milk of Malta is obtained from goats fed on imported foodstuffs because the soil on the island is not capable of producing an adequate supply of fresh green foodstuffs, either for animals or for human beings.

Children need good lime-containing milk from healthy animals fed on fresh green foodstuffs. Can these foodstuffs be produced on the island? If not, why not? Children themselves also need fresh vegetable foods containing vitamin B if they are to grow up strong and healthy. Without good milk and vegetables the children develop poor teeth and so cannot bite, indigestion sets in and vitality becomes lowered so as to allow of the development of respiratory and circulatory diseases. I expect children if they grow up, become men and women whose physical and mental capacity is of reduced national value.

In Great Britain the national committee set up to deal with food and nutrition has emphasized the importance of fresh green vegetable food but without suggesting any special quantity. I have suggested 1 lb per head weekly, which necessitates an annual production of 950,000 tons. At present we produce only 210,000—a deficiency of 740,000 tons annually. Sir John Orr, in a recent broadcast, suggested half a pound more than I did—namely, 1½ lb per head weekly. In this case the national deficiency would be about 1,200,000 tons a year.

If my facts are of value there is something radically wrong with our food production. Farmers and gardeners are able to produce the needed amount but the distribution is at fault. Does this mean that our only hope of national salvation depends on the setting up of a national method of distribution? The question has to be faced and thoroughly discussed and medical men can make a valuable contribution both to the discussion and to the solution of the problem—I am, etc.,

Swansea May 31

G ARBOUR STEPHENS

Air Raid Precautions

SIR,—The letter of Dr Levy in your issue of May 22 (p. 1071) draws attention to a problem which is already engaging medical men. Are we to assist the Government in its endeavour to make the public air raid conscious or are we not? My own mind is made up. I believe that all attempted precautions against bombing are futile and I refuse to take part in them. Even did I believe them to be worth while there would still be the greater objection that air drill accustoms the mind to the idea that war is inevitable, whereas I believe that

the time has come when organized mass murder should be unthinkable. Coué's favourite axiom that when the will and the imagination are in conflict the imagination always wins is a psychological truth. Whether the idea which occupies the mind is a hope or a fear makes no difference there is an irresistible trend towards its realization, just as a man learning to ride a bicycle steers straight into an obstacle he is trying to avoid.

The historian of the future will be aghast at the complacency with which this generation accepts the idea that mass murder can be deliberately resorted to under any circumstances. The real tragedy of Guernica is that it is the logical outcome of the road which we ourselves have elected to travel every country which possesses bombing aeroplanes must accept a share of the responsibility.

The arguments for or against pacifism are not to the point—which is that war with its pomp and pageantry and heroic virtues has gone for ever, and that its place has been taken by inhuman mechanical and chemical mass murder which can find no advocate in any sane man. Few people in a responsible position have a full realization of this. Most of them still talk of war in language appropriate to the Middle Ages. The martyrdom of Guernica will not have been in vain if through it the world can learn this lesson—I am, etc.,

Birmingham May 28

R MACDONALD LADELL

Birching of Children

SIR,—In the present correspondence on judicial birching I consider one point has been largely overlooked. The punishment meted out to an offender is designed not only (or even mainly) to cure him of his evil proclivities, but also to act as a deterrent to others who might otherwise commit the offence. I submit that the fear of a birching does act as a deterrent.

I should be interested to know if Dr W N Maple (May 22 p. 1093) concludes from the last paragraph of his letter that the English nation is more sadistic than most Continental nations—I am, etc.,

Probus Cornwall May 22

E H EASTCOTT

SIR,—The idea that physical violence can never be justified in attempting to correct human behaviour, apart from self-defence, will undoubtedly grow, but only in proportion to the extent that the task of tracing the origin of the kinks which lead to anti-social behaviour is undertaken. The conviction that such means are justified is itself a mental kink, and is itself anti-social.

The proof lies within one's own mind, that is the difficulty, and many are unable to realize this. Complete recognition and realization of such mental kinks as normal primitive states only abnormal when unsuppressed and unrealized in adult civilized man as being part of our own nature are impossible for many alone and unaided. The proof of whether whipping cures the young of let us say, stealing or lying at some particular time and in particular surroundings is beside the point, whipping without doubt does deter many, others it does not. But what else does it do? What other effects does it produce, immediate and remote? Very different conclusions can be drawn from homely psychological lessons by different observers.

In my opinion a knowledge of latent sadism cannot be acquired from a dictionary, this is unfortunate nor can it be recognized, still less realized from such perusals. It is innate in every human soul and its grades are legion. No one likes to be told that a belief in physical violence as a proper corrective for what he believes to be childish

crimes is due to primitive and unrealized wishes, he naturally demands proof, and expects those who tell him this to produce it in the form and manner of material problems. That is not possible, hence the accusation of dogmatism.

Although surprised to see so few psychologists taking part in this discussion, I think it is probably because of the extreme difficulty, perhaps futility, of trying to convince intelligences otherwise informed by means of public letters. Nevertheless I believe it to be important and well worthy of the experienced and eminent Psychologists are aware of the far-reaching importance of this matter, indeed, it is difficult to over-estimate it. The control of sadistic impulses by their realization in all teachers, legislators, and doctors alone would go far to raise the standard of civilization—I am, etc.,

London, W 9, May 29

G W GARDE.

** This correspondence is now closed.—ED. *B.M.J.*

Herpes Zoster and Varicella

SIR,—The following case may be of some interest. A man aged 55 consulted me on account of spots on his body. He presented a typical herpes zoster of the right shoulder region extending over the deltoid, and in addition well marked chicken pox vesicles on scalp, face, chest, and abdomen. He said that between two and three weeks previously he had had a stiff neck and slight aching pain in his right shoulder. Four days before he had noticed clumps of blisters over the right shoulder, and three days later spots appeared all over him. His temperature was 99.4° F and his pulse rate 85. There had been no contact with chicken-pox or shingles. He had not had chicken-pox as a child.—I am, etc.,

London W 14, May 6

W BLOOD

Obituary

ALFRED ADLER, M.D.

Dr Alfred Adler collapsed and died in Union Street, Aberdeen, on May 28. He was in this country on a lecture tour, and had nearly completed a series of lectures on psychopathology at Aberdeen University. Dr Adler, who was 67 years of age, studied medicine at Vienna University and graduated M.D. in 1895. For thirty years he was a general practitioner in Vienna, and in 1927 went as lecturer in psychology to Columbia University, New York. In 1932 he was appointed professor of medical psychology in the Long Island College of Medicine. During his early days of practice Adler joined a discussion group of young medical men whose centre was Sigmund Freud, but twenty five years ago he deliberately broke away from Freud's influence. He was founder and president of the International Society of Individual Psychology and editor of its journal.

Sir Walter Langdon Brown writes

Alfred Adler's influence on medical psychology has been far-reaching. The deliberately challenging methods of Freud excited hostility at first and the spiritual value of Jung's philosophy is still but dimly comprehended but when Adler linked psychoneuroses with organ inferiority he enabled orthodox medicine to join hands amicably with

the new psychology. True this doctrine subsequently retreated into the background of his teaching but the bridge had been built. His theories were practical and simple perhaps sometimes too simple for the complexity of the subject, but they did demonstrate how much psychoneurotic suffering could be alleviated by the general practitioner who would open his mind to this new point of view. Obsessional and compulsion neuroses require prolonged handling by the specialist, but a vast mass of suffering must go unrelieved if such handling is the only way in simpler cases. He showed how much can be done by sympathetic inquiry into and explanation of the origin of a patient's difficulties. "You don't talk psychology, Dr Adler," once said an academic psychologist to him; you only talk common sense. To which Adler replied "Well, why do you not also talk common sense?" The early formation of the style of life, the significance of each child's position in the family hierarchy, the importance of knowing the goal towards which the individual is consciously or unconsciously striving, the vital necessity of co-operation with others—these were the main theses which, like Luther, he insistently hammered on to the door of orthodoxy. He expressed to me more than once his regret that his phrase 'inferiority complex' which is used in season and out of season, had been misunderstood. We all have or should have a feeling of inferiority, for only so is improvement possible, the term complex is only applicable when the individual allows that feeling to assume non-social, non-co-operative expression, by which he evades the responsibilities of life.

His influence in this country is seen in the rapid growth of the Medical Society of Individual Psychology, which from small beginnings was nursed by the energy and skilful, if sometimes special, pleading of the late Dr F. G. Crookshank into a sturdy adolescence. It now has 127 members, largely general practitioners, as well as a number of medical students as associates, and publishes a series of *Bulletins* which have attracted a good deal of attention. At this grown up stage it has, as adults are prone to do, ceased to confine itself entirely to the parental point of view, though abundantly honouring the parent.

Einstein once said that Adler was Sancho Panza to Freud's Don Quixote. We may allow that the simplicity of his theories was the reflexion of his personality. Unaffected by adulation, undeterred by opposition, he went serenely on his way. At the end of a strenuous week his hostess said "You must be very tired, Dr Adler." He replied "Not at all, only complications are tiring and life is so simple when you understand it."

The death occurred on May 5 at Guy's Hospital of Dr FREDERICK SANGER of Tanworth in Arden, Warwickshire. He was born in London in 1876 and from Wellington College proceeded to St John's College, Cambridge to study medicine. He took the M.A. in 1897, and went on to St Bartholomew's Hospital, obtaining the Conjoint qualification in 1899, the D.P.H. in 1902 and the M.D. in 1905. For his M.D. thesis he did original work on blood stains which laid the foundation of the modern study of blood stains in criminal investigations. He served as house-surgeon to both Addenbrookes and the Metropolitan Hospitals, and then went to China with the C.M.S. joining its mission at the St. Luke's Hospital at Hinghai in Fukien. There he remained for six years. During his life in China his wide interests brought him into touch with all classes of the community. His especial interest in education caused him to found a Chinese boys' school, pupils of which have since become eminent in modern China. Sanger was a distinguished Chinese scholar and was one of the small band of medical linguists who

the editorship of Mr. Cormack produced the first Chinese translation of Rose and Carless's *Surgery*. He returned to Europe owing to ill health, and after a two years stay in Davos he took up general practice in England. He practised at Rendcombe in Gloucestershire from 1911 to 1922, and then settled at Tanworth-in-Arden in Warwickshire, where he remained in practice until his recent illness. He acted as police surgeon, district M.O.H. to the public assistance authority, and public vaccinator. Besides running a busy rural practice Sanger found time to devote himself to many outside interests, especially in religious and educational work with the Society of Friends in and around Birmingham. He was a keen naturalist and an omnivorous reader, and was always abreast of all modern scientific and medical thought. Though never able from his rural position to take an active part in the British Medical Association (he was a member of the Birmingham Central Division) he was always a loyal member, and was very keen that all general practitioners should support the formation of the public medical services. He was particularly happy when the advent of the East Worcestershire P.M.S. enabled him to merge his club practice into that organization. He is survived by a widow, two sons and a daughter.

We regret to announce the death of Dr. GEORGE EVERARD DODSON from typhus fever on May 9 at Kerman, Iran. Dr. Dodson was a much beloved and honoured missionary of the Church Missionary Society, in charge of its hospital in Kerman. He was born in 1872 at Higher Crumpsall, Manchester, and educated at Giggleswick Grammar School and St. Bartholomew's Hospital where he qualified M.R.C.S. and L.R.C.P. in 1897. He took the further diploma of D.T.M. & H. at Cambridge in 1913. He was extern midwifery assistant at St. Bartholomew's and assistant in the orthopaedic department in 1897, gaining in both departments experience which he turned to the highest use in after-years in social service for Iran. He also held resident posts at the Norfolk and Norwich Hospital, the Royal United Hospital Bath and the Nottingham Infirmary, and he was a temporary captain R.A.M.C. during the war being appointed surgeon specialist to the Colaba War Hospital, Bombay. Dr. Dodson married Miss Emmie Lucy Wells, a trained nurse and was accepted by the C.M.S. for service in Persia (Iran) in 1903. "J.H.C." writes: During his thirty-four years of service under the C.M.S. Dr. Dodson did a work for Iran which will never be forgotten. He was a gifted surgeon, and laid the foundation of a social service and welfare work in Iran—especially at Kerman—which has been of inestimable value to that country. Two outstanding features of his professional career were his orthopaedic work among the crippled carpet weavers and his skilful obstetrical and gynaecological work which has saved the lives of large numbers of dwarfed cripple mothers in that industry. No less important was the preventive and welfare work which he instituted and which led to legislative reforms that have gone far towards revolutionizing the conditions of the carpet industry in the cities of Iran. As a missionary he was honoured and beloved for his high sense of duty and his lovable personality and his unsparring self-sacrifice in the interests of the sick and suffering. To his patients his colleagues and the many Persian friends who loved him his loss seems irreparable. He died—as he would have wished—among the people whom he had served.

The death took place at a nursing home in Edinburgh on May 13 of Dr. JAMES MILL who for many years was a well known practitioner in Leith. He was born in Leith, the son of the Rev. James S. Mill minister of Kirkgate Church in that town. He studied medicine at Edinburgh graduating M.B., Ch.B. in 1881, and joined the Royal College of Physicians of Edinburgh ten years later as a Member, being elected a Fellow in 1893. Soon after

graduation he settled in Leith where he required a large practice and was greatly respected and beloved by his patients during half a century of active work. He was an ardent volunteer and afterwards held the rank of lieutenant colonel in the R.A.M.C. Territorial Force. Early in the war he accompanied the 7th Leith Battalion of the Royal Scots to Gallipoli. This battalion, on leaving with the Expeditionary Force, had a tragic experience when one of the trains carrying the men met with a railway disaster at Gretna nearly half of the battalion being killed or rendered unfit for service. Lieut.-Colonel Mill fortunately was in the second train and proceeding to Gallipoli he rendered valuable service there. On his return to this country he was placed in charge of Maryhill Military Hospital, Glasgow, where he also did excellent work. He retired from practice some time ago after thirty-two years' membership of the British Medical Association. The funeral service at the Edinburgh Crematorium on May 15 was attended by many former patients and members of the medical profession in Edinburgh.

We announce with regret the death at the age of 74, at his home in Hertfordshire, of HENRY WILLIAM BROOKS SAVILL. Dr. Saville, who studied medicine at Owens College, Manchester, took the L.R.C.P. and the L.M. in 1891 and the M.R.C.S. Eng. some four years later. Soon after qualifying he joined his brother who was in general practice in Radcliffe, Lancashire for a few years before setting up his own practice in the same town. He was appointed honorary consulting surgeon at the Bury Infirmary, and was chairman of the Bury Division of the British Medical Association for the year 1922-3. He had been a member of the Association for over forty-five years. In his forty years of general practice in Radcliffe, Dr. Saville won the affection and respect of his colleagues and his many patients. A presentation was made to him on his retirement from active practice about eight years ago when he left the town in which he had worked for so long and settled in Rickmansworth.

The death is announced of Dr. RICHARD HENRY READ of Hanley, Staffordshire at the age of 72. A student of Owens College, Manchester, he obtained the M.R.C.S. and L.R.C.P. diplomas in 1890 and settled down in general practice at Hanley where he held several public appointments, including those of district medical officer, medical officer to the Post Office, and county surgeon to the St. John Ambulance Brigade. Dr. Read was well known as an ornithologist and had been vice president of the North Staffordshire Field Naturalists Club and Archaeological Society, and he wrote in 1894 a book on *The Nature Distribution and Uses of the Colours of Birds*. He joined the British Medical Association in 1895.

The death of Sir ERNEST MORRIS C.B.E. removes a man who did fine work for the London Hospital and its medical college. In the words of a writer in the *Times* he was the last survivor of the great triumvirate to which the hospital world must remain eternally indebted. Lord Knutsford, Miss Eva Luckes and Ernest Morris are names to be remembered with admiration and gratitude wherever hospital work is done. Ernest William Morris was appointed house governor of the London Hospital in 1903 and resigned in 1930 on reaching the age of 65. In recognition of his services he was elected a member of the House Committee and in 1932 he received the honour of knighthood. We may recall here that in April, 1919, the Council of the British Medical Association appointed a small committee to consider and report on the existing arrangements under which the work of the Association in the head office was carried on with a view to possible rearrangement and improvement, with power to co-opt a business expert to advise. Mr. Morris willingly accepted service on this committee and took an active part in its inquiry.

BOURNEMOUTH TYPHOID OUTBREAK

OFFICIAL REPORT

The report of the late Dr W. Vernon Shaw, a medical officer of the Ministry of Health, on his investigations into the outbreak of enteric fever which occurred in Bournemouth, Poole, and Christchurch in August and September last, was published on Wednesday by H.M. Stationery Office, price 9d.

The outbreak was first brought to the notice of the Ministry on August 21, 1936, and Dr Shaw began his investigations on the following day. On arrival he was informed that thirty cases of enteric fever had been notified during the preceding twenty-four hours, and that medical practitioners in Bournemouth and Poole reported that they had a very large number of other patients, who would probably prove to have enteric fever, under observation. The patients were scattered throughout the three towns without distinction of age, sex, occupation, or social status, and it was clear that a widely distributed article of food or drink was concerned in the spread of the infection.

Raw Milk Inculpated

Dr Shaw ascertained that the only factor common to all the patients was the consumption of raw milk retailed by one distributor. This distributor, acting on Dr Shaw's advice, adopted a form of commercial pasteurization (heating the milk to 160° F.) for the whole of his supply, and distributed no unpasteurized milk after the morning round on August 22. This measure was immediately successful in terminating the outbreak. Dr Shaw concluded that the milk was infective for a period of about thirty-one days preceding August 22, and that the approximate number of persons who had contracted the disease was 718, of whom 518 were residents and 200 visitors. The deaths of residents numbered fifty-one.

A Contaminated Stream

No source of infection could be discovered among the personnel employed in the distribution of the milk or at the retailer's depot, and investigations were accordingly made at the farms from which the milk was supplied. The supply was collected from thirty-seven farms scattered throughout a large part of Dorset; all were visited and inquiries made into the health of such of the personnel as had had any part in the production of milk during the critical period. In all 192 persons were examined, and two at one farm were found to be suffering from enteric fever. They were the wife and son, aged 12, of one of the milk producers. A careful examination of the circumstances in which these persons became ill led Dr Shaw to conclude that neither was the cause of the outbreak, though there was strong presumptive evidence that the milk produced at the premises in question was the source of infection of the retailer's supply and of the farmer's wife. Dr Shaw also ascertained that in the house adjoining that occupied by the farmer a fatal case of enteric fever had occurred in May 1934 when the water supply of the two houses—which was common also to eight other houses in the vicinity—was suspect. It was derived from a well 162 feet deep situated 100 yards from a small stream which ran within a few yards of the two houses. Repeated examination of the well water proved that it was liable to pollution, though at times it yielded a good potable water. The condition of the stream was investigated and into it at a point about half a mile up stream from the farm the sewage effluent from a house in the neighbourhood was found to be discharging. Bacteriological examinations of the effluent for the presence of the typhoid organism proved negative on four occasions in September and early October, but it was found to be present in large numbers on two further examinations in the latter part of October. The occupants of the house were examined and one of them, who had been living

there in April, 1934, and in July and October 1937—that is, during the material periods—was found to be harbouring typhoid bacilli in his digestive tract and excreting them. The person in question was unaware that he was a potential source of danger to others, and he complied at once with the suggestions made to eliminate any further contamination of the stream.

Practical Conclusion

Dr Shaw was satisfied that the outbreak was due to the consumption of raw milk, and that the dealer's supply was infected by the contributions of one or possibly two producers whose milk in turn was infected by the contaminated water of the stream. How the infection was conveyed from the stream to the milk, whether by the use of the water or of a certain well, or by the cows subsequent to their drinking at the stream, was not determined. The suggestion that a cow may excrete typhoid organisms in her dung or even in her milk is apparently a novel one, but one which Dr Shaw found himself unable to reject.

The Chief Medical Officer of the Ministry, Sir Arthur MacNalty, in a prefatory note submitting the report to the Minister, draws attention to the fact that the bulk supply of milk was infected by a relatively small contribution itself produced without apparent fault. He concludes that 'in the present state of our knowledge where large milk supplies and commensurate risk are involved the only practical way to reduce the risk of such outbreaks to a minimum is by pasteurization'.

Medico-Legal

A FATALITY AFTER DIPHTHERIA IMMUNIZATION

The consulting physician to Ring Irish College Co. Waterford, Dr Daniel T. McCarthy, advised the authorities of the college last September to have their pupils immunized against diphtheria. He procured from the county medical officer of health a supply of T.A.F. (Burroughs Wellcome) for which the makers claim a high immunizing effect with a very low tendency to cause reaction. On November 9, 17, and 24, 1936, he gave intramuscular injections of 1 ccm. each to thirty-eight children at the college. The preparation was supplied in rubber-capped bottles each holding 25 ccm., and the doses were withdrawn in the ordinary way by puncturing the rubber cap with the needle of the syringe. Early in January the mother of one of the children, a girl of 12½ named Siobhain Kenneally, consulted Dr McCarthy and informed him that the child had a sore arm, which had developed during the Christmas holidays. On examination he found at the site of injection, which was just above the level of insertion of the right deltoid, a small discharging circular ulcer about 3/8 in. in diameter. The axillary glands were enlarged and tender and the child appeared to be in poor general health, anaemic and debilitated. He prescribed for her general health and for the treatment of the local condition. In April he was called in again and found the child much worse. He consulted other practitioners and the county pathologist, Dr W. J. O'Donovan, made bacteriological examinations. Clinically she appeared to be suffering from acute thrombocytopenic purpura. On April 19 she received a blood transfusion but she died the next day. Forty-four children who were immunized about the same time at another college from the contents of the same lot of ten bottles suffered no untoward results.

The Coroner's Inquest

Dr McCarthy duly reported the death and the inquest was begun on April 21 and continued on May 19 and 21. It was held by Dr WALSH, coroner for East Waterford.

Dr O'DONOVAN who had conducted the necropsy, said that the child had died from toxæmia and purpuric hæmorrhage consequent on general infection by miliary tuberculosis. Three days before death the blood showed a purpuric condition. After death he found numerous petechial hæmorrhages in various parts of the body, a chronic lacerated lesion on the outer aspect of the right arm, and a palpable mass in the right armpit. The lungs did not collapse, were of grey appearance, and were studded with minute tubercles. There were groups of tubercles in the lining of the chest cavity on both sides of the apical regions. There were small hard tubercles on the liver surface and the liver was slightly enlarged, the spleen was enlarged and studded with tubercles on its surface and throughout its substance. There were hæmorrhages in the stomach wall and blood throughout the intestines. There was hæmorrhage in the pelvis of both kidneys and into the tissues of the floor of the abdomen on both sides. There were hæmorrhages into the scalp tissues and dura mater. There was no evidence of meningitis, tubercles were not seen in or on the brain surface and the mesenteric glands were enlarged. The right axilla contained a mass of enlarged glands with hæmorrhagic softening, and on microscopical examination tubercle bacilli were demonstrated in lung liver spleen kidney, and glands, and in one small nodule that was removed from the brain. The tissue from the ulcerated lesion on the right arm was a chronic inflammatory process which could not definitely be diagnosed as tuberculous and in which tubercle bacilli were not found, but its appearance was consistent with tuberculous ulcer. The acute condition was of perhaps a few weeks standing. There was no evidence of chronic tuberculosis.

Dr O'Donovan said he had never heard of a case in which the subcutaneous inoculation of tubercle bacilli had caused any form of tuberculosis infection. In this case, he said, the disease had been caused by a tuberculous ulcer and disseminated throughout the body, leading to purpuric hæmorrhage. A connexion between the inoculation and the generalized infection was possible. The condition could not have been caused by anti-diphtheritic immunization properly administered. There were no signs on the body of old tuberculous lesions. The condition would be a possible result of "living tuberculous serum."

Dr MCCARTHY described the inoculations and the course of the case, and added that all the syringes had been sterilized in an electric sterilizer and sent to the school in a sterilized drum. Every usual precaution had been taken. He had been dealing with no cases of tuberculosis either in hospital or in private, and had no preparation of tuberculous material in his possession. He could not recollect whether this child was the first to be inoculated, but she had been among the first. He had known of no case of tuberculosis in the college during the last few years. The county medical officer had kept the bottles in sealed boxes in his office and Dr McCarthy had fetched them himself.

A Bacteriologist's Evidence

Dr J W BIGGER, professor of bacteriology, Trinity College Dublin, said that he had inspected the research laboratories of the Wellcome Foundation, Ltd., of Langley Court, Beckenham, Kent, where the T.A.F. had been manufactured. He had been given every facility for investigation. He had followed the various stages in the preparation of T.A.F. and inspected all the original records dealing with the two batches from which the flasks had come. At every point in the manufacture the freedom from contamination was tested microscopically, culturally, and by animal inoculation. The tests were more complete and more numerous than were required under the Therapeutic Substances Act. He had devoted particular attention to the three departments where cultures of tubercle bacilli were kept, and found them quite separate

from the departments in which T.A.F. was bottled. The staffs were completely distinct and each was unfamiliar with the work of the other department. He was satisfied from his inspection that no addition of tubercle bacilli could have been made to a bottle of T.A.F. He had particularly investigated the possibility of substitution, and had found no sufficient motive to impel anyone to make it. An attempt, moreover, would be faced with unsurmountable difficulty. To make a suspension of tubercle bacilli even remotely resembling T.A.F. would require expert bacteriological knowledge and even he himself would find it difficult. In addition to expertness in filling, capping, tying, labelling etc., a detailed knowledge of Langley Court laboratories and of the various cultures and store places would be needed. To effect a substitution the collaboration of at least two persons in quite different departments would be required. Professor Bigger's final conclusion was that neither by accident nor by deliberate design could any preparations issued from the Wellcome laboratories and labelled T.A.F. contain living tubercle bacilli. He had tested samples taken from the batches from which the Ring College bottles had come and had found them sterile. Infection was not possible at the laboratories. He had recently inoculated forty students with the same material.

Dr H J PARISH, head of the bacteriological department of the Wellcome Laboratory, described the preparation of T.A.F. The first intimation of trouble had been a personal letter sent on February 23, 1937, by Dr Saunders to the director of the Wellcome Physiological Research Laboratories, saying that about eighteen children had sore arms and that the condition was thought to be tuberculous. After further correspondence Dr Parish had gone to Ireland and seen Dr O'Farrell, Dr McCarthy, and Dr Saunders. The records of both batches of serum showed that they had passed all tests on repeated occasions and on single bottles after having been filled. The coroner adjourned the further hearing for advice as to his jurisdiction, for he was taking the place of Dr McCarthy and his deputy, who were both concerned in the case.

Comment on this extraordinary case would therefore not be proper yet. It seems incredible from the medical evidence already summarized (for a report of which we are indebted to the *Cork Examiner* of May 20 and 22) and from the reputation of the manufacturers that this preparation could have been contaminated when it left the laboratory.

Universities and Colleges

UNIVERSITY OF OXFORD

At a Congregation to be held on Tuesday, June 8 the following business will be presented to the House. That any medical student of a university in Great Britain or in Northern Ireland or the British Dominions or Colonies may be admitted to the status and privileges of a senior student provided that the university shall have been approved by the Hebdomadal Council and that he shall have pursued at that university, or should the Hebdomadal Council in his case so approve at more than one university for at least three years a course of study leading to a degree in medicine and shall have passed all examinations incidental to that portion of the course.

It is hoped to make an election to a lectureship in physiology at Brasenose College on the foundation of William Hulme towards the end of the present year. The lectureship will be tenable in the first instance for three years and at the end of that period may be renewed for a further period of two years. The initial stipend will be £350 per annum with annual increments of £25 and the lecturer will be entitled to partake of the common college dinner without charge and will be given the privileges of common room. The duties of the lecturer will be to undertake research in some branch of medical science and to exercise general supervision over

members of the college studying medicine for the honour school of physiology and the First B.M. and to give them instruction in physiology. The lectureship may be held concurrently with a demonstratorship in one of the university laboratories but the lecturer will not be allowed to undertake other teaching work without the consent of the college. The lecturer will be expected to enter on his duties at the beginning of next Michaelmas term. Preference will be given to candidates who hold a medical qualification and to graduates of Oxford University. The choice of the electors will not necessarily be confined to those who apply. Applications accompanied by references and not more than three testimonials should reach the Principal of Brasenose by June 26.

UNIVERSITY OF CAMBRIDGE

At a congregation held on May 29 the following medical degrees were conferred

M.D.—J. B. Harman
M.B.—B. CHIR.—W. J. E. Phillips, J. W. Hannay, G. F. Wright
T. E. S. Lloyd, J. W. Crofton
M.B.—F. R. Berridge *F. Braithwaite, K. O. Black, T. C. Gipson, T. L. H. Shore, A. R. Kelsall, F. G. Booker, L. J. Pailing, J. Woodrow, A. C. L. Houlton, C. R. McLaughlin,
R. H. A. Swain, W. F. Walton
B. CHIR.—*T. M. Daniel

* By proxy

UNIVERSITY OF LONDON

At a meeting of the Senate held on May 19 the Ph.D. in Medical Vital Statistics (non-clinical) was awarded to E. Lewis-Fanning (London School of Hygiene and Tropical Medicine).

UNIVERSITY OF DURHAM

At a special convocation in connexion with the centenary of Durham University to be held on July 1 and 2 the degree of D.C.L. will be conferred on Sir Cuthbert Wallace, Bt, K.C.M.G. President of the Royal College of Surgeons of England.

UNIVERSITY OF LEEDS

The University Court has resolved to confer on July 5 the honorary degree of LL.D. upon Professor John Kay Jamieson, M.B. Ch.B., professor of human anatomy and embryology in Trinity College, Dublin, and formerly dean of the faculty of medicine and professor of anatomy in the University of Leeds.

UNIVERSITY OF MANCHESTER

Dr J. G. Woolham has been appointed honorary assistant lecturer in physiology.

Medical Notes in Parliament

In the House of Lords on June 1 the Exportation of Horses Bill, the Marriage Bill, and the Statutory Salaries Bill were brought up from the Commons and read a first time.

Tributes to Sir Stanley Baldwin on his retirement from the Premiership were spoken in the House of Commons on May 31 and in the House of Lords on June 1. In the Commons allusion was also made to the retirement of Mr Ramsay MacDonald from the Government and to the fact that he remains a Member for the Scottish Universities.

Mr Neville Chamberlain, the new Prime Minister, spoke in the House of Commons on the Finance Bill on June 1. He announced that the National Defence Contribution would not be proceeded with and that the Chancellor of the Exchequer, Sir John Simon, would substitute proposals for a simpler tax on the profits of industry.

In the Ministerial changes which followed the acceptance of the Premiership by Mr Chamberlain, Mr R. H. Bernal succeeded Mr P. S. Hudson as Parliamentary Secretary to the Ministry of Health. Sir Kingsley Wood remains Minister of that Department.

In the House of Commons on June 1 the Hydrogen Cyanide (Fumigation) Bill which had passed the House of Lords was read a first time. The Civil List Bill was read in the House a third time.

Factories Bill in Committee

The Factories Bill was further discussed by a Standing Committee of the House of Commons on May 25. On Clause 144 (Interpretation of expression factory) Colonel SANDEMAN ALLEN moved to exempt from the Bill a shop as defined by the Shops Act. Mr RHYS DAVIES said that a great number of large shops had premises inside which were to all intents and purposes factories. Mr GEOFFREY LLOYD agreed that there were attached to some shops veritable small factories; it might be dressmaking establishments or in butcher shops where sausage-making machinery operated. It would be unwise to withdraw the protection of the safety provisions of the Bill from those who operated power-driven sewing machines or sausage-making machines. The amendment was withdrawn.

Mr SHORT moved to include premises where switching operations were performed. Mr LLOYD said switching stations in certain circumstances might be as dangerous as converter transformer and generating stations but the number of accidents in switching stations was not large. The Electricity Commissioners lately issued a new code of regulations which included an additional regulation for the safety of employees engaged on operations which did not come within the scope of the Home Office Electricity Regulations. If that regulation did not meet the point raised by Mr Short the Home Office would consult the Electricity Commissioners to see whether further provision could be made. Mr Short withdrew his amendment. An amendment was made on a motion by Mr LLOYD leaving the courts to decide the line of demarcation between the Factory Acts and the Safety in Mines and Quarries Acts in the case of surface works connected with mines and quarries. Clause 144 as amended was then approved.

On Clause 145 (General interpretation) Mr BANFIELD moved an amendment to make the definition of confectionery more clear and to cover the baking of tea bread and scones. He said it was undesirable that foodstuffs should be made at places where no supervision was possible. Mr LLOYD said this matter depended on the result of the inquiry in progress into night baking. He could not say when the report of that inquiry would be published. Mr Banfield withdrew his amendment.

Sir JOHN SIMON moved amendments affecting the definition of 'young person'. He said that although the Bill spoke of persons who had attained the age of 14, the attainment of that age was not to the point unless the young person was one in whose case the new Education Act permitted that he should be released before the age of 15 for beneficial work. It was not true that every child of 14 could be legally employed in a factory. The amendments proposed by Sir John were accepted as also was a similar one in respect of Scotland.

The title of the Bill was approved and the Committee adjourned.

WORKING HOURS OF JUVENILES

Consideration of the Bill was completed on May 27, when new clauses were taken. In fulfilment of a pledge given at an earlier sitting, Sir JOHN SIMON moved the new clause entitled "Reduction of weekly hours of work of young persons under 16" which provides as follows:

"Subject to the provisions of this section as from the expiration of a period of two years after the commencement of this Act, the foregoing provision of this part of this Act limiting the hours worked in any week exclusive of intervals allowed for meals and rest, shall have effect in the case of young persons who have not attained the age of 16 as if for the reference to forty-eight hours there were substituted a reference to forty-four hours."

Sir John explained that at an earlier sitting of the Committee the application of the forty-eight hour week to

young persons was discussed, and he had said the Government would like a reduction if possible before the Bill left the Committee in the permitted hours for juveniles between 14 and 16. The new clause proposed an interval of two years from the commencement of the Act to enable the reduction to be made where interdependence of work in factories would raise complications. There should not be a right to apply in any branch of industry for an extension of reduced hours—which he suggested should be forty four—unless three things could be shown. First, the hours proposed which must not in any case be more than forty-eight, must not be such as reasonably to be regarded as injurious to the health of the juvenile. Secondly, the proper carrying on of the industry must make the proposed modification desirable. Thirdly, the juveniles should engage in work familiarizing them with or helping them to train for processes in which older people were employed and likely to lead to their future employment on a permanent basis.

The Home Office had been in close communication with the trade unions and the employers organizations, and the trades examined included the cotton woollen, engineering, printing, bleaching, dyeing and shipbuilding trades. Some expressed concern as to the effect of the proposal. Team work was common in industry, and would in some cases be dislocated by the proposal, but the mere fact of a need for adjustment or some inconvenience was no reason for not making a necessary and justified change. In the cotton and woollen industries many young persons were members of teams and there would have to be considerable reorganization. He had come to the conclusion that the right figure to include as the lower limit for juveniles was forty four hours which would be convenient if the adjustment took the form of an extra half-day's holiday. The clause did not lay down precisely the manner in which the reduced hours were to be given. He urged that the reduction should be a weekly rather than a daily one. It might be possible for the Home Office when it had experience of the working of the scheme to lay down conditions on the manner in which effect should be given to the clause and Subsection 3 of the clause would give the Home Secretary power to do this by regulation.

Mr RHYS DAVIES said as the Act would become operative on July 1 1938 the new provisions would not come into operation until July 1 1940 whereas the half time system had been abolished nearly at one stroke. He advocated a reduction of the minimum to forty hours. Sir ERNEST GRAHAM LITTLE said public opinion was that for boys and girls between 14 and 16 a limit which permitted work for more than forty hours weekly would not allow a sufficient time for physical training, education, or play. If the Committee pressed the forty hour limit it would carry public opinion with it. Mr RHYS DAVIES moved in the new clause to leave out "forty four" and to insert "forty". The amendment was defeated by 26 to 15. A further amendment, also moved by Mr Rhys Davies to substitute one year for two years in the period of delay before the new clause took effect, was accepted and the clause as amended was added to the Bill.

The Committee then accepted new clauses moved by Mr GEOFFREY LLOYD the first of which provided that young persons working in a factory collecting carrying, or delivering goods carrying messages or running errands should be deemed to be employed in the factory. Another new clause made technical provision for the restriction of hours of employment of young persons in certain occupations including employment at docks wharves quays and warehouses. New clauses granting exceptions for factories operating the five-day week and authorizing the Home Secretary to make exceptions as to the hour of commencement of the period of employment where the exigencies of the trade or the convenience of the persons employed so required were added to the Bill. Mr ELLIS SMITH's proposed clause to make compulsory the setting up of safety first committees in factories employing not less than 100 persons was rejected by 27 to 13 and Mr MANDER withdrew a new clause to ensure the provision and cleanliness of messrooms in every factory. On the latter Mr LLOYD pointed out that the Home Secretary had considerable

powers under Clause 45 and that practically all welfare orders already made included the provision about workmen.

REST IN PREGNANCY

Mr GRAHAM WHITE moved a new clause (Period of rest in the case of confinement) as follows:

Any woman or young person employed in a factory shall be entitled on the production of a medical certificate stating that her confinement will probably take place within six weeks to leave her work, and she shall not be permitted to work during the six weeks following her confinement.

Any woman or young person who shall have left her work under the provision of this section shall be entitled to be re-employed at the end of the period of rest.

Sir ERNEST GRAHAM LITTLE hoped the Committee would not accept the new clause. Hard and fast rules for the treatment of confinements before and after delivery were unscientific. An important aspect of this matter in claiming attention in every part of the world was the spread of abortion. Abortion was being practised in factories by women afraid of being dismissed because of their pregnancy. The maternal mortality from it caused very great anxiety. Twenty five per cent of maternal mortality cases had been shown by statistics to be due to abortion, usually conducted by ill-equipped persons. The suggestion in the new clause was entirely unscientific. The whole question might be much more easily dealt with in the way that was adopted in the munitions factories during the war. At that time women were looked after carefully because they were valuable members of the community, and graded work was found for them during pregnancy. There was no reason whatever why graded work could not be found now in factories for women in that condition. Lady ASTOR did not believe the proposed new clause was practicable, and its adoption would be a disservice to women, particularly if there was not full maternity benefit. Even now women were not allowed to go back to the factory within a month after confinement.

Mr ROBERT HUDSON, Parliamentary Secretary to the Ministry of Health, asked the Ministry not to accept this clause because it was appropriate not to a Factories Bill but to a Public Health Bill and because it attempted to enforce a provision in the draft Washington Convention which depended specifically upon another provision that the woman should receive full and adequate maintenance. At present any woman who got a doctor's certificate to say she was incapable of work was entitled to sign off and receive benefit for four weeks before confinement and in addition no employer was allowed knowingly to employ a woman within a certain period after the date of confinement.

The proposed clause was negatived, as was another clause brought up by Mr WHITE on provision for nursing mothers which ran:

A woman or young person employed in a factory who is nursing her child shall be allowed half an hour twice a day for this purpose and time so allowed shall be included in the calculation of the total hours worked.

Mr HUDSON said the Government was informed by scientific advisers that with the modern shorter working day provisions of this nature were unnecessary that it was sufficient in normal conditions for a woman to nurse her baby before she left for the factory and immediately after she got back, and that provision for one artificial meal for the child in the middle of the working period was better than expecting the mother to go home to the child or arranging for the child to be brought to the factory.

A new clause to make exceptions as to mineral and aerated water factories with respect to the hours of employment of women and young persons where there was seasonal pressure of work was withdrawn. A new clause moved by Colonel SANDEMAN ALLEN on the training and supervision of young persons working on dangerous machines was accepted and added to the Bill.

Certain amendments were made in the schedule to the Bill and the Bill as amended was reported to the House. Sir

JOHN SIMON said the Committee had had twenty-seven sessions, and 580 amendments had been put on the Order Paper, beside a certain number of manuscript amendments. He thanked the chairman of the Committee, Major Lloyd George for his patience and skill.

Thames Barrage Proposal

THE EARL OF DUDLEY in the House of Lords on May 26 advocated a public inquiry into the condition of the River Thames in London and the proposal to build a barrage at Woolwich. He said that a Thames barrage had been mooted for several decades, but no headway had been made towards the public inquiry which was asked for the purpose of examining the proposal. A comparatively simple and an expensive scheme would do away for all time with the ugly and insanitary mud flats on both banks at low tide to the advantage of health safety, public convenience, shipping, and commerce as well as to aesthetic appearances. The project of the Thames Barrage Association was to dam the Thames at Woolwich remove the tides entirely from the London reaches and make the thirty miles of river from Teddington to Woolwich into a slow moving lake maintaining a constant water level. The total cost including all compensation and auxiliary work was estimated at only £4,500,000. There would be a large increase of river transport and a major advantage to public health.

At present 335,000,000 gallons of only partly treated sewage was ejected into the river every day. Of this 81 per cent came from the main works at Barking Creek, of which the outfalls were below the proposed barrage. Most of this was now floated back into London on each flood tide but not carried away to the sea by ebb tides and the ill effect on public health from this pollution was recognized by the Minister of Health. A scheme was under contemplation by the London County Council to take all sewage out of the river into the Channel at a cost of £62,000,000. If the dam were constructed none of this sewage could enter the tideless lake and the remaining 19 per cent of sewage discharged from up-river works could be treated under regulations which could not be enforced under tidal conditions and could be effectively purified in what would then be fresh water.

LORD RITCHIE OF DUNDEE said the Port of London Authority was conversant with this scheme and the opposition of that Authority to it was not due to private interest. As Chairman of the Port Authority he was interested in pollution. The Port of London Act laid upon the Authority the duty of preserving as far as possible the purity of the water. The Authority laid down standards of purity for all effluents discharged into the river. These standards were rigorously imposed but the London County Council was specifically exempted under the Act and the Port of London Authority had no control over it. The County Council's outfall stations at Crossness and Barking discharged into the river every day 280,000,000 gallons of sewage effluent, which had been a source of concern to the Authority for years past especially two or three years ago during the period of drought.

He sympathized with the County Council in the problem with which it had to deal. The promoters of the scheme said their barrage would improve the water of the river. In the opinion of the Authority the reverse would be the result. Above the proposed dam at Woolwich the constant high water would back up the tributary streams into which much sewage matter was discharged and prevent the free discharge which at present took place at low water. This would result in the ponding of highly polluted water and the production of offensive and unhygienic conditions. The sewage storm overflows which discharged untreated sewage into the river would cause offensive conditions when the benefit derived from the tide flush and scouring the river above the dam was withdrawn. Below the dam the pollution of the river water would be of greater intensity than at present owing to the ponding of the sewage discharge of the Barking and Crossness outfalls on the flood tide.

A PREVIOUS EXPERIMENT

LORD DESBOROUGH said that when he was Chairman of the Thames Conservancy that body put up a half tidal weir at Richmond which produced such beneficial results that places below—such as Putney and Wandsworth—asked that a similar weir should be constructed in their neighbourhood to save them from the awful mud flats they had at low tide. At present, in the Thames opposite the Houses of Parliament, the water was neither fresh nor salt. It contained 280,000,000 gallons of moderately filtered effluent, which went up and down at every tide and at slack water went on the mud flats, becoming as Dr Shadwell had said a great menace to London. Lord Desborough denied that the effect on the effluent of this travel up with the tide and down again was to purify it. His information was that there was so much silt in this dirty water that no purification occurred such as would happen if the water were fresh.

LORD SNELL, speaking for the London County Council said the waters of the river were far from satisfactory but the County Council had spent much money in trying to improve the conditions, and in the near future there would be definite improvement. The Council had arrived at no decision on this matter but in the face of the statement made by Lord Ritchie of Dundee the Council until better informed would not be able to take any decision on the barrage. The Council was responsible for disposal of the storm water which came into London. The storm water from the large pumping stations at Abbey Mills and Deptford as well as others would be discharged above the dam, which would contain almost quiescent fresh water.

THE EARL OF ERNE replying for the Government said the main reason that the Ministry of Transport did not favour an inquiry was that Parliament in 1908 gave the Port of London Authority full responsibility for looking after the River Thames. That Authority opposed the scheme. The Minister of Health also opposed the scheme. That Minister considered the barrage would hold up sewage and trade effluents which were discharged above the barrage. It would cause an accumulation at flood tides immediately below the barrage of heavily polluted water which would be deprived of the purifying effective movement with the tide. A condition which was reasonably satisfactory while the Thames was an open river would cease to be so under the new conditions unless heavy expenditure were incurred in more intensive treatment of the effluents. The holding up of land water would increase the risk of flooding above Richmond. The Minister of Transport had been in consultation with the President of the Board of Trade and the President was also unfavourable to the scheme.

Approved Societies' Administration of Benefit

MR PARKER on May 26 asked the Minister of Health whether, in view of the differing practices of various approved societies in the administration of the National Health Insurance Act he would secure the introduction of a uniform system under which the rights of insured persons to benefit were more clearly defined. Mr ROBERT HUNSON said Sir Kingsley Wood had no reason to think that under the system of administration of national health insurance through approved societies insured persons were not aware of their rights to the benefits provided by the Act. As every insured person had a right of appeal if dissatisfied with the decision of his society on a claim for benefit the Minister did not consider that any such fundamental change as was suggested was either necessary or desirable.

Midwifery Services in Wales

MR JAMES GRIFFITHS asked on May 27 whether the Minister of Health having regard to the abnormally high maternal mortality rate in Wales and more particularly in the rural areas was satisfied with the proposals submitted by the appropriate authorities in the Principality for the provision of midwifery service and if not what steps he proposed. Sir KINGSLEY replied that examination of the pro-

posals submitted by the local supervising authorities in Wales under the Midwives Act 1936 was not complete, but in the case of the majority of the authorities their proposals might be considered generally adequate. In some cases further information was awaited and in others points, varying in different areas, were the subject of communication with the local supervising authority. If in any case he was advised that the proposals submitted were inadequate he would make the necessary representations to the authority concerned.

Duke-Fingard Inhalation Treatment

Mr ROWSON on May 27, asked whether the Minister of Health would set up a committee of inquiry consisting of an equal number of medical men and laymen to inquire into the efficacy and genuineness of the Duke-Fingard inhalation treatment for diseases of the respiratory organs such as chronic catarrh, bronchitis, bronchiectasis, asthma and tuberculosis and take steps to have this treatment made available for panel patients under the Health Insurance Acts who suffered from chest complaints.

Sir KINGSLEY WOOD replied that he would not take such action. He was not aware of any sufficient reason for instituting a special inquiry into this treatment. An insurance practitioner was free to give such treatment as in his judgment was appropriate for his patients.

Mr ROWSON: Will the Minister put this treatment on the list of those which may be used by the medical profession for the diseases mentioned in the question?

Sir K. WOOD: The hon. member had better give me notice of that question.

Mr JAGGER: Is the Minister aware that personal friends of mine and numbers of my constituents who had been given up as incurable have been cured by this treatment?

Safety glass—On May 26 Mr HORE BELISHA announced the results of his investigations into the question whether certain forms of safety glass used in motor cars turned opaque when cracked or broken. He said it was found that on the rare occasions when glass of this type cracked without collapsing the obscuration was not complete and the cracked glass could be pushed out. He saw no reason for prohibiting its use.

Coalowners and Silicosis Compensation—On May 31 Mr J. GRIFFITHS asked the Home Secretary if he was aware that the South Wales Coalowners Indemnity Society was refusing to pay compensation to men certified by the medical board to be disabled by silicosis, that the reason given for this refusal was that the society proposed to institute proceedings for the purpose of seeking a declaration that the Silicosis Orders were *ultra vires*, that meantime these men were compelled to seek public assistance and what action he proposed to take in the matter. Sir SAMUEL HOARE said he had no information to the effect suggested and had no power to interfere with any legal proceedings. Mr GRIFFITHS asked if Sir Samuel Hoare would give an assurance, if the courts held that this Order was *ultra vires* that these men would not be penalized, and that the Government would bring in a new Order to give them compensation to which they were entitled. Sir SAMUEL HOARE agreed that this was a matter of great importance but said he would rather not express an opinion until he had further facts.

The Services

INDIAN MEDICAL SERVICE

SPECIAL CORONATION DINNER

The annual dinner of the Indian Medical Service will be held at the Trocadero Restaurant London on Wednesday June 16 at 7.15 p.m. when Brevet Colonel Sir Rickard Christophers C.I.E., O.B.E., F.R.S. will preside. Officers can arrange to sit near their friends and separate tables to seat eight will be provided. Tickets may be obtained from the joint honorary secretary Major Sir Thomas Carey Evans, Hammersmith Hospital, Ducane Road, London, W.12.

Medical News

The president and council of the Harverian Society of London have issued invitations to the Buckston Browne annual banquet, to be held at the Connaught Rooms, Great Queen Street, W.C., on Thursday, June 10, at 7.30 for 8 p.m.

The first International Congress of Neo Hippocratic Medicine will be held in Paris from July 1 to 5, under the presidency of Dr Laignel Lavastine, professor of the history of medicine in the Paris Faculty of Medicine. Further information can be obtained from the secretary of the congress, Hôpital Leopold-Bellan, 7, Rue du Texel, Paris XIVe.

The twelfth annual Macalister Lecture will be given at the National Temperance Hospital, Hampstead Road, N.W., on Thursday, June 24, at 9 p.m., by Sir Arthur MacNalty, whose subject is "The Doctor in Politics and Diplomacy." All medical practitioners are invited to be present and may bring friends (ladies or gentlemen). Smoking is allowed and tea and coffee will be served.

A Chadwick Public Lecture on 'Plants in Health and Disease' will be delivered by Mr H. Gilbert Carter at the Chelsea Physic Garden, Swan Walk, S.W., on Thursday, June 10, at 5 p.m., with Sir William Collins in the chair.

The third annual general meeting of the British Association of Radiologists will be held at the British Institute of Radiology, 32, Welbeck Street, on Friday and Saturday, June 11 and 12.

The summer meeting of the Association of Clinical Pathologists will be held at the Royal East Sussex Hospital, Hastings, on Saturday, June 12, at 9.30 a.m., when the subject for discussion will be Blood Transfusion and Saline Injections to be opened by Professor A. E. Boycott, F.R.S. Subsequent speakers will be Dr H. F. Brewer, "The Organization and Medical Administration of a Voluntary Blood Transfusion Service," Dr S. C. Dyke, "The Organization of a Blood Transfusion Service," Dr J. Boycott, "Grouping of Donors and Recipients," Dr H. L. Marriott and Dr A. Kekwick, "Continuous Drip Blood Transfusion," Dr R. J. V. Pulvertaft, "Abnormal Reaction following Blood Transfusion," Dr P. Lazarus-Barlow, "Direct Blood Transfusion," Dr F. A. Knott, "Transfusion in Aplastic Anaemia and Agranulocytosis," Dr Norah H. Schuster, "The Storage of Blood," Dr N. Hamilton Fairley, "Intravenous Haemolysis, with Special Reference to Pseudo-Methaemoglobin Production," Dr R. Officer, "Post-operative Saline Treatment." After the meeting members of the Association will be entertained to an official luncheon to be given by the Corporation of Hastings. At the afternoon session Dr Janet Vaughan will show specimens from a case of osteosclerosis with leuco-erythroblastic anaemia, and Dr Lazarus Barlow will give a demonstration of a new method of filtering agar culture media. There will be a business meeting at 5 p.m.

The King Edward's Hospital Fund for London has made arrangements for a second series of Coronation tours of historical buildings famous throughout the Empire. These privileged visits will take place on June 9, 16, and 25, July 7, 14, 16 and 21. Tickets are 10s. each visit (Tilbury Docks £1) or £3 for the series, and the entire proceeds are devoted to the Fund. Communications should be addressed to the secretary, King Edward's Hospital Fund for London, 10 Old Jewry, E.C.2.

The issue of *Paris Médical* for May 15 which is mainly devoted to diseases of the liver and pancreas, shows the distribution of the medical staff in Paris hospitals.

The Belgian Red Cross has sent four motor ambulances to Spain, two for the Government forces and two for the insurgents.

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

ORIGINAL ARTICLES and LETTERS forwarded for publication are understood to be offered to the *British Medical Journal* alone unless the contrary be stated. Correspondents who wish notice to be taken of their communications should authenticate them with their names not necessarily for publication.

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QUERIES AND ANSWERS

Chronic Proctitis

"PROCTALGIA" writes I should be most grateful for suggestions in treating a case of chronic proctitis. My patient is a middle aged man who had a severe attack of acute proctitis with passage of mucus pus and blood and severe pain. These have now all cleared up with treatment, but pain and discomfort still persist and are aggravated by prolonged standing and particularly by motoring. Suppositories and rectal irrigations give no relief, and the chief complaint is of a burning sensation in the rectum. Recent examination with the proctoscope and sigmoidoscope show the mucous membrane is now normal in appearance and it is difficult to see why the pain should persist.

Mastitis of Puberty in the Male

Dr W. PATERSON BROWN (London W.1) writes I have recently been puzzled to account for a painful non septic mastitis, at first unilateral in an apparently normal boy of 16. There was no history of mumps or other condition which might be responsible and I obtained no enlightenment from the standard textbooks which I consulted. I now find an adequate account of the disorder in the *Year Book of Neurology, Psychiatry and Endocrinology* (1936 p. 578). Apparently it is a by no means rare complication of puberty in boys may last for months but generally resolves and requires no treatment. I am writing this note in the hope that others encountering the same condition may be saved from being as puzzled as I was.

Splitting of Finger Nails

"H. M. B. F." writes It is just possible that the following may prove helpful to "Stumped" who asks if anyone can suggest a cause for the splitting and flaking of his wife's finger nails. The condition may be due to nail varnish especially when this varnish is used to remove the old layer before painting on the new one. I have found that the condition can be cured by using an oily remover for taking off the old varnish. There are several brands of oily remover on the market.

Another correspondent writes A discussion on cases of peculiar splitting of the nail was opened in the Section of Dermatology of the Royal Society of Medicine by Dr A. C. Roxburgh and was reported in the *Proceedings* of that society for February 20 1936. I have seen a number of cases since of a similar type and have come to the conclusion that the splitting of the nails is due to the use of nail varnish and the splitting of the nails is due to the use of nail varnish and nail varnish remover. As the nails take some five months to grow from the nail fold to the free edge stopping the use of nail varnish will not be followed by an immediate cure.

Asthma Query

Dr A. B. JOHNSON (Chautauqua, New York) writes in reply to "Plex" (*Journal* May 1 p. 952) I have had excellent results with the intratracheal injection of lipiodol. It seems to me that this treatment warrants a trial in "Plex's" case injecting 4 to 5 c.cm. as indicated. I should be glad to supply him with all the details as to technique if he should so desire. It should be understood that the lipiodol is used therapeutically and not necessarily diagnostically a fact which is not yet commonly appreciated.

Income Tax

Sale of Share in Partnership

A. B. C. asks (a) When one partner buys out the other and works the practice with an assistant is the surviving partner in any way responsible for the income tax of the partner who has gone? (b) Are legal expenses incurred in purchasing the share allowable expenses?

*(a) The profits of a partnership are assessable on the firm as such for the period to the date of dissolution of the partnership and the tax is legally recoverable from either partner. As regards the subsequent period "A. B. C." will presumably require the practice to be regarded as having started afresh at the date of dissolution so that he can deduct the salary etc. of his assistant. (b) No such expenses are of a capital nature.

LETTERS, NOTES, ETC

Gangrene Complicating Diphtheria

Dr EUSTACE THORP (Sunderland) writes Few cases of gangrene complicating diphtheria are mentioned in the literature. I have recently had three grave cases. In the first about six square inches of the left side of the frontal bone were denuded and there were numerous small spots of gangrene over the skin obviously embolic. Diphtheria bacilli were recovered from the discharge. In the second there was extensive gangrene of the left side of the neck exposing the sterno mastoid and the muscles of the posterior triangle diphtheria bacilli were again recovered. There were no other gangrenous sites. In the third a gangrene of the cheek like that in the second resembled noma. All the cases occurred in poor children and the condition was present before admission to hospital.

Medical Aid in Spain

Mr GEORGE JEGGER, Organizing Secretary, Spanish Medical Aid Committee (24 New Oxford Street W.C.1) writes The work being done in Spain by the British Medical Unit has received widespread publicity and assistance has been forthcoming to the extent of £30,000 from people of all political views. Members of the medical profession have been particularly generous and it is therefore with some diffidence that I appeal to them again through your columns. But the shortage of medical supplies of all kinds is so acute that little things that are practically valueless in England are necessities in Spain. Might I ask doctors who do not make use of the samples so frequently sent them by druggists to send them to us? Our hospitals can use them. If desired they can be collected.

Hawthornberry Jam

R. L. METTING (*Zbl. inn. Med.* April 3 1937 p. 289) describes the method of preparation of hawthornberry jam and hawthornberry infusion. These when suitably prepared represent a rich source of vitamin C. Experiments on animals have proved that the jam possesses marked antiscorbutic properties. Guinea pigs artificially infected with pneumococcus were favourably influenced by the administration of the jam. The advantage of the hawthornberry as a source of vitamin C is that of being available all the year round.

Corrigendum

In Major S. N. HAYES's paper on "Present-day Methods of Sterilizing Dressings" which appeared in our issue for May 1 a printer's error occurred eight lines from the foot of the first column of page 913. It was there wrongly stated that to sterilize efficiently six abdominal sheets in an autoclave perforated drum would take 72-80 minutes. The time taken should have read 72 + 20 minutes.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

440 Nervous Complications in Leukaemia

P MASSAROLI (*Polichinco Sez. Med.*, April 1, 1937, p 177) records a personal case, and has collected from the literature between 1878 and 1933 thirty-two other cases, of nervous complications of the different forms of leukaemia. As a general rule they are a late manifestation in an obvious case of leukaemia, but they may be the first symptom of the hitherto unrecognized disease. Nervous complications are more frequent in lymphatic than in myeloid leukaemia, as is shown by the fact that in twenty-five cases in which sufficient haematological data were available nineteen were examples of the former and only six of the latter. The nervous complications which are most often encountered are partly due to haemorrhage and partly to leukaemic infiltration of the tissues. As regards the former, simple or multiple cerebral haemorrhages are most frequent, haematomyelia is less common, and haemorrhagic pachymeningitis is rarest of all. The complications due to leukaemic infiltrations are most often found in the nerves, especially the cranial nerves, then in the spinal cord, the brain, and the meninges. A third and much rarer type of lesion consists in combined degeneration of the spinal cord, which is exactly similar to that found in pernicious anaemia. Massaroli's patient was a girl aged 19, in whom involvement of the cranial nerves was marked at the onset of lymphatic leukaemia, diabetes insipidus occurred in the last stage.

441 Benign Tuberculosis of Adolescents

A PIC and M PIÉRY (*J méd Lyon* March 5, 1937, p 123) in 2,300 medical inspections, conducted during twenty years, of candidates for the *Écoles Normales* aged 15½ to 18, have found a syndrome which they describe as indicating a benign tuberculosis of adolescents and differing from the tuberculous syndromes both of infancy and of adult life. In 38 per cent. of the males and 35 per cent. of the females two or more of the following were found: intermittent or orthostatic albuminuria, anaemia, thyroid hypertrophy, cervical or axillary adenopathy, kyphoscoliosis. Morbid physical signs, usually at one pulmonary apex, were found in a few of these subjects, but all who were subjected to x-ray examination showed hilar enlargement. Each individual component of the syndrome described has been stated by French writers to be that of a pretuberculous state or mild tuberculous infection, and such a syndrome in adolescents corresponds closely with the "inflammatory tuberculosis" of Poncet and Leriche. Following up these adolescents for a year or longer, Pic and Piéry have found that persistence of pulmonary infection is very exceptional (and then in an attenuated form), and that the majority of these subjects show great improvement in signs and symptoms after a few months rest by the sea or preferably, in mountain climates.

442 Fate of the Young Diabetic

W STOCKINGER and H ALBRECHT (*Med Klinik* March 5, 1937, p 335) point out that diabetes in the young is usually of a severe type. In the pre-insulin era the prognosis was very grave: of twenty-five patients treated in 1921-3 only one is alive to-day. Since the introduction of insulin the prognosis is very much better: of 106 patients treated between 1923 and 1935 48 per cent are alive. The authors discuss the mortality, which is still high: (1) It is due in 25 per cent to complications of which tuberculosis is the most serious (13 per cent). Complications which occur typically in adult diabetics are rarely found in the young, death due to hypoglycaemic

shock is uncommon. (2) 75 per cent. of fatal cases are due to coma. Coma is followed by death because treatment has been begun too late owing to the poor economic environment of the patient or a lack of knowledge on the part of his doctor. Lack of self-discipline on the part of the patient in the carrying out of his diet or the administration of insulin is followed by coma and death. Infection is a grave danger to the young diabetic. It lowers the tolerance permanently at the beginning of the disease. In old-standing cases stabilized by insulin administration infection is only temporarily serious. An average daily dosage of 50 to 60 units of insulin is necessary in young diabetics for the maintenance of health. Although diabetics are eugenically inferior, the majority are an economical asset. Of forty-eight young diabetics under the authors' care only three are unable to work, fourteen are able to work part-time and thirty one whole-time. The self-discipline necessary for the overcoming of their condition makes the majority psychologically more fit to face life. Hard manual labour is not necessarily contraindicated. Work requiring much nervous energy is usually unsuitable owing to the danger of hypoglycaemia. Work entailing special difficulty with regard to diet and insulin therapy must be given up. State appointments are generally not open to diabetics.

Surgery

443 Phlebitis following Trauma

M C LASSERRE (*Gaz hebdomadaire de médecine* March 28, 1937, p 200) states that phlebitis following trauma is not uncommon, and describes ten cases of which four were fatal, occurring within three months, in all of them the lower limb was involved. The age of the patients varied from 25 to 72, but the commonest age was between 35 and 50 years. In five cases pulmonary embolism revealed the presence of phlebitis, in two cases the phlebitis remained latent. Most of the patients were restless. Round about the tenth day following the trauma the temperature was elevated and the pulse accelerated, and pain was complained of. Sudden death occurred in four cases twenty to forty days after operation on the lower limb. Lasserre believes that in most cases death is due to microscopic or fat emboli, or to massive emboli with pulmonary infarction. Necropsies are rarely performed and their results are often inconclusive. For prophylactic and remedial treatment he recommends complete immobilization of the limb and the application of leeches to soft parts in which attrition and haematomata are present.

444 Catgut

J E RHOADS, H F HOTTENSTEIN and I F HUDSON (*Arch Surg* Chicago, March, 1937, p 377) review the medical literature on the absorption of catgut. Catgut must be sterile, strong, supple, and absorbable. Much experimental work has been carried out on the effect of various methods of sterilization on the tensile strength of the catgut, and suppleness has also been studied by determining the loss of tensile strength that results from knotting. Tests have been made on different kinds of catgut, and showed variation between consecutive samples from the same strand of catgut, between different strands of catgut of the same size type and brand, between sizes 0 and 1 of otherwise identical catgut, between corresponding products of different manufacturers and between plain, medium, hard, chromic, and tanned iodized catgut of the same size and from the same manufacturer. Tests by means of the implantation of different kinds of catgut in the abdominal walls of dogs showed that tanned iodized

catgut possessed substantially more resistance to the action of tissue fluids and was less affected by infection than medium hard chromic catgut. It was also ascertained that tanned iodized catgut loses its strength more slowly both in dogs and in man than medium hard chromic catgut. Detailed results of all these tests are given, with the history of the development and preparation of catgut during the last hundred years.

445 Thyroidectomy in Heart Disease

T S CLAIBORNE and L M HURXTHAL (*New Engl J Med* March 11, 1937, p 411) give the results of total thyroidectomy in twenty-seven patients with heart disease. There were fourteen cases of angina pectoris, in two of which there was associated congestive heart failure. Eight of the patients had hypertension, and four had rheumatic heart disease with valvular lesions. In this group there were no operative deaths, although three patients died subsequently, two in under four months, from rheumatic heart disease with an aortic lesion, while recurrence and death occurred at the end of a year in the third case. The eleven living patients have been followed up for from one to two and a half years, and improvement has been over 50 per cent in five cases, between 25 and 50 per cent in five cases, and only slight in the remaining case. The degree of improvement appears to have diminished slowly since the first year after operation. Total thyroidectomy was carried out in thirteen cases of congestive heart failure. Eight patients had rheumatic heart disease with valvular lesions, two had syphilitic heart disease, and three hypertensive heart disease. There was one operative death in this group, and six patients have since died. There was no real improvement in eight cases, there was definite, though temporary improvement in one case, and definite and gratifying improvement in four cases. Armour's desiccated thyroid was used to control symptoms of myxoedema in all cases. A brief summary of each case is given. Although the results have been fairly satisfactory in some cases, it was seen that the amelioration of pain in cases of angina pectoris was more or less temporary. The conclusion reached as a result of total thyroidectomy in this series of cases is that the operation is justifiable in some cases, but that they are few in number.

446 Retroperitoneal Tumours

E HESSE (*Presse méd* March 31, 1937, p 492) draws attention to what he calls a calorimetric symptom of diagnostic value in cases of tumour or inflammation in the retroperitoneal space. This symptom is caused by the pressure of the tumour or the extension of the inflammatory condition, producing compression of the lumbar part of the sympathetic trunk where it passes over the antero-lateral aspect of the vertebrae. This compression leads to lowering of the skin temperature, hyperhidrosis, and exaggeration of the pilomotor reaction of the lower limb. If the pressure on the nerve continues or if the tumour increases the phenomenon of excitation gives place to inhibition and later to paralysis. Clinically this is manifested by elevation of the temperature, the diminution and loss of sweating and then disappearance of the pilomotor reflex of the corresponding lower limb particularly at the ankle. This group of symptoms is of great diagnostic value particularly the difference in temperature of the two limbs which can be felt by the back of the hand. The hyperhidrosis or anhidrosis is also appreciable to the touch. The excitation of the sympathetic trunk produces an exaggerated sweating and the skin of the leg is moister than on the other side. Paralysis of the nerve causes a dryness of the skin. Eight cases are reported in which these symptoms established a diagnosis of tumour or inflammatory condition in the retroperitoneal space when a correct diagnosis would have been impossible in the early stages by any other means.

1182

Therapeutics

447

Peripheral Vascular Diseases

K HITZENBERGER (*Wien klin Wschr* April 9, 1937, p 465) points out that in organic diseases of the peripheral blood vessels treatment of the pain and of the underlying cause is indicated. Pain may occur in the veins and arteries themselves. It is combated by placing the affected limb at rest. Drugs which enlarge the vessel lumen are useless. Care must be exercised in the application of heat, for diseased blood vessels often give a paradoxical reaction to heat, which may cause gangrene. Pain occurs in organs which are ischaemic owing to a poor blood supply from diseased vessels. In such cases rest is essential. In cases of reversed intermittent claudication in which pain occurs during rest case is obtained by having the limb hanging down. Where pain is due to infection care must be taken in the choice of well fitting shoes and in the cutting of nails and corns. In the presence of gangrene conservative treatment with rest, warm baths, and ointments containing thyroxine must be tried before any surgical intervention. Treatment of the cause is directed towards increasing the lumen of the blood vessels. In thromboangiitis obliterans Hitzenger has had excellent results for over six years with follicular hormones, 1,000 units of menformon are injected daily for three weeks and the injections repeated at six monthly intervals. Operation has never been required. He came to use this form of therapy because this condition occurs nearly always in men, and he believed that a female sex hormone might act as a protection against the disease. Other conditions of the peripheral blood vessels react less certainly to follicular hormones. Owing to a raising of the viscosity of the blood in some of these conditions the administration of hypertonic saline is useful, 150 to 300 ccm of 5 per cent salt solution are injected two to three times weekly for from six weeks to two years. The author also strongly recommends the use of increased and decreased pressure artificially produced in treatment. The limb is placed in a boot, hermetically sealed above to which pumps regulating the pressure within it are attached. An increase of pressure to +20 mm Hg for one to three seconds is enough, otherwise thromboses occur. Pressure may be decreased to -80 mm Hg, not lower, otherwise haemorrhages into the skin occur. Daily treatment lasts two to six hours, and the whole course 100 hours. Phlegmonous conditions and acute thrombophlebitis, but not gangrene or varicosis, are contraindications to this form of therapy.

448

Treatment of Erysipelas

S SCHWARTZ (*Thèse Paris* 1937, No 127) records ten illustrative cases in children aged from 15 days to 24 years including a personal case in a male child aged 3 weeks with generalized erysipelas complicated by gangrene of the scrotum. Recovery took place after the administration of prontosil in large doses. About a hundred cases reported by other writers testify to the good results obtained in erysipelas in older children and adults so that Schwartz comes to the conclusion that prontosil may be regarded as a specific for erysipelas in young children.

449

Gold Tribromide in Whooping-cough

J EPSTEIN (*Arch Pediat* March 1937 p 177) records his observations on 350 cases of pertussis, 191 being girls and 159 boys aged from 3 weeks to 81 years. Nine cases had had a prophylactic vaccination from one to 14 years before the onset of whooping-cough. 250 were given gold tribromide exclusively while 100 were treated by drugs such as sodium bromide, antipyrin, phenobarbital and camphorated tincture of opium. The results were

as follows. Under gold treatment the average duration of the cough was three to eight weeks, while among the controls it was ten weeks. After considerable experimenting the gold tribromide was finally made up in a stable, assayed, and palatable elixir. The average dose for children was a teaspoonful every four hours, and for adults two teaspoonfuls.

Dermatology

450 Intolerance to Resins

M. FERRAND, H. RABEAU, and UKRAINCZYK (*Bull Soc franç Derm Syph* January, 1937, p 77) describe a case of dermatitis of the hands in a painter. This began on the thumb and forefinger of each hand and spread over the whole of both hands and forearms. The eruption was papulo-vesicular in type and intensely itching in character. Patch tests were performed with a number of substances used in his work, and were found to be positive only in the case of varnishes and oils containing turpentine resins. It is of interest to note that the patient had been a painter for over forty years before becoming thus sensitized, and that he subsequently was able to return to work employing only water colours or distemper. A year after the trouble had cleared up he was found by patch tests to be still sensitive to the same substances.

451 Argyria

A timely warning is issued by A. W. STILLIANS (*Arch Derm Syph* Chicago, January, 1937, p 67) against the haphazard and wholesale use of silver preparations. According to him argyria is on the increase. This is largely due to the fact that assertions made by the manufacturers of proprietary colloidal and organic silver preparations—that they do not cause argyria—are untrue. Silver is most readily absorbed from the stomach and intestines, but it is also absorbed from any other part of the body, and is soon deposited in the skin where, on histological section, it is found to be present in the corium. Clinically in argyria the skin is a bluish colour in the parts exposed to light and an ashy grey where it is covered. The diagnosis may be confirmed by injecting intradermally a mixture of 1 per cent potassium ferrocyanide and 6 per cent sodium thiosulphate in distilled water. This causes the appearance of a light spot. The same solution may be employed for treatment of the condition but although results are good the method is a tedious one.

452 Pyoderma and Psoriasis

F. FRENZL (*Derm Wschr* January 16, 1937, p 81) discusses the relation between psoriasis and pyoderma. The history of persons suffering from psoriasis often reveals an attack of more or less extensive furunculosis preceding the outbreak of the psoriasis. In such cases the furunculosis is supposed to have weakened the vitality of the individual and thus contributed to the manifestation of the psoriatic diathesis. The same explanation applies to cases where the pyoderma appears simultaneously with the psoriasis. In a number of cases, however, the pyoderma appears after an attack of psoriasis, sometimes even after the psoriasis has been apparently cured. In such cases the psoriatic diathesis has been weakened to such an extent as to allow the development of ordinary pyodermic manifestations.

453 Juvenile Acne

F. MILANES (*Arch Soc Estud clin Habana* January 1937 p 13) records his observations on forty-four cases of acne in patients whose average age was 21. With three exceptions all were females, thirty-seven of whom were

unmarried. The majority were of a slender build, had a certain degree of thyroid abnormality, a normal basal metabolism, morphological changes of the suprarenal type (hirsutism) and complained also of functional dysmenorrhoea. The majority therefore presented a syndrome involving the ovaries, suprarenal cortex and thyroid, arising from impaired ovarian function and closely associated with the development of puberty. As regards the digestive system a large proportion showed symptoms of a hepatobiliary type such as dyspepsia, abdominal pain, diarrhoea, and constipation. A syndrome of marked intestinal fermentation was also present as shown by naked-eye, microscopical, bacteriological, and chemical examination of the excreta. The pathogenesis of acne therefore appears to consist in a hepato-endocrine syndrome, which is responsible for changes in the sebaceous system of the skin, in which septic factors play a secondary part. Treatment consequently should be both local and internal, the latter consisting in the administration of the appropriate endocrine extracts.

Obstetrics and Gynaecology

454 Adnexal Tuberculosis

T. HEYNEMANN (*Zbl Gynäk* March 27, 1937, p 738) has found neither in his own investigations nor in the literature a single case in which vaginal (conjugal) infection has been proved to be the cause of adnexal tuberculosis, the reported cases break down either because a thoracic focus has not been excluded radiographically or because it has been forgotten that acid-fast bacilli in the semen of a male suffering from urogenital tuberculosis may be smegma bacilli, and that therefore only animal inoculation tests are conclusive. He states that experience has now convinced most gynaecologists that conservative climatic treatment, although requiring at least six months, is better and less risky than surgery. An adjuvant is found in x-radiation, which, however because of the danger of castration is only justified in the worst cases. Operative treatment is called for only (1) when the diagnosis is obscure, (2) for simple opening of an abscess, (3) when the patient demands it for persistent fistula. Regarding operation as dangerous and to be avoided whenever possible, Heynemann, to ensure a diagnosis, advocates puncture of the pouch of Douglas. Two positive results after animal inoculation and one finding of tubercle bacilli have previously been described after this procedure. Heynemann reports having tried it in eleven patients, with five positive and five negative correct results and one incorrect one in which no fluid could be aspirated. Since smegma bacilli have been found by Simmonds in an adnexal tumour animal inoculation results are more reliable than those of smears. A positive finding in Heynemann's opinion, is a contra-indication to operation.

455 Cancer of the Cervix

K. F. B. BUSCH (*Ugeskr Laeg* March 11, 1937 p 288) reports from a radium centre in Denmark the results he has achieved in cancer of the cervix with radium supplemented since 1931 by x-ray treatment a month after the last radium application. The 653 cases 393 of which were in the third and fourth stages of the disease treated between 1914 and 1927 were reviewed after an interval of at least five years, when it was found that recoveries could be claimed in 68 per cent. of the cases in all four stages of the disease. The recovery rate after an observation period of only three years after treatment was 24.8 per cent. Wishing to see if the supplementary treatment with the x rays has appreciably increased the recovery rate, the author has investigated the after-histories of the 69 patients treated during 1932. In forty of these cases the patients were in the third or fourth stage of the

disease After an observation period of three years, 40.6 per cent of the patients were still symptom free. If a discount of 10 per cent be allowed for the next two years after the first three years following treatment, the calculation may be made that approximately 30 per cent of the patients first treated with radium and then with x rays would be symptom-free five years later. The rise from a recovery rate of 16.8 per cent to 30 per cent is in the author's opinion, not to be accounted for by the slight rise in the proportion of early cases treated in 1932, and he is inclined to credit the post-radium treatment with x rays with at least some of this improvement. Still better results should be possible if (1) education of the public brought patients to treatment earlier, (2) more attention were paid to avoiding local infections, (3) preliminary and larger doses of x ray treatment were given, and (4) the radium were distributed in a more suitable way.

456 Hegar's First Sign of Pregnancy

A-MAYER (*Zbl Gynäk* April 3, 1937, p 786) upholds the reliability of Hegar's first sign, which, he says, has many times saved him from operating in pregnancy for supposed ovarian cyst or myoma as diagnosed by others. Hegar's sign has recently been subjected to criticism by Russian writers, who never found it positive during the first three or four weeks. In reply Mayer suggests that owing to the frequency of abortion, and therefore of endometritis, in Russia many of the uteri examined were not sufficiently healthy to show the softness and elasticity which form the basis of the test. It would seem too, that of late years it has sometimes been forgotten that Hegar's sign consists in a compressibility not of the cervix, but of the lower part of the corpus uteri. Finally, administration of a general anaesthetic, which is absolutely necessary in those with a fat or rigid abdominal wall, is sometimes wrongly omitted. Mayer finds Hegar's sign reliable in the great majority of healthy uteri, especially in primiparæ.

457 Histological Diagnosis of Pregnancy

B. G. SMITH and E. K. BRUNNER (*Amer J Obstet Gynec* March, 1937, p 404) as a preliminary to their investigation of the typical histological changes of the vaginal mucosa in pregnancy have first studied the normal and the most common pathological microscopical appearances of the vaginal mucosa. These appearances are described in detail. In the fifty-four cases of pregnancy represented by 110 biopsies of the vaginal mucosa the histological diagnosis of pregnancy was positive, and was possible in the very early stages of pregnancy. In four cases a positive diagnosis was made when menstruation was only six days overdue. The principal defect of the method is that it is not applicable in cases exhibiting marked pathological modifications of the vaginal mucosa, as for example in chronic vaginitis etc. The advantage of the method is its speed. The biopsies are small, and the usual paraffin technique can be speeded up so that the sections are ready for study in a few hours.

Pathology

458 Morphine Detection

C. K. LIANG (*Chin med J* February 1937, p 211) describes a new method for the detection of morphine in the urine. Fifty ccm of urine are acidified with tartaric acid and evaporated to a syrupy consistence on a water-bath, then well mixed with 5 or 6 grammes of clean dry sand and evaporated to dryness. The residue is extracted with 30 ccm of warm alcohol (95 per cent) three times filtered and the alcohol evaporated. The residue is mixed

with 25 ccm water, transferred to a separating funnel and neutralized with sodium hydroxide (25 per cent), 1 ccm of phosphoric acid (85 per cent) is added then 10 ccm of amyl alcohol to remove the colouring impurities. The aqueous solution is separated and made alkaline with ammonia. It is then extracted twice with 10 ccm of amyl alcohol and the extract purified by shaking out with 10 ccm of normal phosphoric solution (3 per cent) twice. The phosphoric acid solution is made alkaline with ammonia and shaken out with chloroform-alcohol mixture (9:1). The residue from the chloroform-alcohol extract is tested for morphine by means of Froehde's, Froehde, Buckingham's, or Marquis's reagents. The author claims that this method will detect 0.005 mg of morphine hydrochloride in 50 ccm urine, and that it is much less costly and time-consuming than other methods. Also the test can be done with 50 ccm of urine, whereas other methods require 500 ccm.

459 Heart Lesions in Scurvy

J. MCBROOM *et al* (*Arch Pathol* January, 1937, p 20) have studied the effects of scurvy on the guinea pig heart in the presence and absence of streptococcal infection. Four groups of eight to ten guinea-pigs were used. Two groups were fed on a diet producing acute scurvy. One of these, together with a third group on a semi-scorbutic diet and the fourth on a normal diet, were injected with haemolytic streptococci. Marked degenerative and proliferative valvular lesions were found in the majority of guinea pigs that died of acute scurvy and were equally prevalent and severe whether or not there was a superimposed streptococcal infection. The animals on a semi-scorbutic diet with a superimposed streptococcal infection showed evidence of acute scurvy. The fourth group (control) of guinea pigs showed no evidence of scurvy and only few heart lesions. Focal haemorrhages and focal degeneration with some proliferative reaction were seen in the myocardium of those animals with acute scurvy. The heart lesions were different from those in rheumatic fever, although there were points of resemblance. There was no evidence that rheumatic fever and scurvy are the same disease or have a causal relationship, although scurvy may be indirectly a factor in lowering resistance to infection and infection may precipitate acute scurvy in semi-scorbutic states.

460 Blood Changes After Exercise

T. TSUCHIYA (*Jap J exp Med* December, 1936 p 551) has studied the changes in the blood cells and tissues of dogs produced by running (treadmill) exercise of varying duration and degree, the course of recovery, and the effects on the recovery rate of injections of various tissue constituents. Both erythrocyte and leucocyte counts immediately after exercise were transiently higher than before but as exercise increased in duration and severity the erythrocytes began to show advancing diminution in numbers while the leucocyte count first increased and then decreased, with changes in the distribution of the cells. The haemoglobin content ran parallel to the erythrocyte count. Depending on the duration and severity of the exercise recovery from the anaemia caused by prolonged exercise was found to occur spontaneously and the leucocyte count returned to normal sometimes with leucocytosis and eosinophilia. The histological changes in the haemopoietic organs usually indicated hypo-erythropoiesis and accorded with the blood changes. Changes in the kidney—glomerular hyperaemia, cast formation, capillary haemorrhages etc.—agreed with the findings in the urine after exercise. Changes in the liver, spleen and lungs were noted. All these tissue changes were recovered from in about one month after cessation of exercise. Of the tissues injected only erythrocytes and marrow cells appeared to have any appreciable effect in assisting recovery from the exercise anaemia.



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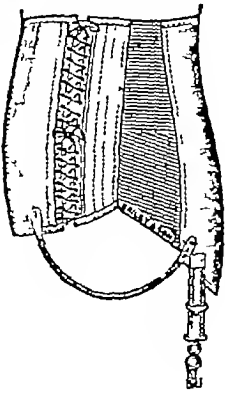


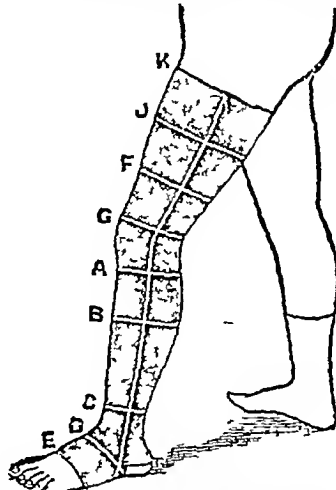
Fig B690

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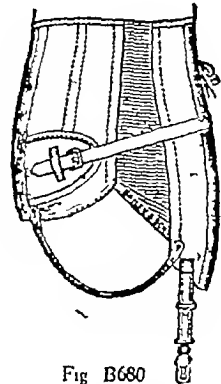


Fig B680

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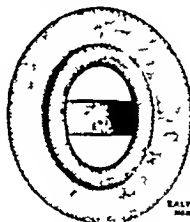
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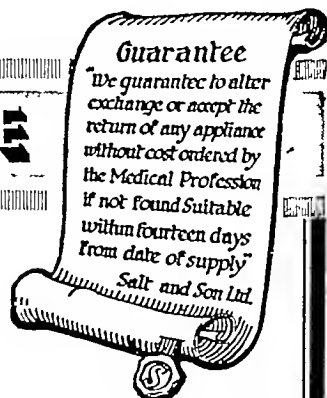


Showing
attachment
of receiver
and bag to
belt

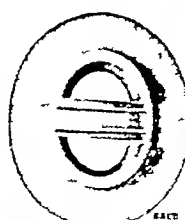


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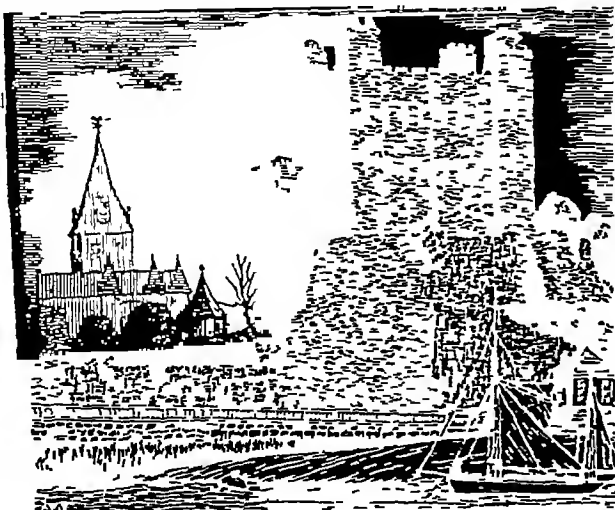
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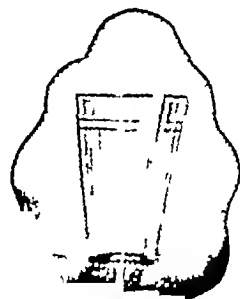
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M.B., B.S. (Lond.)	Final 1918-36 (Completed Exam)	251
F.R.C.S. (Eng.)	Primary Final 1919-35	188
M.R.C.P. (Lond.)	1919-36	270
D.P.H.	(Various) 1906-36 (Completed Exam)	342
F.R.C.S. (Edin.)	1918-36	63
M.R.C.S., L.R.C.P.	Final 1919-36 (Completed Exam)	587

M.D. Various By Thesis Many successes Preparation for the above also for Medical Preliminary and all examinations leading up to M.R.C.S., L.R.C.P. or M.B. of various Universities also for M.R.C.P. (Edin.) D.P.M. D.O.M.S. D.T.M. & D. D.L.O. D.C.H. D.A. D.N.R.E. M.M.S.A. L.M.S.S.A. D.C.O.G., and some exams of Dominions Universities

ORAL CLASSES

M.R.C.P., M.D. Primary and Final F.R.C.S. F.R.C.S. (Edin.) also Final M.B. B.S. and M.R.C.S., L.R.C.P. Museum and Microscope Work. Also Private Tuition

MEDICAL PROSPECTUS (48 pp.)

CONTENTS: The method and the cost of entering the Medical Profession. Particulars of all Medical Examinations. Postal Courses and Oral Classes. Suggestions for the Higher Medical Examinations. Suggestions for the Higher Surgical Examinations. Suggestions for the Special Diploma Examinations. Refresher Courses. Open lines for Women. Illus. for writing these

Medical Prospectus gratis along with list of Tutors etc. on application to the Principal 17 Red Lion Sq., London W.C.1 (Telephone Holborn 6313)

THE LONDON SCHOOL OF DERMATOLOGY St John's Hospital for Diseases of the Skin 5 Little Street, Leicester Square W.C.

Conducted by the Honorary Staff of the Hospital together with the Physician in charge of the Dermatological Departments of the London Teaching Hospitals. Lectures and Demonstrations twice weekly during October and November and again during January and February and four times weekly during May. General Practitioners desiring to attend any particular lecture or oral examination can do so without paying a fee. Clinics daily at 2 p.m. and 4 p.m. Saturday 2 p.m. only. The Laboratory is particularly well equipped and arrangements can be made for clinical and post-mortem work for research work. Enquiries to the Dean or Secretary of the School.

F.R.C.S. (Edin.)

POSTAL AND ORAL COURSES

For details of the above and other courses apply to the Principal, 17 Red Lion Sq., London W.C.1

BRITISH POSTGRADUATE MEDICAL SCHOOL

(UNIVERSITY OF LONDON).

An Intensive Refresher Course for General Practitioners will be held in the fortnight commencing 28th June as follows

1937	10.30 to 1.0	Conducted by—	2.0 to 4.30	Conducted by—
Monday 28th June	Principles of the Examination of Patients	Dr A. E. CLARK KENNEDY M.A. M.D. F.R.C.P.	Hæmorrhoids, Fistula and Fissure in Ano	Sir CHARLES GORDON WATSON K.B.E. CMG F.R.C.S.
Tuesday 29th June	Diabetes	Dr R. S. AITKEN D.Pall F.R.C.P.	The Management of Pregnancy and Labour	Mr A. J. WRIGLEY M.D. F.R.C.S.
Wednesday 30th June	Local Anaesthesia in General Practice	The Staff of the School	Infectious Diseases	Dr E. H. R. HARRIES M.D. D.P.H. North-Eastern Hospital St. Ann's Road N.15
Thursday 1st July	Infections and Injuries of the Hand and Wrist	Mr CECIL P. G. WAKELEY D.Sc. F.R.C.S. F.R.S.E.	Heart Diseases in General Practice	Dr DONALD HALL, M.D. F.R.C.P.
Friday 2nd July	Difficult Labour Prontosil in Obstetrics	Mr ALEC BOURNE, M.A. F.R.C.S. F.C.O.G. Dr MEAVE KENNY M.B. B.S. M.C.O.G.	Diseases of the Breast	Mr CECIL ROWNTREE, F.R.C.S.
Saturday 3rd July	Eye Conditions in General Practice	The Staff of the Royal London Ophthalmic Hospital City Road E.C.1	—	—
Monday 5th July	Common Gynaecological Conditions	Dr CHA. SAR MOIR, M.D. F.R.C.S. F.C.O.G.	The Diagnosis and Management of Tuberculosis.	Dr ALEC WINGFIELD M.D. F.R.C.P.
Tuesday 6th July	The Acute Abdomen	Mr W. H. C. ROMANIS M.A. F.R.C.S. F.R.S.E.	Peptic Ulcer	Dr J. J. CONYBEARE, M.C. M.D. F.R.C.P.
Wednesday 7th July	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children Great Ormond Street W.C.1	Children's Diseases in General Practice	The Staff of the Hospital for Sick Children Great Ormond Street.
Thursday 8th July	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital	Diagnosis of Nervous Diseases	The Staff of the National Hospital Queen Square
Friday 9th July	Chronic Rheumatism	The Staff of the Red Cross Clinic for Rheumatism	Retention of Urine	Mr VICTOR W. DIX M.A. M.R.C.P. F.R.C.S.
Saturday 10th July	Psychiatry in General Practice	Professor E. MAROTHE F.R.C.P. F.R.C.S. at Maudsley Hospital	—	—

Early application is recommended as only a limited number can be admitted Fee £5 5 0

Similar courses lasting a fortnight will commence on the following dates —
20th September 18th October 15th November

Detailed programme and any further information can be obtained from the Dean British Postgraduate Medical School, Ducane Road W 12

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1937

The POST-GRADUATE COURSES to be held this year comprise

- (1) A COURSE IN OBSTETRICS AND GYNAECOLOGY from July 12th to July 31st Fee £3 8s
- (2) A GENERAL PRACTITIONERS' COURSE from August 16th to September 11th
Fee £10 10s for whole Course £6 6s for two weeks
- (3) A GENERAL SURGICAL COURSE from August 16th to September 11th.
Fee £10 10s for whole Course £6 6s for two weeks
- (4) A COURSE ON INTERNAL MEDICINE from October 18th to December 10th Fee £15 15s

In addition to the above Courses in the following Subjects will be held at various periods of the year

INTERPRETATION AND SIGNIFICANCE OF MODERN DIAGNOSTIC METHODS Fee £3 3s	DISEASES OF NOSE, EAR AND LARYNX (Royal Infirmary) Fee £10 10s
DISEASES OF THE BLOOD Fee £3 3s	DISEASES OF EAR, NOSE AND THROAT (Ear and Throat Dispensary) Fee £4 4s
ENDOCRINOLOGY Fee £3 3s	OPERATIVE SURGERY OF THE EAR Fee £4 4s
DISEASES OF THE NERVOUS SYSTEM Fee £3 3s	VENEREAL DISEASES Fee £10 10s
UROLOGY Fee £10 10s	SURGICAL PATHOLOGY Fee £4 4s
X-RAY PHYSICS AND ELECTRO-TECHNIQUES Fee £3 3s	ORTHOPAEDIC SURGERY Fee £4 4s
ULTRA VIOLET RADIATIONS AND THEIR USES Fee £3 3s	CLINICAL MEDICINE INCLUDING CHILD LIFE AND HEALTH Fee £5 5s
AND TREATMENT OF FRACTURES Fee £4 4s	CLINICAL SURGERY Fee £4 4s
NEUROLOGICAL SURGERY Fee £4 4s	MODERN METHODS IN ANAESTHESIA Fee £3 3s

The Courses will be held only if a sufficient number of entries are received.
Further particulars may be had on application to the Hon. Secretary, Post Graduate Courses in Medicine, University New Buildings, Edinburgh

NATIONAL HOSPITAL FOR DISEASES OF THE HEART,
WESTMORELAND STREET W 1

THE ST. CYRES LECTURE

for the year 1937 will be delivered at the Barnes Hall of the
ROYAL SOCIETY OF MEDICINE, 1, WIMPOLE STREET, W 1,
by

DR. CH. LAUBRY

Professor of Cardiology, University of Paris Physician to the Broussais Hospital Paris

on

THURSDAY, 10th JUNE at 5 p.m.

Subject 'CONSIDERATIONS PATHOLOGIQUES ET CLINIQUES SUR LES RYTHMES DE GALOP

UNIVERSITY OF DUBLIN

SCHOOL OF PHYSIC, TRINITY COLLEGE.

The usual three weeks Post-graduate Course for General Practitioners will be held this autumn from Monday September 20th to Friday October 8th. The course will include clinical instruction in Surgery (including Orthopaedics) Medicine (including Neurology, Cardiology, Fevers, Children's Diseases and Skin Diseases), Obstetrics and Gynaecology and Diseases of Eye, Ear, Nose and Throat. Instruction will be given each afternoon in the Medical School in Clinical Pathology, Bacteriology, Physiology and Biochemistry. There will also be demonstrations on the uses of Radium and lectures on Medicine and Therapeutics. Fee for the course five guineas.

For further particulars apply to —

Professor DAVID S. TORRENS
School of Physic, Trinity College Dublin

THE BRITISH HOMOEOPATHIC CONGRESS

June 17th & 18th The Langham Hotel London W 1

Paper and Discussion June 18th
A Review of the Therapeutic Use of Snake Venom

The Pathology of Snake Venom Poisoning
The Homoeopathic Indications for the Snake Poisons

Presidential address. Friday June 18th at 4.30 pm
Homoeopathy and its relation to General Medicine

Particulars can be obtained from The Secretary
69 Elizabeth Street London SW 1

ROYAL FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW

The Council of the Royal Faculty of Physicians and Surgeons will meet on Wednesday June 9th 1937 to consider applications from Candidates for admission to the FELLOWSHIP EXAMINATION. Candidates are required to make application in writing to the Secretary to whom all certificates and testimonials should be sent not later than June 7th 1937.

242 St Vincent Street DAVID WILSON
Glasgow C 2. Secretary
May 1937

CITY OF NOTTINGHAM
HOUSE SURGEON AT CITY HOSPITAL

The Nottingham City Council invite applications from duly qualified medical practitioners for a position as HOUSE SURGEON (male) unmarried. Salary at the rate of £50 per annum, with board residence and laundry.

The appointment will be for six months with a prospect of renewal for a further six months subject to satisfactory service.

The officer appointed will be under the control of the Resident Medical Superintendent who will take duties on the surgical side of the hospital and will administer anaesthetics.

The appointment does not come under the Corporation's Superannuation Scheme.

Applications forms and further particulars may be obtained from the undersigned to whom they should be returned forthwith.

Canvassing directly or indirectly is forbidden.
The Guildhall J. E. RICHARDS
Nottingham Town Clerk
May 20th 1937

COUNCIL BOROUGH OF BURNLEY
MUNICIPAL GENERAL HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER (MALE)

Applications are in need from fully qualified medical men for the position of Junior Resident Medical Officer at the Municipal General Hospital. Salary at the rate of £100 per annum for the first six months, £120 per annum for the second six months, plus full residential emolument.

Further particulars and application form may be obtained from the Medical Officer of Health, St James Street, Burnley, to whom applications must be accompanied by testimonials should be forwarded.

Canvassing either directly or indirectly is forbidden.
HARRY FLOWMAN Town Clerk
Town Hall, Burnley

LONDON JEWISH HOSPITAL
S. M. G. F. I.

General Hospital, 111, St. James Street, London W.C.2.
RESIDENT MEDICAL OFFICER (MALE)
Salary at the rate of £100 per annum for the first six months, £120 per annum for the second six months, plus full residential emolument.

METROPOLITAN BOROUGH OF GREENWICH

APPOINTMENT OF A PUBLIC VACCINATOR

The Council of the above-named Borough is prepared to receive applications from properly qualified and experienced Medical Practitioners for the position of Public Vaccinator for the St Nicholas Deptford Ward of the Borough of Greenwich.

The appointment will be subject to the approval of the Vestry of Greenwich and to the provisions of the Vaccination Order 1930.

The successful applicant will be required to enter into a Contract for the due performance of the work as provided by such Order and to supply the name of a suitably qualified deputy to act as occasion may require in the absence of the candidate appointed.

Particulars as to the fees payable may be obtained upon application to the undersigned during ordinary office hours (9 a.m. to 4 p.m. Saturdays 9 a.m. to 1.30 p.m.).

Applications for the position giving particulars of experience in the work of vaccination must be sealed up and delivered to the office of the undersigned not later than 12 o'clock noon on Wednesday June 23rd 1937.

Canvassing the Members of the Council either directly or indirectly will be a disqualification.
D. J. REASON
Town Clerk

June 4th 1937

KENT COUNTY COUNCIL
RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Resident Assistant Medical Officer at the Chatham Public Assistance Hospital (700 beds).

The salary is £250 a year with residential emoluments which are valued at £120 a year. A superannuation scheme is in operation and the successful candidate will be required to pass a medical examination.

The appointment is a whole-time one and will be for a period of one year only and not renewable.

Forms of application can be obtained from the Public Assistance Officer, Tonbridge Road, Maidstone to whom applications must be sent by 10 a.m. on Monday June 14th 1937.

W. L. PLATT
Clerk of the County Council

Sessions House
Maidstone
June 2nd 1937

KENT COUNTY COUNCIL
RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the post of Resident Assistant Medical Officer at the Dartford Public Assistance Hospital (660 beds).

The salary is £250 a year with residential emoluments which are valued at £120 a year. A superannuation scheme is in operation and the successful candidate will be required to pass a medical examination.

The appointment is a whole-time one and will be for a period of one year only and not renewable.

Forms of application can be obtained from the Public Assistance Officer, Tonbridge Road, Maidstone to whom applications must be sent by 10 a.m. on Monday June 21st 1937.

W. L. PLATT
Clerk of the County Council

Sessions House, Maidstone
June 1st, 1937

CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL (600 Beds)

TWO HOUSE SURGEONS (Male or Female)
ONE HOUSE PHYSICIAN (Male or Female)

The above post will become vacant on July 1st 1937 and applications are invited from duly qualified and registered Medical Practitioners.

The salary in respect of each of the appointments which are tenable for six months is at the rate of £100 per annum with board lodging etc.

Applications, having and qualifications together with a copy of not more than three recent testimonials must be submitted to the Medical Officer of Health, Town Hall, Newcastle upon Tyne.

May 1st 1937

CITY BOROUGH OF HULLDERFIELD
ST LUKE'S HOSPITAL

RESIDENT MEDICAL OFFICER

Applications are invited from fully qualified medical men for the position of Resident Medical Officer at St Luke's Hospital. Salary at the rate of £100 per annum for the first six months, £120 per annum for the second six months, plus full residential emolument.

Further particulars and application form may be obtained from the Medical Officer of Health, St James Street, Burnley, to whom applications must be accompanied by testimonials should be forwarded.

Canvassing either directly or indirectly is forbidden.
HARRY FLOWMAN Town Clerk
Town Hall, Burnley

LONDON COUNTY COUNCIL

Applications invited from Medical Practitioners of at least one year's standing to under mentioned positions. Candidates must have held resident appointment in a general hospital for at least six months. Married quarters not available.

ASSISTANT MEDICAL OFFICERS (Grade I)
—Salary £350-£425 with board lodging and washing

(a) NEW END HOSPITAL, Hampstead NW.3—Obstetric experience essential. Anaesthetics and surgical experience desirable.

(b) PADDINGTON HOSPITAL, Harrow Road W.9—Duties mainly medical.

(c) ST ALFEGES HOSPITAL, 48 Vanbrugh Hill, Greenwich SE.10—Duties mainly medical. Midwifery experience essential.

(d) ST MARY'S HOSPITAL, Marlborough Road, Kensington W.8—Experience in obstetrics and gynaecology essential.

ASSISTANT MEDICAL OFFICERS (Grade II)
—Salary £250 a year together with board lodging and washing. Appointment for one year only in first instance (renewable for a second year under certain conditions).

(e) ARCHWAY HOSPITAL, Archway Road, Highbury N.19—Medical duties.

(f) HACANEY HOSPITAL, 111th Street, Homerton E.9—Duties mainly medical. Experience in anaesthetics desirable.

No accommodation for a woman.

(g) HIGHGATE HOSPITAL, Darlington Park Hill N.19—Duties mainly medical. Experience in anaesthetics essential.

(h) PADDINGTON HOSPITAL, Harrow Road W.9—Duties mainly medical.

(i) ST BENEDICT'S HOSPITAL, Church Lane, Tooting SW.17—Duties mainly medical. Woman officer only.

(j) ST GEORGE IN THE EAST HOSPITAL, Raine Street, Wapping E.1—Duties mainly medical. Experience in anaesthetics essential.

(k) ST JAMES' HOSPITAL, Outsey Road, Balham SW.12—Surgical duties.

(l) ST NICHOLAS' HOSPITAL, Plumstead SE.18—Duties mainly medical. Experience in anaesthetics essential and in midwifery desirable.

(m) ST PANCRAS HOSPITAL, Pancras Road NW.1—General duties.

No accommodation for a woman.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Staff Division 2A, County Hall SE.1 returnable by June 14th.

Canvassing disqualifies.

LONDON COUNTY COUNCIL

PART TIME MEDICAL OFFICER required at ASHFORD RESIDENTIAL SCHOOL, Woodthorpe Road, Ashford, Middlesex. Duties include daily attendance at fixed times and at such other times as may be necessary. Candidates must be registered medical practitioners and must reside within easy reach of school. Appointment temporary in first instance. Salary in accordance with accommodation of school—at present £85 a year.

Application forms and details of appointment obtainable (stamped addressed foolscap envelope necessary) from Education Officer (S.S.3) County Hall SE.1 must be returned by June 19th. Canvassing disqualifies.

STAFFORDSHIRE WOLVERHAMPTON AND DUDLEY JOINT COMMITTEE FOR TUBERCULOSIS

PRESTWOOD SANATORIUM (700 Beds)

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (male) at the above-named Sanatorium which is approximately nine miles from Wolverhampton. The appointment will be for six months in the first instance, renewable for a further maximum period of six months.

Salary at the rate of £100 per annum with board residence and laundry.

Forms of application may be obtained from the undersigned and should be returned by first post on June 10th 1937 together with copies of not more than three recent testimonials.

W. L. UNDERWOOD
Clerk of the Joint Committee
County Buildings, Stafford
May 4th 1937

B. LEISTON AND STAPLEFORD URBAN DISTRICT COUNCIL

MATERNITY AND CHILD WELFARE

A vacant position for a well-qualified MEDICAL PRACTITIONER to conduct CLINICAL AND STAFF WELFARE CLINICS at LEISTON and STAPLEFORD. A fee of one and a half guineas per session is offered and a full pension of £100 per annum is payable. The appointment is for one year.

Applications should be sent to the undersigned and should be accompanied by testimonials and a copy of not more than three recent testimonials.

W. L. UNDERWOOD
Clerk of the Joint Committee
County Buildings, Stafford
May 4th 1937

ROYAL AIR FORCE MEDICAL SERVICE

Applications are invited from medical men for appointment to commissions in the Medical Branch of the Royal Air Force for entry in September, 1937

Candidates must be of pure European descent. They must be British Subjects, the sons of British Subjects and registered under the Medical Acts

Candidates must be under 28 years of age and will be selected after interview by a selection board without competitive examination

Hospital appointments held since qualifying will, under certain conditions, qualify candidates for antedate of commission up to a maximum of one year, the age of entry may, if necessary, be increased by a period equal to the "antedate"

Selected candidates will be appointed to short service commissions (for 3 years extendible to 5 years) followed by 4 years' service in the Reserve, and will be eligible to be considered for Permanent Commissions during their second or third year of service. Officers not selected for permanent commissions receive gratuity as follows, on transferring to the Reserve—

On completion of 3 years—£400

On completion of 5 years—£1,000

Copies of the regulations for entry and conditions of service, including rates of pay and allowances, also form of application, may be obtained on application from—

The Secretary,
Air Ministry (DMS),
Adastral House,
Kingsway, WC2

Completed applications from intending candidates for the vacancies in September, 1937, must be received in the Air Ministry not later than the 15th of July, 1937

SURREY COUNTY COUNCIL PUBLIC HEALTH DEPARTMENT KINGSTON AND DISTRICT HOSPITAL (600 Beds) APPOINTMENT OF RESIDENT ASSISTANT MEDICAL OFFICER.

Applications are invited from registered Medical Practitioners for the above appointment. The Hospital is approved by the General Nursing Council and the Ministry of Health as a complete training school for nurses and by the Central Midwives Board for the training of midwives. The work undertaken includes surgery, medicine and midwifery.

The Medical Officer appointed will work mainly in acute Medical Wards and candidates must have held a previous appointment as House Physician.

The appointment is for a period of six months renewable for a further period of six months, and the gross salary is at the rate of £375 per annum less a deduction of £15 in respect of board (lodging and laundry).

Applicants must state age, qualifications and experience, and enclosing copies of not more than three recent testimonials should be endorsed. Resident Assistant Medical Officer and sent to the Medical Superintendent, Kingston and District Hospital, Wellington Avenue, Kingston-on-Thames, to be received not later than June 15, 1937.

County Hall, DUDLEY AUKLAND
Kingston-on-Thames Clerk of the Council
May 15th 1937

SURREY COUNTY COUNCIL JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER

There is a vacant Medical Officer (either sex) required at County Sanatorium (100 bed) situated near Coalbrook. Resident experience in general hospital essential. Appointment is for a period of six months renewable for further six months.

Salary £340 per annum less a deduction of £100 per annum in respect of board, lodging and laundry.

Appointments subject to the Staffing Regulations of the County Council.

Forms of application from County Medical Officer at County Hall, Kingston-on-Thames, to which forms should be returned with copies of three recent testimonials by Monday, June 14th.

DUDLEY AUKLAND
Clerk of the County Council
Kingston-on-Thames
May 15th 1937

HOLLAND (LINCOLNSHIRE) COUNTY COUNCIL ASSISTANT MEDICAL OFFICER OF HEALTH (male)

Applications are invited from duly qualified and registered medical practitioners (under 40 years of age) for the above appointment.

The salary will be £600 per annum rising by annual increments of £25 to £700 per annum.

The duties of the post include school medical inspections, the carrying out of work under the maternity and child welfare and tuberculosis schemes and such other duties as may be required by the Council.

The person appointed will devote the whole of his time to the duties of his office, act under the direction and supervision of the County Medical Officer and reside in such part of the district as may be required.

Post-graduate experience in the diagnosis and treatment of tuberculosis and the possession of a Diploma in Public Health will be additional qualifications.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of no more than three testimonials, must be addressed to the County Medical Officer of Health, County Hall, Boston, Lincolnshire, and received by him not later than June 14th 1937.

County Hall, Boston, Lincolnshire
May 15th 1937 W. G. BOOTH
County Medical Officer of Health

CITY OF MANCHESTER BOOTH HALL HOSPITAL FOR CHILDREN (70 Beds)

The Public Health Committee invites applications from registered medical practitioners for the post of RESIDENT SURGICAL OFFICER at the above-named hospital.

The salary for the appointment is £400 per annum rising by £25 annually to a maximum of £425 per annum, with board, residence and laundry in addition, subject to the Manchester Corporation's conditions of service.

Applicants must hold a higher qualification in surgery and must have had previous experience in residential hospital posts.

Full information and forms of application may be obtained from the Medical Officer of Health, Sanatorium House, Quay Street, Manchester 3, and applications for the post must be received by him not later than June 15th 1937.

County Hall, Manchester
May 15th 1937 L. W. BRETHERTON
Town Clerk

BOROUGH OF PUDSEY APPOINTMENT OF MEDICAL OFFICER OF HEALTH

Applications are invited from duly qualified and registered Medical Practitioners who are also registered in the Medical Register as the holder of a Diploma in Sanitary Science, Public Health or State Medicine for the post of Medical Officer of Health of the Borough of Pudsey. The appointment is subject to the provisions of the Local Government Act 1933 and the Sanitary Officers (Outside London) Regulations 1935.

The person appointed will be required to perform all the duties imposed on a Medical Officer of Health under relevant Acts and Orders, to undertake administration of the School Medical Service, Maternity and Child Welfare Service, and as Chief Medical Adviser to the Local Authority, and will also be required to carry out such other duties as the Council may, with the consent of the Ministry of Health (where necessary) from time to time direct.

The person appointed must reside within the Borough, must not engage in private practice and must devote his whole time to the duties of the office.

The salary will be at the rate of £800 per annum. A list of the duties and form of application will be supplied on application to the undersigned. Canvassing either directly or indirectly will be a disqualification.

Applications on the prescribed form accompanied by not more than three recent testimonials, and endorsed by the undersigned Medical Officer, must be delivered to the undersigned on or before June 14th 1937.

Town Hall, Pudsey
May 26th 1937 R. S. BISHOP
Town Clerk

INSTITUTE FOR THE SCIENTIFIC TREATMENT OF DELINQUENCY (PSYCHOPATHIC CLINIC) 8 Portman Street London W1

Applications are invited for the post of part time MEDICAL REGISTRAR at the above Institute.

Candidates should have experience in psychiatry, psycho-therapy and neurology, and must be engaged exclusively in the practice of psychological medicine. The duties will include three evening sessions per week. A private consulting practice will be allowed. Salary £300. Date of commencement by arrangement.

Applications should reach the undersigned (from whom forms with full particulars may be obtained) on or before June 21st.

L. M. JAMES
General Secretary

HIS MAJESTY'S COLONIAL SERVICE COLONIAL MEDICAL SERVICE.

A vacancy exists for an ASSOCIATE PROFESSOR OF MEDICINE, COLLEGE OF MEDICINE, SINGAPORE STRAITS SETTLEMENTS Qualifications

Candidates must be British subjects of European parentage about 30 to 35 years of age and must be Members or Fellows of one of the Royal Colleges of Physicians. They are required to have had experience in the neurological wards of a teaching hospital and to be able to undertake investigation and teaching. Preference will be given to candidates who have served on the medical staff of a teaching hospital but no specialist knowledge of experimental pharmacology is required.

Salaries and Terms of Appointment

Engagement is for a period of three years in the rate of £1,190 a year rising by annual increments of £35 to £1,260 a year and if the officer's services are in every way satisfactory and his engagement is continued after the expiry of that period he will be placed on the permanent and pensionable establishment and will draw salary at the rate of £1,295 a year rising by an annual increment of £35 to £1,330 a year.

Quarters

Turned quarters are provided at a small rental.

Passages

Free passages will be provided for the officer and his family not exceeding four persons besides himself on first appointment and when proceeding on or returning from leave.

Duties

The officer will work under the direction of the Professor of Medicine and assist generally in the teaching of medicine to undergraduates and post-graduates and in the investigation and care of patients in the medical unit and elsewhere in the hospitals. He will be required to investigate and treat neurological cases in the hospitals and to undertake the teaching of neurology. He will also be required to teach applied pharmacology and therapeutics.

Further particulars and forms of application may be obtained from the DIRECTOR OF RECRUITMENT (COLONIAL SERVICE) 2 Richmond Terrace Whitehall London S.W.1

HIS MAJESTY'S COLONIAL SERVICE COLONIAL MEDICAL SERVICE

A vacancy exists for a MEDICAL SUPERINTENDENT of the LUNATIC ASYLUM, MALACCA.

Qualifications—Candidates must be British subjects in possession of a Diploma in Psychological Medicine and have had experience of the treatment of the insane in a British Mental Hospital and at least five years administrative experience.

Salary—£750 to £850 by annual increments of £50.

Quarters—Unfurnished quarters are provided free.

Passages—Free passages will be provided on first appointment for the officer and his family not exceeding four persons besides himself.

Terms of Appointment—The appointment is provisional subject to a period of two years probation.

Duties—The general direction and superintendence of the Asylum.

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service) 2 Richmond Terrace Whitehall London S.W.1

BOROUGH OF HESTON AND ISLEWORTH

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified medical men with a Public Health qualification for the position of Assistant Medical Officer of Health and School Medical Officer.

Candidates will be required to carry out medical inspection of school children, bacteriological work, child welfare work, and administer dental anaesthetics and perform such other duties as may be allotted as a member to the Medical Officer of Health and School Medical Officer.

The person appointed will be required to devote his whole time to the duties and will be allowed to engage in private practice. The salary will be at the rate of £1,000 per annum rising to £1,200 per annum by increments of £25 per annum.

A deduction of 5 per cent. will be made from the salary in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922, which has been adopted by the Council and the appointment will be subject to a period of medical examination in connection therewith.

Copies of the appointment form and terms of appointment may be obtained from the Medical Officer of Health 94a, Bala Road, Heston.

Applications should be sent to the Council of the Borough of Heston and Isleworth, 100, Victoria Road, Heston, by 10.15 a.m. on June 11, 1937.

COUNCIL HESTON AND ISLEWORTH
J. H. W. JONES, Town Clerk

SOUTHERN RHODESIA MEDICAL SERVICE GOVERNMENT MEDICAL OFFICER

Applications are invited from fully qualified medical Practitioners for appointment as a GOVERNMENT MEDICAL OFFICER in the Southern Rhodesia Medical Service.

Salary will be on the scale £600-£25-£750 per annum. There is also a senior grade (£750-£25-£900) to which promotions are made as vacancies occur. Salary will commence from the date of assumption of duty in Southern Rhodesia. In addition private practice is allowed.

The successful applicant will be required to sign an agreement for three years service in the first instance and thereafter may make application to be placed on the pensionable establishment.

A free second-class steamship passage to Cape Town and first-class railway ticket thence to Southern Rhodesia will be provided.

Conveying either directly or indirectly will disqualify applicants.

The applicants should state the date on which they would be prepared to leave England if appointed.

Applications stating age, qualifications and experience together with copies of testimonials, should reach the Official Secretary Office of the High Commissioner for Southern Rhodesia, Rhodesia House, 429 Strand, London W.C.2 (from whom further particulars and application form may be obtained) not later than June 15th.

LIVERPOOL COUNTY BOROUGH

LOCAL EDUCATION AUTHORITY

ASSISTANT SCHOOL MEDICAL OFFICERS

Applications are invited for TWO ASSISTANT SCHOOL MEDICAL OFFICERS in the Department of the Medical Officer to the Local Education Authority at a salary in each case of £500 per annum rising by annual increments of £25 to £700 per annum.

(Where a successful candidate holds a similar appointment under another Local Education Authority and receives a salary in excess of the advertised minimum a commencing salary of not less than the salary which the candidate is receiving under his (or her) existing appointment (not exceeding the maximum under the Liverpool Scale) may be paid.)

Candidates must be registered medical practitioners and must have had at least three years experience. It is desirable that they should have had some special experience in school hygiene and in diseases of children.

The Officers appointed will be required to reside within the City and devote whole time service to the Local Education Authority under the direction of the Medical Officer to the Local Education Authority and will not be allowed to undertake any private practice.

The appointments will be subject to the Local Government and Other Officers Superannuation Act 1922 and the Standing Orders of the City Council.

Form of application which may be obtained by forwarding a stamped addressed foolscap envelope, should be returned together with copies of three recent testimonials, to the undersigned not later than June 21st 1937 and endorsed Assistant School Medical Officer.

The conveying of Members of the Education Committee or the City Council is strictly prohibited and will be considered a disqualification.

W. H. BAINES
Town Clerk and Clerk to the Local Education Authority

Municipal Buildings Liverpool 2.
June 4th 1937

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners (male) for the post of ASSISTANT TUBERCULOSIS MEDICAL OFFICER (resident) at the Sully Hospital, Sully, Glam. (400 beds) for the treatment of pulmonary tuberculosis) situated between Penarth and Barry.

Salary £500 per annum rising by annual increments of £25 to £700 per annum less the value of emoluments amounting to £100 per annum.

Preferably candidates should have six months' resident experience in a special institution (Hospital or Sanatorium) for the treatment of pulmonary and/or non-pulmonary tuberculosis with eighteen months' experience in general clinical work of which six months' should have been spent in a hospital not confined to the treatment of tuberculosis. Experience in anaesthetics also desirable.

The person appointed to the above post will be required to pass a medical examination and to receive 5 per cent of his salary (the 5 per centum being paid of the actual amount and not of the gross) in the form of a Medical Pension in the event of his death or retirement.

Applications should be sent to the Secretary, The King Edward VII Welsh National Memorial Association, 10, Victoria Road, Heston, by 10.15 a.m. on June 11, 1937.

W. H. BAINES, Secretary
Municipal Buildings Liverpool 2.

COUNTY BOROUGH OF ST HELENS ASSISTANT MEDICAL OFFICER OF HEALTH (female)

(Amended Advertisement)

Applications are invited for the post of Assistant Medical Officer of Health (female). The duties will be mainly in connection with Maternity and Child Welfare and the School Medical Service together with such other duties as the Medical Officer of Health may direct. Candidates must have special experience in midwifery and in the diseases of children.

The salary will be at the rate of £500 per annum plus travelling expenses rising by annual increments of £25 to a maximum of £700 per annum and in the case of a candidate now in the service of another authority on a rising scale recognition may be given to past service with such authority in fixing the commencing salary.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922, and to the successful candidate passing the necessary medical examination.

Forms of application may be obtained from the Medical Officer of Health Town Hall St. Helens and completed applications accompanied by copies of not more than three recent testimonials should reach him not later than June 18th 1937.

FRANK HAUXWELL

Medical Officer of Health

DEVON COUNTY COUNCIL (Medical Department)

ASSISTANT COUNTY MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners for the appointment of Assistant County Medical Officer.

The salary which is £500 rising by annual increments of £25 to £700.

The appointment will be subject to three months notice on either side. The person appointed will be required for duties in connection with the medical inspection of school children and must have special postgraduate experience in Refraction work. A Diploma in Public Health is desirable.

The successful candidate must provide a motor car for his work. Travelling and subsistence allowance will be paid in accordance with the Devon County Council Scale.

The successful candidate will be required to pass a medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Forms of application and conditions of appointment may be obtained from the undersigned to whom they should be returned completed by June 21st 1937 together with copies of not more than three recent testimonials.

4 Batfield Crescent L. MIERDITH DAVIES
Exeter County Medical Officer

DEVON COUNTY COUNCIL (Medical Department)

SCHOOL DENTIST

Applications for the appointment of a School Dentist are invited from registered Dental Surgeons.

Salary £500 per annum rising by annual increments of £25 to £650. The person appointed will be required to provide his own motor car and will be allowed subsistence and travelling expenses in accordance with a scale approved by the Devon County Council.

The successful candidate will be required to pass a medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Forms of application and conditions of appointment may be obtained from the undersigned to whom they should be returned completed by June 21st 1937 together with copies of not more than three recent testimonials.

4 Batfield Crescent L. MIERDITH DAVIES
Exeter County Medical Officer

CITY OF MANCHESTER Withington Hospital (1,293 Beds)

The Public Health Committee invites applications from registered medical practitioners for the following posts at the above-named hospital.

RESIDENT OBSTETRICAL OFFICER Salary £850 per annum rising by annual increments of £5 to a maximum of £1,000. Candidates must have had previous experience in obstetrics and gynaecology and preference will be given to candidates holding a higher qualification.

RESIDENT ASSISTANT MEDICAL OFFICER Salary £750 per annum. This appointment will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter.

Board residence and laundry is provided in addition to the salaries stated and each post is subject to the Manchester Corporation Code of Officers' Regulations.

Further particulars and forms of application may be obtained from the Medical Officer of Health, 11, St. James' Street, Manchester 1, and must be sent to the post not later than June 11, 1937.

11 St. James' Street, Manchester 1.
May 11, 1937

COUNTY COUNCIL OF MIDDLESEX. CENTRAL MIDDLESEX COUNTY HOSPITAL. WILLESDEN

Applications are invited for the following appointments at the above hospital. Candidates must be registered medical practitioners unmarried and must have held resident appointments in a general hospital.

TWO RESIDENT ASSISTANT MEDICAL OFFICERS (Male)

Salary £400 per annum rising by annual increments of £25 to £475 per annum together with board lodging and laundry valued at £100 per annum.

The duties of one of the appointments are mainly surgical and candidates must have had special experience in surgery.

For the other appointment candidates must be experienced in the administration of anaesthetics by modern methods and special qualification in anaesthetics is desirable.

The appointments which do not carry any rights under the Council's Superannuation Act are for a period of four years at the end of which period the officers will leave the Council's service. In a special case the Council may decide to retain an officer on the established staff in which case the salary will be increased to a maximum of £500 per annum.

RESIDENT CASUALTY MEDICAL OFFICER.

Salary £350 per annum with board lodging and laundry valued at £100 per annum.

The duties of this officer will be carried out mainly in the admission and outpatient department. Higher qualifications are desirable and previous hospital and surgical experience essential.

The appointment is for a period of six months with the option of renewal for a further period of six months if desired and on the recommendation of the Medical Superintendent.

Each of the appointments which will be subject to medical examination will be held during the pleasure of the Council and are terminable by one month's notice on either side.

The officers appointed will work under the direction of the Medical Superintendent of the Hospital and will devote their whole time to their official duties.

Applications stating age qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 12th. Application forms are not provided. Envelopes must be endorsed "Resident Medical Officer (Surgical) (Anaesthetic) or (Casualty) Central Middlesex County Hospital" as the case may be. Relation ship to any member or officer of the Council must be disclosed in the application.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.
Clerk of the County Council

Middlesex Guildhall
Westminster SW1
May 21st 1937

COUNTY COUNCIL OF MIDDLESEX VISITING EAR, NOSE AND THROAT SURGEON

Applications are invited for the above appointment at Central Middlesex County Hospital Willesden.

The Surgeon appointed will be required to attend for one session per week at the hospital. Remuneration will be at the rate of £3 3s per session. The appointment which does not carry any superannuation rights will be held during the pleasure of the Council and terminable by one month's notice on either side.

Applications stating age qualifications and experience accompanied by copies of not more than three recent testimonials must be received by the undersigned not later than June 12th. Application forms are not provided. Envelopes must be endorsed "Ear, Nose and Throat Surgeon Central Middlesex County Hospital" Relation ship to any member or officer of the Council must be disclosed in the application.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.
Clerk of the County Council

Middlesex Guildhall
Westminster SW1
May 21st 1937

BRITISH POSTGRADUATE MEDICAL SCHOOL

There are three vacancies for HOUSE SURGEONS to the SURGICAL UNIT British Postgraduate Medical School, Hammersmith Hospital.

The appointments are for a term of 12 months and the holder may apply for a further period of 12 months. Salary at the rate of £100 per annum with board, lodging and laundry. Duties to commence on 1st July 1937.

Applications are invited from General Surgeons, who have held appointments in a General Hospital and who have held appointments in a General Hospital and who have held appointments in a General Hospital.

Applications should be sent to the Director of the British Postgraduate Medical School, Hammersmith Hospital, 100, W. 12th St., London, W.12.

COUNTY BOROUGH OF CROYDON Croydon Mental Hospital Upper Warrington Surrey

APPOINTMENT OF ASSISTANT MEDICAL OFFICER

The Visiting Committee of the Croydon Mental Hospital are prepared to receive applications from Medical Men for the appointment of Assistant Medical Officer at the Croydon Mental Hospital. No married quarters are provided.

The salary will be at the rate of £400 per annum rising by annual increments of £25 each to a maximum of £500 per annum and the age of the candidates should not exceed 35. A further £50 per annum will be paid if in possession of the D.P.M.

Furnished apartments will be provided with board and washing and for the purpose of superannuation will be valued at £150 per annum.

Candidates must be registered under the Medical Act and preference will be given to those candidates who have held the post of House Surgeon or House Physician at a General Hospital. Previous experience in a Mental Hospital is not essential.

The appointment will be subject to the provisions of the Asylums Officers Superannuation Act 1909.

Applications to be made on forms to be obtained by sending a stamped addressed foolscap envelope to the undersigned with copies (not originals) of not more than two testimonials of recent date not later than 10 o'clock in the forenoon of Thursday June 10th 1937 endorsed "Croydon Mental Hospital Assistant Medical Officer".

Canvassing in any form is prohibited.

JOHN M. NEVNHAM

Clerk to the Visiting Committee.

Town Hall Croydon
May 22nd 1937

COUNTY BOROUGH OF PRESTON ASSISTANT SCHOOL MEDICAL OFFICER

The Council invite applications from Registered Medical Practitioners (female) for the position of ASSISTANT SCHOOL MEDICAL OFFICER at a salary of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum.

The duties are mainly in connection with the School Medical Service but a certain amount of time is given to infant welfare work and antenatal consultations, diphtheria immunisation and the treatment of venereal diseases.

Candidates must have had not less than three years post-graduate experience including resident hospital appointments and must have had special experience in refraction work. Special experience in the diseases of children will be an advantage.

The person appointed will be required to pass a medical examination and to contribute to the Council's Superannuation Fund.

Application forms together with further particulars can be obtained from the undersigned to whom they must be returned endorsed "School Medical Officer" on or before noon on Monday June 7th 1937.

HERBERT E. NUTTER, Town Clerk
Municipal Building Preston
May 24th 1937

CITY AND COUNTY OF NEWCASTLE UPON TYNE BARRASTFORD SANATORIUM (100 Beds)

RESIDENT MEDICAL ASSISTANT

Applications are invited for the above post from duly qualified and registered Medical Practitioners who have held a previous resident appointment.

The sanatorium is fully equipped for the treatment of male and female cases of pulmonary tuberculosis.

The salary in respect of the appointment which is for one year only is £250 per annum with board, lodging, etc. The post does not provide facilities for the taking of the D.P.H.

Applications on the prescribed form which can be obtained on application to the Medical Officer of Health, Town Hall, Newcastle-upon-Tyne must be submitted not later than Saturday June 12th 1937.

CITY OF BIRMINGHAM Dudley Road Hospital, (19 Beds)

Applications are invited from fully qualified Medical Practitioners for the whole-time appointment as JUNIOR MEDICAL OFFICER (Male) at the Dudley Road Hospital, Birmingham. The appointment will be for a period of 12 months but may be extended for a further period of not exceeding six months.

Salary £150 per annum plus an additional £20 per annum. The officer appointed will be required to attend to the Council at the Dudley Road Hospital.

Applications should be sent to the Medical Officer of Health, Dudley Road Hospital, Birmingham, on or before Monday June 14th 1937.

Canvassing in any form is prohibited.

AMENDED ADVERTISEMENT COUNTY OF DORSET APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER and MEDICAL OFFICER OF HEALTH for THE PORTLAND URBAN DISTRICT

The Dorset County Council invite applications from Registered Medical Practitioners with at least three years experience since qualification and not exceeding 40 years of age for the joint appointment of Male Assistant Medical Officer for the Administrative County of Dorset and Medical Officer of Health for the Portland Urban District (population 12,000).

The salary for the combined appointment will be £800 per annum together with a travelling allowance of £50 per annum and necessary out-of-pocket expenses according to the scales now in force.

Candidates must be fully qualified medical men with experience in public health duties and must hold the Diploma in Public Health. Experience in the treatment of VENEREAL DISEASES as required by the Local Government (Qualifications of Medical Officers) Regulations 1936 will be considered an important additional qualification.

The candidate appointed will as regards his duties as Assistant County Medical Officer act under the direction of the County Medical Officer of Health and will be required to perform such duties as may be from time to time prescribed. As regards his duties as Medical Officer of Health for Portland he will be subject to the control and direction of the Urban District Council.

The post will be designated under the Local Government and Other Officers Superannuation Act 1922 and the successful candidate will be required to pass a medical examination. He will also be required to reside either in, or in the vicinity of Portland.

Candidates must apply to their own hand writing in the prescribed form to be obtained on receipt of a stamped addressed foolscap envelope, from the undersigned by whom applications accompanied by copies of not more than three recent testimonials must be received not later than Saturday June 26th 1937.

Canvassing in any form will be a disqualification. County Offices, C. P. BRUTTON
Dorchester, Clerk of the County Council.
May 21st, 1937

CITY OF PLYMOUTH CITY HOSPITAL 570 Beds

DEPUTY MEDICAL SUPERINTENDENT

Applications are invited from fully qualified male Medical Practitioners for the post of Deputy Medical Superintendent at the City Hospital Plymouth. The appointed candidate will work under the direction of the Medical Superintendent. The duties are mainly medical and candidates should have had medical experience, and preference will be given to candidates possessing a higher medical qualification.

Salary at the rate of £470 per annum with full residential emoluments.

The appointment will be held during the pleasure of the Council and will be subject to—

(1) The candidate passing a medical examination (2) To the provisions of the Local Government and Other Officers Superannuation Act.

(3) Six weeks notice on either side.

The Officer will be required to refund to the Council all fees allowances and emoluments other than the foregoing received by him. Forms of application may be obtained from the undersigned and should be returned accompanied by copies of not more than three recent testimonials not later than June 12th 1937.

T. PEIRSON

Medical Officer of Health
Town Hall, Stonehouse
Plymouth.

CITY OF BIRMINGHAM SEELY OAK HOSPITAL, 1570 Beds

JUNIOR MEDICAL OFFICERS (Male)

Applications are invited from fully qualified Medical Practitioners for the whole-time appointment of Junior Medical Officers (Male) at the Seely Oak Hospital, Birmingham. The appointments will be for periods of 12 months in the first instance but may be extended at the end of that time for further periods of not exceeding six months.

Salary at the rate of £700 per annum and full residential emoluments.

The Officers appointed will be required to refund to the Council all fees allowances and emoluments other than the foregoing received by them. Further particulars may be obtained from the Medical Superintendent at Seely Oak Hospital to whom applications should be sent, stating age and qualifications with copies of recent testimonials. Applications should be forwarded not later than Wednesday June 10th 1937.

J. H. C. WILSHIRE,
Town Clerk

The Council House, Birmingham
June 1st 1937

COUNTY COUNCIL OF DURHAM

ASSISTANT WELFARE MEDICAL OFFICER

The County Health Committee invite applications for an Assistant Welfare Medical Officer (woman) at a commencing salary of £500 per annum rising by annual increments of £25 to £700 per annum. Travelling allowance will be paid by the County Council in accordance with a scale to be approved from time to time.

The appointment will be held subject to three calendar months' notice on either side and to the following conditions:

(1) The officer appointed must be a registered Medical Practitioner between the ages of 25 and 45 years must devote the whole of her time to the duties of the office and must not engage in private practice.

(2) She should either have had a previous appointment as Medical Officer of an ante-natal clinic, with the approval of the Minister of Health or have had at least three years' experience in the practice of her profession and special experience of practical midwifery and ante-natal work. The holding of a Diploma in Public Health will be deemed an additional qualification for the post.

(3) She will be subject to the directions of the County Medical Officer.

(4) She will be required to reside in Durham City or such other place as required by the Council.

(5) She must be prepared if called upon to act as locum tenens to other members of the medical staff of the County Medical Officer.

(6) The appointment will terminate on marriage.

(7) The candidate appointed will be required to pass the County Council's medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Applications endorsed Assistant Welfare Medical Officer with copies of not more than three recent testimonials must be addressed to the County Medical Officer, Shire Hall, Durham, and must be received by him not later than Saturday June 19th 1937.

Shire Hall J. K. HOPE
Durham Acting Clerk of the County Council
May 27th 1937

COUNTY COUNCIL OF DURHAM

DEPUTY COUNTY MEDICAL OFFICER OF HEALTH

The County Health Committee invite applications for the appointment of a Deputy County Medical Officer of Health at a salary of £960 per annum. Reasonable travelling and out-of-pocket expenses will be paid by the County Council.

Applicants must be duly registered medical practitioners holding a degree or diploma in Public Health and the gentleman appointed will be required to devote the whole of his time to the duties of the office and to reside in the City of Durham or other approved centre.

He will be expected to undertake any duties required of him by the Council bearing on the health and medical services of the County, and will act under its administrative control and be responsible to the County Medical Officer of Health for his duties.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to a medical examination as required by the Council for the purposes of the Act, and the statutory conditions to the superannuation fund under that Act will be deducted from the salary.

Applications marked Deputy County Medical Officer of Health, together with copies of not more than three recent testimonials must be sent to the County Medical Officer of Health, Shire Hall, Durham, not later than Saturday June 19th 1937.

Shire Hall J. K. HOPE
Durham Acting Clerk of the County Council
May 27th 1937

COUNTY BOROUGH OF BRIGHTON

BRIGHTON MUNICIPAL HOSPITAL

THIRD RESIDENT ASSISTANT MEDICAL OFFICER (male)

Applications are invited for the above post at the Brighton Municipal Hospital, which is a General Hospital with 400 beds, with board residence and laundry provided.

The appointment is a whole-time one and will be for a period of one year.

Candidates must have had a hospital appointment at a recognised hospital and preference will be given to those who have had practical experience in infectious diseases and in ante-natal work. The candidate must be a registered medical practitioner.

The post is advertised under the Local Government and Other Officers Superannuation Act 1922, and the successful candidate will be required to pass a medical examination to be held on or about June 15th 1937.

Particulars and form of application can be had from the undersigned.

Applications should be sent to the undersigned.

JAS. H. FORTWELL

June 11 1937

URBAN DISTRICT COUNCIL OF WEMBLEY

APPOINTMENT OF WOMAN ASSISTANT MEDICAL OFFICER OF HEALTH

Applications are invited for the appointment of whole time woman Assistant Medical Officer of Health.

The duties will be mainly in connection with Maternity and Child Welfare Services together with such other duties as the Medical Officer of Health with the consent of the Council may assign from time to time.

Candidates must subsequent to qualification have had at least three years' experience in the practice of their profession and special experience of practical midwifery and ante-natal work.

Candidates should have had practical hospital experience in Maternity and Child health work and preference will be given to applicants holding diplomas in midwifery and child health subjects and also to those holding a Diploma in Public Health.

The salary will be at the rate of £500 per annum exclusive of travelling and other expenses and will rise by annual increments of £25 to a maximum of £700 per annum.

The successful candidate will be required to devote the whole of her time to the duties of the Council and shall not engage in private practice.

The appointment will be terminable by one calendar month's notice on either side and will be subject to the Council's Staff Regulations and to the provisions of the Local Government and Other Officers Superannuation Act 1922 for which purpose the successful candidate will be required to pass a medical examination.

Applications on forms to be obtained from the undersigned accompanied by copies of not more than three testimonials must reach the undersigned not later than noon on Monday June 14th 1937 endorsed Assistant Medical Officer of Health.

Canvassing in any form will disqualify candidates.

KENNETH TANSLEY
Clerk of the Council
Council Offices Wembley
May 28th 1937

ESSEX COUNTY COUNCIL

APPOINTMENT OF MALE WHOLETIME VENEREAL DISEASES MEDICAL OFFICER

The County Council of the Administrative County of Essex invite applications for the above appointment from Registered Medical Practitioners qualified as a Venereal Diseases Medical Officer under the Local Government (Qualification of Medical Officers and Health Visitors) Regulations, 1922.

The salary will be £750 per annum and will rise subject to satisfactory service by annual increments of £25 to £937 10s. per annum.

At the discretion of the Council either a car will be provided or payment made for the use of the successful candidate's own car in connection with county duties.

The person appointed will be required under the County Medical Officer of Health to render general administrative assistance in connection with the diagnosis and treatment of venereal diseases and to undertake duties at the Council's Venereal Diseases Clinics. Preference will be given to candidates with previous experience in a hospital or a large Public Health Department.

The appointment will be held by the successful candidate during the pleasure of the Council and will be terminable by the Officer by three months' notice in writing.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under the Local Government and Other Officers Superannuation Act 1922.

The appointment will be subject to the Council's Staff Pay Rules and Regulations a copy of which will be forwarded on application.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of not more than three testimonials (which will not be returned) should be addressed to me and be inserted in the Council's Office not later than 4.30 p.m. on Monday June 21st 1937.

County Hall E. S. HOLCROFT
Chelmsford Clerk of the County Council
May 11 1937

DISTRICT INFIRMARY

ASHTON UNDER LYNE (General Hospital 100 Beds)

MALE CASUALTY HOUSE SURGEON required for June 1937. Applicant must have a hospital appointment. Salary at the rate of £150 with the usual residential allowances.

Applicants to be sent to FRANK OLIVER, Central or District Clerk and Secretary.

ROYAL LEE AND LAR HOSPITAL, FRIDLEY

100 Beds. General Hospital. SURGEON. F. M. A. S. (Male) 30 to 40 years. Salary £150 per annum with board and laundry. Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

LANCASHIRE COUNTY COUNCIL

Park Hospital, Davyhulme near Manchester

APPOINTMENT OF SECOND RESIDENT MEDICAL OFFICER

Applications are invited from registered Male Medical Practitioners for the appointment of Second Resident Medical Officer at the above Hospital. Candidates must be unmarried.

The appointment will be in the first instance be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Salary £25 per annum together with the usual residential allowances.

The Hospital comprises 500 beds for acute cases, and is fully equipped in every respect.

The duties will include in addition to medical work those of House Surgeon to the Visiting Ear, Nose and Throat Surgeon.

The Hospital is recognised as a complete Training School for Nurses.

Forms of application may be obtained from the County Medical Officer of Health Hospital and Medical Department County Offices Preston to whom all applications accompanied by copies of not more than two recent testimonials must be forwarded so as to be received not later than Monday June 21st 1937.

County Offices GEORGE ETHERTON
Preston Clerk of the County Council
May 11st 1937

CITY OF SALFORD

INFECTIOUS DISEASES HOSPITAL (300 Beds)

Applications are invited for the post of JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male). Salary £700 per annum plus board residence and laundry. The appointment will be for one year.

Form of application may be obtained from the Medical Officer of Health 143 Regent Road Salford 5 in whom it must be returned endorsed Junior Assistant Resident Medical Officer not later than June 18th 1937.

H. H. TOMSON Town Clerk

CITY OF SALFORD

ASSISTANT RESIDENT MEDICAL OFFICER HOPE HOSPITAL (1700 Beds)

Applications are invited for the post of Assistant Resident Medical Officer (male) at Hope Hospital Salford. The appointment will be for a period of six months. One appointment will be made immediately and another to commence on July 20th 1937. Salary £800 per annum plus board residence and laundry.

Further particulars and form of application may be obtained from the Medical Officer of Health 143 Regent Road Salford 5. Candidates to whom it should be returned not later than June 19th 1937.

H. H. TOMSON Town Clerk

CLAYTON HOSPITAL, WAKEFIELD

(150 Beds 4 Residents)

Required a SENIOR HOUSE SURGEON (male) with experience in fractures and emergency surgery. Salary at the rate of £2.0 p.a. with board residence and laundry. The appointment is for one year with an option of extension. The selected candidate will be expected to take up the duties on July 4th.

Applications stating age, qualifications, experience and nationality and accompanied by three testimonials to be sent to the

Clayton Hospital ACTING SECRETARY Wakefield

CLAYTON HOSPITAL, WAKEFIELD

There is a vacancy for a FOURTH HOUSE SURGEON (Male British) for which post applications are invited. The appointment is for six months in the first instance and the salary is at the rate of £1.0 p.a. per annum together with board residence and laundry.

Applications with copies of three recent testimonials should be sent to the undersigned as early as possible. The selected candidate will be expected to take up the duties on July 1st.

J. H. GRIEVALS

President

MAIDENHEAD HOSPITAL, BRACKSHILL

(100 Beds)

An appointment is sought for the post of RESIDENT MEDICAL OFFICER (Male) 30 to 40 years. Salary at the rate of £1.0 p.a. per annum together with board residence and laundry. Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

Applications to be sent to the undersigned not later than 4.30 p.m. on Monday June 21st 1937.

O. C. HOWELL
Secretary, Summer 1901

CEFN COED HOSPITAL, SWANSEA

(Swansea County Borough Mental Hospital)

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Commence the salary of £400 per annum rising by annual increments of £25 to £500 per annum with the usual residential emoluments consisting of board, lodging, laundry and attendance which are valued for superannuation purposes at £100 per annum. An additional £50 per annum will be paid if the successful candidate holds or obtains no approved Diploma in Psychological Medicine.

Preference will be given to those candidates who have experience as House Surgeon or House Physician in a General Hospital.

The appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909.

Applications giving all necessary particulars together with copies of two recent testimonials, should be sent to the Medical Superintendent not later than June 12th 1937.

H. L. LANG-COATH
Clerk to the Visiting Committee

BURY INFIRMARY (LANCS)

(127 Beds)

APPOINTMENT OF CASUALTY OFFICER (MALE)

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of an R.S.G., a House Surgeon, a House Physician and a Casualty Officer.

In addition to his duties in the Casualty Department the Casualty Officer is also responsible for the In-patient and Out-patient work in connection with the Eye and Ear, Nose and Throat Departments.

The appointment is for six months at a salary at the rate of £150 per annum with board, residence and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age, qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible endorsed "Casualty Officer".

Further particulars may be had on application
H. WILKINSON, Supt.

NORFOLK AND NORWICH HOSPITAL

NORWICH

Applications are invited for the following posts: TWO GENERAL HOUSE SURGEONS. For one of these posts previous obstetrical experience desirable.

Salary for each post £120 per annum with board, residence and laundry.

Candidates (Male) must be unmarried and must possess registered qualifications. Preference will be given to candidates who have held previous Hospital appointments.

Applications stating age, nationality etc. together with copies of testimonials, should reach the undersigned by first post on Tuesday June 8th 1937.

FRANK INCH
House Governor and Secretary

May 19th 1937

ROYAL SUSSEX COUNTY HOSPITAL

BRIGHTON

(Beds 272, 518 R.M.O.s)

CASUALTY HOUSE SURGEON (Male) required. Salary £100 per annum with board, residence and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire, and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications, with copies of recent testimonials to be forwarded to the undersigned.

L. L. W. LANCASTER-GAYE
Secretary Superintendent

PONTEFRACI GENERAL INFIRMARY

(Yorks)

JUNIOR RESIDENT MEDICAL OFFICER (Male, unmarried), duly qualified registered Medical Practitioner.

Commencing salary £150 per annum with residence and laundry.

The appointment is for six months from July 1st 1937.

Applications, with copies of testimonials and not later than June 1st 1937.

DAVID I. RICHARDS
Secretary Superintendent

THE CHILDREN'S HOSPITAL, SHEFFIELD

(142 Beds)

HOUSE SURGEON required immediately. Salary £100 per annum with board, residence and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire, and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications, with copies of three recent testimonials, should be forwarded to the undersigned.

H. C. CARLAND
Secretary Superintendent

SOMERSET AND BATH MENTAL HOSPITAL

Cotford Norton Fitzwarren Taunton.

The Sub-Committee invite applications for the appointment of a RESIDENT SECOND ASSISTANT MEDICAL OFFICER at an annual salary of £350 rising by annual increments of £25 to a maximum of £450 per annum with residential allowances valued for superannuation purposes at £146 per annum. An additional £50 per annum will be paid to the successful candidate if or when he holds the diploma in Psychological Medicine. Candidates must be legally qualified and registered. The appointment will be subject to the provisions of the Asylum Officers Superannuation Act 1909 and terminable by one month's notice on either side.

Applications stating age, experience, qualifications whether married or single and accompanied by copies of recent testimonials must reach the Medical Superintendent at the Mental Hospital by first post June 14th.

A. W. CALEY
Clerk to the Visiting Sub-Committee.
Dated May 24th 1937

EAST SUFFOLK AND IPSWICH HOSPITAL

(350 Beds) & Residents

Applications are invited for the following posts: CASUALTY OFFICER to commence August 1st. HOUSE SURGEON TO THE ORTHOPAEDIC AND FRACTURE HOUSE.

on or about July 1st.

The Hospital is recognised by the Royal College of Surgeons in respect of the latter post. Salary for each office at the rate of £144 per annum with board, apartments and laundry.

Applications from British male candidates together with copies of three recent testimonials to be sent to the undersigned.

The Hospital ARTHUR GRIFFITHS
Ipswich
May 29th 1937

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION

GLOUCESTER

(225 Beds Five Residents)

Applications are invited for the post of HOUSE PHYSICIAN (male). Salary at the rate of £150 per annum with board, residence and laundry.

The appointment is for six months, which may be extended for similar periods by re-election from time to time.

Applications stating age, qualifications and nationality with copies of not less than three recent testimonials, should be sent to the undersigned not later than Tuesday June 8th.

The elected candidate will be required to enter upon his duties immediately.

F. J. SYMONS
Secretary
May 27th 1937

ABERDEEN ROYAL INFIRMARY

The Board of Directors invite applications for the appointment of SENIOR CASUALTY OFFICER in the Out-patient Department, to take up duty on July 1st 1937. The salary is at the rate of £200 per annum plus an allowance in lieu of quarters and is tenable for one year with eligibility for reappointment.

Applications together with six copies of recent testimonials should be lodged on or before June 14th 1937 with the undersigned from whom particulars regarding the appointment can be obtained.

330 Union Street JOHN A. MCCONACHIE
Aberdeen Clerk and Treasurer

NORTH ORMESBY HOSPITAL

MIDDLESBROUGH

(195 Beds)

HOUSE SURGEON (male and unmarried) required. Salary £135 per annum with board, residence and laundry.

Applications stating age, qualifications, experience (if any) with copies of three recent testimonials, should be sent to the undersigned.

GEORGE WAITS
Secretary Superintendent

ROTHERHAM HOSPITAL

Wanted: Special HOUSE SURGEON, to act in the OPHTHALMIC and EAR, NOSE AND THROAT DEPARTMENTS and ADMINISTER ANAESTHETICS. Salary £100 per annum with board, residence and laundry (£140 total).

Applications, with copies of recent testimonials to be sent to the Secretary G. W. REIDERS, 6 Minto Street, Rotherham.

LONDON HOSPITAL, STONE-ON-TRENT

CO. RUTLAND

HOUSE SURGEON (male and unmarried) required. Salary £100 per annum with board, residence and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire, and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications, with copies of three recent testimonials, should be forwarded to the undersigned.

H. C. CARLAND
Secretary Superintendent

BOOTHAM PARK (REGISTERED MENTAL HOSPITAL) YORK

MEDICAL SUPERINTENDENT

Applications are invited for the post of Medical Superintendent at the above Hospital. Applicants, who should not be more than 38 years of age, must be registered Medical Practitioners with previous experience in the treatment of nervous and mental disorders. They should also possess a degree or diploma in psychological medicine.

Salary commencing at the rate of £800 per annum with emoluments valued at £250 which include unfurnished house free of rent, rates and taxes fuel and light garden produce.

Applications, with full particulars as regards education previous experience etc. to be sent to the Secretary to the Committee along with copies of testimonials, on or before June 21st. Personal canvassing will be regarded as a disqualification.

ROYAL BUCKINGHAMSHIRE HOSPITAL

AYLESBURY

(In course of extension to 120 beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER (male) for six months commencing June 28th 1937.

Salary £200 per annum with board residence and laundry. Candidates must be fully qualified and registered. Previous experience in Hospital appointment desirable, as well as in administration of Anaesthetics.

Applications stating age, qualifications and experience with copies of not more than three testimonials, should be sent to the undersigned by June 9th.

F. G. DAWES
Secretary
May 20th 1937

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(Fifth Auxiliary Norton)

Applications are invited for the post of RESIDENT MEDICAL OFFICER (Male or Female).

The appointment will be for six months commencing July 1st 1937 subject to renewal for a further six months with salary at the rate of £150 per annum plus board residence and laundry.

Previous Obstetrical experience is desirable.

The Fifth Auxiliary Hospital contains 47 beds, of which 23 are set apart for the treatment of Puerperal Septicemia the remainder being for Ante-natal and Gynaecological cases.

Applications should be lodged with the undersigned addressed to the Jessop Hospital for Women, Sheffield immediately.

DAVID OSWALD
Superintendent and Secretary

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(151 beds)

The Board of Management invite applications for the post of SENIOR RESIDENT OFFICER (Male) unmarried.

The appointment is for six months in the first instance from July 1st 1937.

Salary £150 per annum plus board residence and laundry.

Previous resident experience essential.

The duties include charge of the Maternity Department, 36 beds and general supervision of the Gynaecological Department.

Applications stating age and experience with copies of recent testimonials should be forwarded immediately to the undersigned.

DAVID OSWALD
Superintendent and Secretary

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(151 beds)

The Board of Management invite applications for the posts of THREE HOUSE SURGEONS (Male) unmarried for a period of six months, commencing July 1st 1937.

Salary £100 per annum together with board residence and laundry.

Applications stating age together with copies of testimonials, should be added to the undersigned immediately.

DAVID OSWALD
Superintendent and Secretary

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(151 beds)

Gynaecological, Maternity and Puerperal Separation Department.

The Board of Management invite applications for the posts of SENIOR RESIDENT OFFICER (Male or Female) for the appointment of ASSISTANT MEDICAL OFFICER in the HOSPITAL LABORATORIES.

Commencing salary £100 per annum with board residence and laundry.

Applications, with copies of testimonials, should be forwarded to the undersigned immediately.

DAVID OSWALD
Superintendent and Secretary

AMENDED ADVERTISEMENT WORCESTERSHIRE MENTAL HOSPITAL BARNLEY HALL, BROMSGROVE.

DEPUTY MEDICAL SUPERINTENDENT

Applications for this post are invited from duly qualified Registered Medical Practitioners who have had previous Mental Hospital experience.

Commencing salary £450 rising by annual increments of £25 to £550 with furnished quarters, board laundry and attendance. If the successful candidate is unmarried these emoluments are valued at £90. If married partly furnished quarters are available and the emoluments are valued at £187 of which £52 is paid in cash in lieu of board and attendance. An additional £50 per annum will be paid to the holder of the D.P.M. qualification. The usual deduction will be made in accordance with the Superannuation Act 1909.

Forms of application may be obtained from the Medical Superintendent, and they should be returned to him accompanied by copies of three recent testimonials not later than Tuesday June 14th 1937.

THE ROYAL INFIRMARY SHEFFIELD (500 Beds)

The Board of Management invite applications from the undermentioned posts—

- (1) HOUSE SURGEON
- (2) AURAL HOUSE SURGEON
- (3) OPHTHALMIC HOUSE SURGEON

The salary attached to posts (1) and (2) is £80 per annum increasing to £100 after six months service and to (3) £170 per annum with board and residence in each case.

The appointments will be tenable for the residue of the period of six months terminating on October 31st next.

The Ophthalmic Department contains (9 Beds) and an Out Patient Department which is open daily.

Applications with copies of testimonials, to be sent to the undersigned forthwith.

H. KINGSLEY PEARCE,

General Superintendent and Secretary

May 4th 1937

THE BOLTON ROYAL INFIRMARY (315 Beds including two Auxiliary Hospitals)

Applications are invited from men or women for the post of HOUSE PHYSICIAN. Salary £700 per annum with board residence and attendance. Duty in commencing July 1st 1937. The appointment is for six months and is renewable.

This post offers an excellent opportunity for post graduate experience of acute medical cases and clinical practice.

Applicants stating age and nationality and previous experience together with copies of testimonials should be forwarded to the undersigned not later than Tuesday June 14th.

H. CORLESS

Asst. Secy.

THE WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL (112 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post which becomes vacant on July 1st next. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist.

The post is for six months in the first instance—offers valuable experience in both In-patient and Out-patient work.

Applications with copies of recent testimonials should be sent to the undersigned as early as possible.

JOSEPH E. SEARJEANT F.R.C.S.

House Governor and Secretary

CASSEL HOSPITAL FOR FUNCTIONAL NERVOUS DISORDERS Swaylands, Penshurst, Kent.

Applications are invited for the post of MEDICAL DIRECTOR. Candidates who must be of the male sex are requested to send their application and state age, qualifications and experience. They should send not more than three recent testimonials or references.

Salary £1,200-£1,500 a year with house light and other emoluments. The appointment is terminable on three months' notice on either side. (The hospital has 64 beds and there are 3 assistant physicians and 1 resident medical officer.)

Applications should be sent to Dr T. A. Ross

32 Devonshire Place, W.1

E. FARQUHAR BUZZARD

(Chairman of the Medical Committee)

GENERAL INFIRMARY SALISBURY (Voluntary Hospital 191 beds now in course of extension to 225 beds)

RESIDENT MEDICAL OFFICER (male) required to commence duty as soon as possible. The appointment is for one year including a three months probationary period with the option of extension. Candidates must have held at least one appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist either separately or in conjunction with the former. He must reside in the Infirmary and devote his whole time to the service of the Infirmary. Salary £250 per annum with board residence.

Applications with copies of testimonials to be sent to the House Governor and Secretary and to be received by June 14th 1937.

COUNTY MENTAL HOSPITAL Rainhill near Liverpool

Wanted SECOND ASSISTANT MEDICAL OFFICER. Salary £600 per annum. Must be in possession of Diploma in Psychological Medicine for which an extra £50 per annum will be paid.

An unfurnished house is provided for which a rental of £50 per annum will be made.

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKES-ON-TRENT A General Hospital of 390 beds. Recognised for the D.L.O. and F.R.C.S. Examinations

HOUSE SURGEON FOR AURAL AND OPHTHALMIC DEPT

The Committee invite applications for the above post.

Salary at the rate of £140 per annum with board residence and laundry.

The appointment will be made for six months, renewable.

Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately.

By Order

W. STEVENSON

Secretary and House Governor

ROYAL UNITED HOSPITAL, BATH

HONORARY ASSISTANT TO FRACTURE SERVICE.

Applications are invited for the above post and it will be a recommendation if the applicant possesses the Fellowship of one of the Colleges of Surgeons and has Orthopaedic experience.

Applications stating age, qualifications and experience together with copies of three testimonials to be addressed to the undersigned by the first post June 10th 1937.

A list of the names and addresses of members of the Board of Management will be forwarded on application to whom copies of the application and testimonials may be sent.

Canvassing will be deemed a disqualification.

J. LAWRENCE MEARS

May 29th 1937

Secretary Superintendent

NORTH LONSDALE HOSPITAL, BARROW IN FURNESS (142 Beds)

Appointment now vacant. Required immediately. RESIDENT CASUALTY OFFICER (Male). Applications are invited for the above position from fully qualified Practitioners experienced in the administration of anaesthetics. Salary £150 per annum with board residence and laundry. Applications stating age, qualifications, experience and nationality accompanied by copies only of three recent testimonials should be sent to the Secretary immediately.

TILBURY HOSPITAL, ESSEX (Seamen's Hospital Society)

HOUSE SURGEON (male) required for 12 months from July 1st. Salary £140 per annum with board residence and laundry. Good opportunity for minor surgery.

Applications with copies of three testimonials to be sent in on or before June 7th to the undersigned.

F. A. LYON

CEFN COED HOSPITAL, SWANSEA

(Swansea County Borough Mental Hospital.)

Applications are invited for the post of ASSISTANT MEDICAL OFFICER. Commence salary of £400 per annum rising by annual increments of £25 to £500 per annum with the usual residential emoluments consisting of board, lodging, laundry and attendance, which are valued for superannuation purposes at £100 per annum. An additional £50 per annum will be paid if the successful candidate holds or obtains an approved Diploma in Psychological Medicine.

Preference will be given to those candidates who have experience as House Surgeon or House Physician in a General Hospital.

The appointment is subject to the provisions of the Avonlins Officer Superannuation Act 1909.

Applications giving all necessary particulars together with copies of two recent testimonials, should be sent to the Medical Superintendent not later than June 12th 1937.

H. L. LANG-COATH
Clerk to the Visiting Committee.

BURY INFIRMARY (LANCS)

(127 Beds)

APPOINTMENT OF CASUALTY OFFICER (MALE)

A vacancy as above arises on the Resident Medical Staff and applications are invited for the post.

The Resident Staff consists of an R.S.O., a House Surgeon, a House Physician, and a Casualty Physician in a General Hospital.

In addition to his duties in the Casualty Department, the Casualty Officer is also responsible for the In-patient and Out-patient work in connection with the Eye and Ear, Nose and Throat Departments.

The appointment is for six months at a salary at the rate of £140 per annum with board residence and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age, qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible endorsed "Casualty Officer".

Further particulars may be had on application
H. WILKINSON, Supt.

NORFOLK AND NORWICH HOSPITAL

NORWICH

Applications are invited for the following posts: TWO GENERAL HOUSE SURGEONS. For one of these posts previous obstetrical experience desirable.

Salary for each post £120 per annum with board residence and laundry.

Candidates (Male) must be unmarried and must possess registered qualifications. Preference will be given to candidates who have held previous Hospital appointments.

Applications stating age, nationality etc., together with copies of testimonials, should reach the undersigned by first post on Tuesday June 8th 1937.

FRANK INCH
House Governor and Secretary

May 19th 1937

ROYAL SUSSEX COUNTY HOSPITAL

BRIGHTON

(Beds 272. Six R.M.O.s.)

CASUALTY HOUSE SURGEON (Male) required. Salary £10 per annum with board residence and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Act.

They must be unmarried and when elected under thirty years of age.

Applications with copies of recent testimonials to be forwarded to the undersigned.

L. L. W. LANCASTER-GAYE
Secretary Superintendent

PONTEFRAC T GENERAL INFIRMARY

(Works)

JUNIOR RESIDENT MEDICAL OFFICER (Male, unmarried) duly qualified registered Medical Practitioner.

Commence salary at £10 per annum with residence and board. The appointment is for six months from July 1st 1937.

Applications stating age with testimonials and nationality to be sent to the undersigned by first post on June 10th 1937.

DAVID J. RICHARDS
Secretary Superintendent

THE CHILDREN'S HOSPITAL SHEFFIELD

(141 Beds)

HOUSE SURGEON required IMMEDIATELY. Salary £10 per annum with board residence and laundry. Candidates (Male and Unmarried) must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Act. They must be unmarried and when elected under thirty years of age. Applications with copies of recent testimonials to be forwarded to the undersigned.

L. H. C. CARLAND
Secretary Superintendent

SOMERSET AND BATH MENTAL HOSPITAL

Cotford, Norton Fitzwarren Taunton

The Sub-Committee invite applications for the appointment of a RESIDENT SECOND ASSISTANT MEDICAL OFFICER at an annual salary of £350 rising by annual increments of £25 to a maximum of £450 per annum with residential allowances valued for superannuation purposes at £146 per annum. An additional £50 per annum will be paid to the successful candidate if at the time he holds the diploma in Psychological Medicine. Candidates must be legally qualified and registered.

The appointment will be subject to the provisions of the Avonlins Officers Superannuation Act, 1909 and terminable by one month's notice on either side.

Applications stating age, experience, qualifications whether married or single and accompanied by copies of recent testimonials must reach the Medical Superintendent at the Mental Hospital by first post June 14th.

A. W. CALEY

Clerk to the Visiting Sub-Committee.
Dated May 24th 1937

EAST SUFFOLK AND IPSWICH HOSPITAL

(350 Beds) 8 Residents

Applications are invited for the following posts: CASUALTY OFFICER to commence August 1st; HOUSE SURGEON TO THE ORTHOPAEDIC AND FRACTURE DEPARTMENT August 1st; HOUSE SURGEON TO A GENERAL SURGEON AND GENITO-URINARY SURGEON on or about July 1st.

The Hospital is recognised by the Royal College of Surgeons in respect of the latter post. Salary for each office at the rate of £144 per annum with board apartments and laundry.

Applications from British male candidates - together with copies of three recent testimonials to be sent to the undersigned.

The Hospital, ARTHUR GRIFFITHS
Ipswich
May 29th 1937
Secretary

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION

GLOUCESTER

(2.5 Beds Five Residents)

Applications are invited for the post of HOUSE PHYSICIAN (Male). Salary at the rate of £150 per annum with board residence and laundry.

The appointment is for six months, which may be extended for similar periods by re-election from time to time.

Applications stating age, qualifications and nationality with copies of not less than three recent testimonials should be sent to the undersigned not later than Tuesday June 8th.

The elected candidate will be required to enter upon his duties immediately.

J. J. SIMONS
Secretary
May 27th 1937

ABERDEEN ROYAL INFIRMARY

The Board of Directors invite applications for the appointment of SENIOR CASUALTY OFFICER in the Out-patient Department to take up duty on July 1st 1937. The salary is at the rate of £200 per annum plus an allowance in lieu of quarters and is payable for one year with eligibility for reappointment.

Applications together with six copies of recent testimonials should be lodged on or before June 12th 1937 with the undersigned from whom particulars regarding the appointment can be obtained.

30 Union Street, JOHN A. MC DONALDIE,
Aberdeen
Clerk and Treasurer

NORTH ORMESBY HOSPITAL

MIDDLESBROUGH

(195 Beds)

HOUSE SURGEON (Male and Unmarried) required. Salary £135 per annum with board residence and laundry.

Applications stating age, qualifications, experience (if any), with copies of three recent testimonials, should be sent to the undersigned.

GEORGE WATTS
Secretary Superintendent

ROTHERHAM HOSPITAL

Wanted Special HOUSE SURGEON to assist in the OPHTHALMIC and EAR, NOSE AND THROAT DEPARTMENTS and ADMINISTER ANAESTHETICS. Salary £120 per annum with board residence and laundry (140 beds).

Applications with copies of recent testimonials to be sent to the Secretary G. W. ROBERTS & MESSRS S. REED, Rotherham.

LONDON HOSPITAL, STATION TREET

LONDON

HOUSE SURGEON (Male and Unmarried) required. Salary £110 per annum with board residence and laundry. Candidates must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Act. They must be unmarried and when elected under thirty years of age. Applications with copies of recent testimonials to be forwarded to the undersigned.

BOOTHAM PARK (REGISTERED MENTAL HOSPITAL) YORK

MEDICAL SUPERINTENDENT

Applications are invited for the post of Medical Superintendent at the above Hospital. Applicants who should not be more than 35 years of age must be registered Medical Practitioners with previous experience in the treatment of nervous and mental disorders. They should also possess a degree or diploma in psychological medicine.

Salary commencing at the rate of £800 per annum with emoluments valued at £250 for inclusive unfurnished house, free of rent, rates and taxes fuel and light garden produce.

Applications, with full particulars as regards education, previous experience etc. to be sent to the Secretary to the Committee along with copies of testimonials on or before June 21st. Personal canvassing will be regarded as a disqualification.

ROYAL BUCKINGHAMSHIRE HOSPITAL

AYLESBURY

(No course of extension to 120 beds)

Applications are invited for the post of SENIOR RESIDENT MEDICAL OFFICER (Male) for six months commencing June 8th 1937.

Salary £700 per annum with board residence and laundry. Candidates must be fully qualified and registered. Previous experience in Hospital appointment desirable, as well as in administration of Anaesthetics.

Applications stating age, qualifications and experience with copies of not more than three testimonials, should be sent to the undersigned by June 9th.

F. G. DAVES
Secretary
May 20th 1937

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(Fifth Auxiliary Norton)

Applications are invited for the post of RESIDENT MEDICAL OFFICER from registered Medical Practitioners (Male or Female).

The appointment will be for six months commencing July 1st 1937, subject to renewal for a further six months with salary at the rate of £150 per annum plus board residence and laundry.

Previous Obstetrical experience is desirable. The Fifth Auxiliary Hospital contains 47 beds, of which 23 are set apart for the treatment of Puerperal Septicæ, the remainder being for Ante-Natal and Gynaecological cases.

Applications should be lodged with the undersigned addressed to the Jessop Hospital for Women Sheffield immediately.

DAVID OSWALD
Superintendent and Secretary

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(151 beds)

The Board of Management invite applications for the post of SENIOR RESIDENT OFFICER (Male) unmarried.

The appointment is for six months in the first instance from July 1st 1937.

Salary £150 per annum plus board residence and laundry.

Previous resident experience essential.

The duties include charge of the Maternity Department, 36 beds, and general supervision of the Gynaecological Department.

Applications stating age and experience with copies of recent testimonials should be forwarded immediately to the undersigned.

DAVID OSWALD
Superintendent and Secretary

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(151 beds)

The Board of Management invite applications for the posts of THREE HOUSE SURGEONS (Male) unmarried for a period of six months commencing July 1st 1937.

Salary £100 per annum together with board residence and laundry.

Applications stating age together with copies of testimonials should be addressed to the undersigned immediately.

DAVID OSWALD
Superintendent and Secretary

THE JESSOP HOSPITAL FOR WOMEN

SHEFFIELD

(151 beds)

Gynaecological, Maternity and Puerperal Septicæ Department.

The Board of Management invite applications for the post of SENIOR RESIDENT OFFICER (Male) unmarried for a period of six months commencing July 1st 1937.

Salary £100 per annum together with board residence and laundry.

Applications stating age together with copies of testimonials should be addressed to the undersigned immediately.

DAVID OSWALD
Superintendent and Secretary

AMENDED ADVERTISEMENT WORCESTERSHIRE MENTAL HOSPITAL, BARNSELY HALL, BROMSGROVE.

DEPUTY MEDICAL SUPERINTENDENT

Applications for this post are invited from duly qualified Registered Medical Practitioners who have had previous Mental Hospital experience.

Commencing salary £450 rising by annual increments of £25 to £50 with furnished quarters, board, laundry and attendance. If the successful candidate is unmarried these emoluments are valued at £90. If married partly furnished quarters are available and the emoluments are valued at £167 of which £52 is paid in cash in lieu of board and attendance. An additional £50 per annum will be paid to the holder of the D.P.M. qualification. The usual deduction will be made in accordance with the Superannuation Act 1909.

Forms of application may be obtained from the Medical Superintendent, and they should be returned to him accompanied by copies of three recent testimonials not later than Tuesday June 15th 1937.

THE ROYAL INFIRMARY * SHEFFIELD (500 Beds)

The Board of Management invite applications for the undermentioned posts—

- (1) HOUSE SURGEON
- (2) AURAL HOUSE SURGEON
- (3) OPHTHALMIC HOUSE SURGEON

The salary attached to posts (1) and (2) is £80 per annum increasing to £100 after six months service and to (3) £10 per annum with board and residence in each case.

The appointments will be tenable for the residue of the period of six months terminating on October 31st next.

The Ophthalmic Department contains 9 Beds and an Out Patient Department which is open daily.

Applications with copies of testimonials to be sent to the undersigned forthwith.

H. KINGSLEY PEARCE

General Superintendent and Secretary

May 20th 1937

THE BOLTON ROYAL INFIRMARY (315 beds including two Auxiliary Hospitals)

Applications are invited from men or women for the post of HOUSE PHYSICIAN. Salary £500 per annum with board residence and attendance. Duty to commence July 1st 1937. The appointment is for six months and is renewable.

This post offers an excellent opportunity for post-graduate experience of acute medical cases and clinic work.

Applicants must be of nationality and previous experience together with copies of testimonials should be forwarded to the undersigned not later than Tuesday June 15th.

H. CORLESS

Assistant Secretary

THE WEST NORFOLK AND KINGS LYNN GENERAL HOSPITAL (112 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post which becomes vacant on July 1st next. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist.

The post is for six months in the first instance—offers valuable experience in both In-patient and Out-patient work.

Applications, with copies of recent testimonials should be sent to the undersigned as early as possible.

JOSEPH E. SEARJEANT F.C.C.S.

House Governor and Secretary

CASSEL HOSPITAL FOR FUNCTIONAL NERVOUS DISORDERS Swaylands, Penhurst Kent

Applications are invited for the post of MEDICAL DIRECTOR. Candidates who must be of the male sex are requested to send their application and state age qualifications and experience. They should send not more than three recent testimonials or references.

Salary £1200-£1500 a year with house light and other emoluments. The appointment is terminable on three months' notice on either side. (The hospital has 64 beds and there are 3 assistant physicians and 1 resident medical officer.)

Applications should be sent to Dr T. A. Ross, 32 Devonshire Place, W.1.

E. FARQUHAR BUZZARD

(Chairman of the Medical Committee)

GENERAL INFIRMARY SALISBURY (Voluntary Hospital 191 beds now in course of extension to 225 beds)

RESIDENT MEDICAL OFFICER (male) required to commence duty as soon as possible. The appointment is for one year including a three months probationary period with the option of extension. Candidates must have held at least one appointment at a recognised hospital as House Physician and/or House Surgeon and Anaesthetist either separately or in conjunction with the former. He must reside in the Infirmary and devote his whole time to the service of the Infirmary. Salary £450 per annum with board residence.

Application with copies of testimonials to be sent to the House Governor and Secretary and to be received by June 15th 1937.

COUNTY MENTAL HOSPITAL Rainhill near Liverpool

Wanted SECOND ASSISTANT MEDICAL OFFICER. Salary £50 per annum. Must be in possession of Diploma in Psychological Medicine for which an extra £50 per annum will be paid. An unfurnished house is provided for which a rental of £50 per annum will be made. The appointment is subject to the approval of the Board of Management.

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKES-ON-TRENT A General Hospital of 390 beds. Recognised for the D.L.O. and F.R.C.S. Examinations

HOUSE SURGEON FOR AURAL AND OPHTHALMIC DEPT

The Committee invite applications for the above post.

Salary at the rate of £150 per annum with board residence and laundry.

The appointment will be made for six months renewable.

Applications stating age and experience with copies of two recent testimonials to be sent to the undersigned immediately.

By Order

W. STEVENSON

Secretary and House Governor

ROYAL UNITED HOSPITAL BATH HONORARY ASSISTANT TO FRACTURE SERVICE

Applications are invited for the above post and it will be a recommendation if the applicant possesses the Fellowship of one of the Colleges of Surgeons and has Orthopaedic experience.

Applications stating age qualifications and experience together with copies of three testimonials to be addressed to the undersigned by the first post June 10th 1937.

A list of the names and addresses of members of the Board of Management will be forwarded on application to whom copies of the application and testimonials may be sent.

Canvassing will be deemed a disqualification.

J. LAWRENCE MEARS

May 29th 1937

Secretary Superintendent

NORTH LONSDALE HOSPITAL BARFOW INFURNESS (150 Beds)

Appointment now vacant. Required immediately. RESIDENT CASUALTY OFFICER (Male).

Applications are invited for the above position from fully qualified Practitioners experienced in the administration of anaesthetics. Salary £150 per annum with board residence and laundry. Applications stating age qualifications experience and nationality accompanied by copies only of three recent testimonials should be sent to the Secretary immediately.

TILBURY HOSPITAL, ESSX. (Seamen's Hospital Society)

HOUSE SURGEON (male) required for 12 months from July 1st. Salary £140 per annum with board residence and laundry. Good opportunities for minor surgery.

Application with copies of three testimonials to be sent in on or before June 15th to the undersigned.

G. A. LYON

Secretary, Seamen's Hospital

WEST LONDON HOSPITAL, HAMMER SMITH ROAD W 6 (241 Beds)

Required one HOUSE PHYSICIAN and two HOUSE SURGEONS (MALES). These appointments are tenable for 6 months from July 1st next subject to one month's notice on either side. The duties of the House Physician include some work in the Neurological and Dermatological Departments. The duties of one House Surgeon include some work in the Gynaecological Department and of the other some work in the Deep X Ray Therapy Department. Salary at the rate of £100 a year with board lodgings and laundry allowance.

Candidates must be registered under the Medical Act. Applications (which must be made on printed forms obtained from me) must reach me not later than Thursday June 10th. Selected candidates will be required to call upon such members of the Medical Staff as directed to be in attendance at a Medical Council Meeting at 4.30 p.m. on Friday June 18th and the House Committee Meeting at 5 p.m. the same day when the appointments will be made.

H. A. MADGE,
Secretary

WEST LONDON HOSPITAL, HAMMER SMITH ROAD W 6

Required one JUNIOR ASSISTANT MEDICAL OFFICER (male) for the VENEREAL DISEASES DEPARTMENT. Salary at the rate of £350 a year. The appointment is subject to three months' notice on either side. Candidates must be registered Medical Practitioners of British nationality and have had special experience in the diagnosis and modern treatment of venereal diseases.

Applications, accompanied by copies of testimonials must reach me not later than first post on Thursday June 10th. Candidates must send copies of their application and testimonials to each member of the Medical Council. Selected candidates will be required to attend a meeting of the Medical Council on Friday June 25th at 4.30 p.m. and prior to that date to call upon such members as directed. The appointment will be made by the House Committee at 5.15 p.m. the same day. Further details with regard to the duties can be obtained from the undersigned.

H. A. MADGE,
Secretary

THE WILLESDEN GENERAL HOSPITAL Harlesden Road N.W.10

Applications are invited from fully-qualified and registered candidates (unmarried) for the appointment of a Resident Officer to hold the appointment of CASUALTY OFFICER for a period of three months from July 1st 1937 followed by a six months' appointment as HOUSE SURGEON (total nine months).

Salary at the rate of £100 per annum. Applications to be received by the Secretary not later than first post on Tuesday June 15th 1937. May 31st, 1937.

GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL, LONDON W 1

HOUSE SURGEON (male) required to commence duties August 1st. Salary £100 per annum with board residence and laundry.

Applications stating age, qualifications and experience together with copies of three recent testimonials to be sent to the undersigned on or before June 11th.

F. P. CARROLL,
Secretary Superintendent

GOLDEN SQUARE THROAT NOSE AND EAR HOSPITAL LONDON W 1

HOUSE ANAESTHETIST required immediately for mornings only. Salary £150 per annum.

Application stating age and experience with copies of three recent testimonials should be sent to the undersigned from whom further particulars may be obtained.

F. P. CARROLL,
Secretary Superintendent

PRINCESS LOUISE KENINGTON HOSPITAL FOR CHILDREN

St. Quentin Avenue W 10
(1 Bed)

HOUSE SURGEON (male) required for six months. Salary at the rate of £100 p.a. for the first three months and £110 p.a. for the second three months with board residence and laundry. Applications with copies of three recent testimonials should be sent to the undersigned not later than Friday June 11th.

H. J. ELEY,
Secretary

BAILEYSEA GENERAL HOSPITAL Bartley Park S.W.11

Appointments are invited for the post of HOUSE PHYSICIAN AND CASUALTY OFFICER (male) for a period of three months from July 1st 1937. Salary £100 per annum with board residence and laundry. Applications with copies of three recent testimonials should be sent to the undersigned not later than Friday June 11th.

G. I. PINFOLD,
Secretary

ST PETER'S HOSPITAL FOR STONE ETC., Henrietta Street Covent Garden W.C.2

The appointment of CLINICAL ASSISTANTS to the undermentioned members of the Honorary Staff who attend the Outpatients Department at the times indicated will be considered at an early date. A fee of Five Guineas becomes payable to the funds of this Hospital on appointment and applications should reach the undersigned on or before Tuesday June 15th.

Mr. John Sandrey—Mondays 3 to 6.30 p.m.
Mr. Alban Andrews—Tuesdays 2 to 5 p.m.
Mr. Osler Ward—Wednesdays 3 to 7 p.m.
Mr. F. J. F. Barrington—Thursdays 3 to 7 p.m.
Mr. R. Osler Ward—Fridays, 9.30 to 11.10 a.m.
(women and children)
Mr. Alban Andrews—Fridays 3 to 6 p.m.
(male outpatients)
Mr. John Sandrey—Saturdays, 2 to 6 p.m.
BEECHER ROGERS
Secretary

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.3

APPOINTMENT OF CASUALTY SURGICAL OFFICER

Applications are invited from unmarried registered Medical women for the position of Casualty Surgical Officer at the Outpatients Department of the Hospital, Bayham Street, Camden Town which will be vacant on July 1st next.

The salary will be at the rate of £100 per annum together with board residence, etc. and the term will be for six months.

Applications, to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials, should reach the Secretary not later than noon on June 12th next.

PUTNEY HOSPITAL, LOWER COMMON S.W.15 (75 Beds)

The post of JUNIOR MEDICAL OFFICER (male) will fall vacant on July 1st. Salary £100 per annum, with rooms and board. The appointment is for six months.

The successful candidate will have charge of the Medical Beds and will be employed in the Ear and Throat and Casualty Departments (under the R.S.O.) and will be required to give anaesthetics. Applications, giving age and full particulars, together with three recent testimonials should be received by the undersigned not later than June 22nd 1937.

H. SEYMOUR HADWEN
Secretary

THE CHILDREN'S HOSPITAL HAMPSTEAD 30 COLLEGE CRESENT N.W.3 (45 Beds)

Applications are invited from registered Medical Practitioners for the post of RESIDENT MEDICAL OFFICER for six months from July 1st to December 31st 1937 inclusive. Salary at the rate of £150 per annum with board residence and laundry. Applications stating age, nationality qualifications and experience with copies of three testimonials should reach the undersigned on or before June 11th 1937.

H. W. WALLIS GRAIN,
Secretary

ST THOMAS'S HOSPITAL VACANCY

The appointment of a PHYSICIAN and in the event of a Physician to Outpatients being preferred to the Ward, the appointment of a Physician with charge of Outpatients. Candidates must be Fellows or Members of the Royal College of Physicians.

Applications with full details of academic career and copies of testimonials, to be sent not later than June 9th to Clerk to the Governors who will be pleased to give further information.

PADDINGTON GREEN CHILDREN'S HOSPITAL (re-constructed) LONDON W 2

Applications are invited for the post of HOUSE SURGEON to the above Hospital which will become vacant on July 1st 1937. Gentlemen (unmarried) are invited to send in their applications with copies of testimonials to the undersigned as soon as possible.

Salary at the rate of £100 per annum with board and laundry. The appointment is for a period of four months.

JAMES A. HANLIN, Secretary

HOSPITAL FOR TROPICAL DISEASES Grosvenor Street W.C.1 (Seamen's Hospital Society)

HOUSE PHYSICIAN (male) required for six months from July 1st 1937. Salary £100 per annum with board residence and laundry.

Applications with copies of three recent testimonials should be sent to the undersigned not later than Friday June 11th 1937.

F. A. LYON,
Secretary

HAMPSTEAD GENERAL AND NORTH WEST LONDON HOSPITAL Haverstock Hill N.W.3

APPOINTMENT OF A HOUSE SURGEON

Applications are invited from unmarried Medical men for an appointment of House Surgeon, vacant on July 1st next.

The salary will be at the rate of £100 per annum together with board residence etc. and the term will be for six months.

Applications, to be made on a form which will be supplied by the Secretary together with copies of not more than three testimonials, should reach the Secretary not later than noon on June 19th next.

ROYAL NORTHERN HOSPITAL Holloway N 7

Applications are invited for the following appointment—HOUSE SURGEON vacant on July 15th. The appointment is for nine months (six months as House Surgeon and three months as Casualty Officer). Salary at the rate of £70 per annum with board residence and laundry.

Applications with copies of testimonials should be sent by June 15th to the undersigned from whom forms of application and rules can be obtained.

GILBERT G. PANTER
Secretary

SOUTH LONDON HOSPITAL FOR WOMEN Clapham Common S.W.4

Applications are invited from fully qualified medical women for the under-mentioned appointment.

SURGICAL REGISTRAR Half-time duty for a period of one year with eligibility for reappointment to a maximum of three years. Honorarium of £75 per annum.

Candidates are requested to call on members of the Hon. Medical Staff before Wednesday June 16th by which date applications and copies of testimonials should reach the Secretary at the Hospital.

DREADNOUGHT HOSPITAL Greenwich S.E.10 (Seamen's Hospital Society)

Applications are invited for the non resident post of RECEIVING ROOM OFFICER (male) for six months from July 1st. Salary £200 per annum with lunch and tea. Hours of attendance: Week days 9 a.m. to 5 p.m., Saturdays 9 a.m. to 12 noon.

Applications stating age, nationality and experience of previous House appointments accompanied by copies of testimonials to be sent in on or before June 7th 1937 to the undersigned.

F. A. LYON,
Secretary

DREADNOUGHT HOSPITAL Greenwich S.E.10 (Seamen's Hospital Society)

ONE HOUSE PHYSICIAN and ONE HOUSE SURGEON required for six months as from July 1st. Salary £110 per annum and a proportion of fees with board residence and laundry. Candidates must be male and single.

Applications with copies of three testimonials to be sent in on or before June 7th to the undersigned.

F. A. LYON,
Secretary

EAST HAM MEMORIAL HOSPITAL Sharnbury Road E 7 (100 Beds)

The General Committee invite applications for the post of HONORARY SURGEON to the ORTHOPAEDIC DEPARTMENT. Candidates must be Fellows of the Royal College of Surgeons of England and engaged solely in orthopaedic surgery.

Applications stating age and full particulars together with copies of three testimonials should reach the undersigned on or before June 11th. Candidates will be expected to send copies of their application and testimonials to and call upon members of the Honorary Medical Staff.

REGINALD LIPPY,
Secretary

EAST HAM HOSPITAL Sharnbury Road E 7 (100 Beds)

Applications are invited for the post of TWO ANALYSTS to the Hospital. The appointments are for six months from July 1st 1937. Salary £100 per annum with board residence and laundry. Applications with copies of three recent testimonials should be sent to the undersigned not later than Friday June 11th 1937.

REGINALD LIPPY,
Secretary

APPOINTMENTS—Important Notice.

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE—(contd)	CONTRACT PRACTICE—(contd)
ABERTYSSWIC MEDICAL AID SOCIETY (Medical Officer)	LLWYNPIA CLYDACH VALE, PENYGRAIG GLAMORGAN (Women's Medical Scheme)	OGMORE VALLEY GLAMORGAN (Windsor Colliery Medical Aid Society) (Women's Medical Scheme)
BLACKPOOL AND FYLDE FRIENDLY SOCIETIES COUNCIL (Medical Officer)	MID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	PUBLIC HEALTH
CILFACH GOCH GLAMORGAN (Women's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	CARMARTHENSHIRE COUNTY COUNCIL (Assistant County Medical Officer of Health)
	OAKDALE, MON. (Medical Officer for Medical Aid Association)	FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1

Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch	Town or District	Hon Sec of Division or Branch
NEW SOUTH WALES (All English and Scottish Applicants)	The Medical Secretary New South Wales Branch 115 Macquarie St. Sydney N.S.W.	VICTORIA (All Institute or Medical Practitioners)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St 1st Melbourne Victoria	WESTERN AUSTRALIA (Contract and Locum Practitioners)	Hon Sec Western Australian Branch British Medical Association Shell House 65 St George's Terrace Perth Western Australia
QUEENSLAND (English and Scottish Applicants)	The Hon Sec Queensland Branch British Medical Association Building 15 Adelaide St Brisbane				

June 2 1937

By Order of the Council

G. C. ANDERSON Medical Secretary

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WANTED ASSISTANT (MALE) PLEASANT Lancashire town. Panel Practice with midwifery. Protestant preferred. £400 p.a. car allowance. £50. Use of small unfurnished house—Address No 4226 BMA House Tavistock Square WC1

WANTED ASSISTANT (MALE) SOME EXPERIENCE essential. £416 per annum plus £50 car allowance (town car). Branch surgery house free. Large northern city. About July 1st—Address No 418 BMA House Tavistock Square WC1

WANTED AT ONCE, ASSISTANT OUTDOOR (male) with view. Mixed Practice. Country South Midland. 50 miles from London. £400 p.a. car allowance. Car essential. Some experience G.P.—Address No 477 BMA House Tavistock Square WC1

WANTED IMMEDIATELY INDOOR AND outdoor ASSISTANTS for town and country Practices, with and without view to partnership. Good salaries offered. State full particulars—British Medical Bureau 31 Cross Street Manchester

WANTED IMMEDIATELY OUTDOOR ASSISTANT single man or woman, in colliery and private practice in S. Wales. British Hospital Anaesthetics and Midwifery. Salary £400 with roomy attendance and car. Good bond—No 411 BMA House Tavistock Sq WC1

WANTED IN CHESHIRE TOWN AN ASSISTANT with view to partnership in mixed Practice. Salary £150—Address No 411 BMA House Tavistock Square WC1

WANTED INDOOR ASSISTANT AT ONCE (male British) for country practice in North of England. Small car provided. Pleasant country. £400 p.a. £50 p.a. to reliable and experienced man. Address No 411 BMA House Tavistock Square WC1

WANTED IN PLEASANT LANCASHIRE town and/or ASSISTANT preferably 50s. W.D. or recently qualified graduate. Salary £416. Apply early to ease state national age and reference—Address No 411 BMA House Tavistock Square WC1

WANTED MIDLANDS AN ASSISTANT ON PARTNERSHIP basis in a growing Practice. London or Country. Excellent. Salary £400 p.a.—Address No 411 BMA House Tavistock Square WC1

WANTED RECENTLY QUALIFIED FEMALE ASSISTANT for country practice in North of England. Small car provided. Pleasant country. £400 p.a. £50 p.a. to reliable and experienced man. Address No 411 BMA House Tavistock Square WC1

WANTED PERMANENT EXPERIENCED ASSISTANT under 30. Panel practice near Birmingham. £400 all round. Light work car provided. Comfortable home good prospects and ample scope for conscientious temperate man to show initiative and acquire partnership—Address No 419 BMA House Tavistock Square WC1

WANTED SOON OUTDOOR SMALL ASSISTANT. Age under 34. Catholic preferred for South-West Lancashire town. Salary £400 with prospects for suitable man—Address No 4201 BMA House Tavistock Square WC1

ASSISTANT (OUTDOOR) WANTED IN GOOD-CLASS PRACTICE (not large) in Surrey. Salary £400 work light. Preferably with some capital as half-share of practice would be sold later to suitable man—Address, No 4 BMA House Tavistock Square WC1

ASSISTANT REQUIRED FOR GENERAL Practice W. London suburbs are 25-40 male to live in with bachelor principal age 36. Grow in practice partnership considered later. Previous experience G.P. preferred but not essential. Salary £300 per annum plus keep—Address No 439 BMA House Tavistock Square WC1

LADY ASSISTANT OUTDOOR REQUIRED Catholic City non-panel middle-class and urban practice and Vicar. Car provided. Dist. pension kept. Replies stating age qualifications experience and usual particulars—Address No 411 BMA House Tavistock Square WC1

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COTTAGE HOSPITAL, HERNE BAY

APPOINTMENT OF SECRETARY

Applications for the above appointment are invited from suitable persons (male or female) with office experience and knowledge of typing and book-keeping.

Applications stating age, qualifications and salary required should be addressed to

Secretarial T B CORNFoot
Cottage Hospital Herne Bay Hon Sec

APPLICATIONS ARE INVITED FOR THE position of MEDICAL OFFICER to a large industrial company in London. Preference is likely to be given to a male candidate of pure British extraction between the ages of 28/35 who has held hospital appointments who has had some experience of general practice and who would be able to take up his duties shortly. The post is a full-time one. Salary commences at £700 p.a. and carries a non-contributory pension. Applications should be addressed to Address No 40 B.M.A. House Tavistock Square W.C.1

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Practices and Partnerships for Disposal

- 1 SURREY—Very old established PRACTICE in populated suburban area. Cash receipts last year about £1,500 including appointments worth about £60 and a panel of 1,100. Visits 3/6 to 10/6. Rent of private residence (6 bedrooms dressing room etc.) garage and fair sized garden £80 p.a. Surgery close by for sale or rent. Scope Premium £2,800.
- 2 N DEVON—PARTNERSHIP in old-established Practice averaging £2,050 p.a. in delightful country district. Panel 1,150. Visits 1/6 to £1 1s. House (6 or 7 bedrooms) large and good garden. Rent £60 p.a. Good hospital and scope for surgery. Premium one third share £1,300 and up to one half later.
- 3 RESIDENTIAL DISTRICT WITHIN 15 MILES OF LONDON—Old-established PRACTICE. Receipts last year over £2,000. Panel about 1,600. Visits 3/6 to 10/6. Nic residence (4 bedrooms dressing room etc.) good garage and garden for sale or rent.
- 4 SE COAST—Very old-established upper-class non-dispensing PRACTICE averaging £600 p.a. in residential part of popular seaside resort. No panel. Visits 5/ to £1 1s and £2 2s. No Midwifery. Good house (6 bedrooms) for sale or rent. Definite scope for increase. Premium £1,000.
- 5 LONDON (Western District)—PARTNERSHIP in Practice averaging about £3,500 p.a. Panel about 3,300. House containing 4 bedrooms etc. large garage and nice garden for sale. One third share at first. Premium two and one-eighth years purchase.
- 6 LIVERPOOL—Well established PRACTICE. Receipts 1936 £2,900. Appointments worth about £150. Panel 2,650.
- 7 MIDLANDS—Old-established non-dispensing PRACTICE in first rate residential town. Cash receipts average £1,640 p.a. Panel 560. House contains 6 bedrooms etc. garage and small garden. Price £2,400 freehold. Scope. Hospital. Premium £2,850.
- 8 LONDON SW—Old-established good-class non-dispensing PRACTICE in neighbourhood of Victoria. Receipts last year over £660. Visits range from 3/6 to £1 1s. £60 and panel of about 200. 1/17s range from 3/6 to £1 1s. mostly 10/6 to 12/6. No Midwifery. Nice flat (3 bedrooms) rent £275 p.a. on lease include. Scope. Premium £1,200.
- 9 E MIDLANDS—Old-established country PRACTICE averaging nearly £650 p.a. in pleasant village. Appointments worth over £150 and panel 400. Charming stone-built house (6 bedrooms) with central heating main electric light and power and water supply. Large garage garden about 1 1/2 acres. Price freehold £1,700. Scope. Premium two years purchase.
- 10 ESSEX—PARTNERSHIP in well established and steadily increasing Practice in growing residential district with in 12 miles of London. Receipts past year £1,100. Panel 1,150. Suitable house or other accommodation available. One third share at first. Premium £1,200.
- 11 SURREY—NUCLEUS OF PRACTICE in one of the best outlying rapidly growing districts. Receipts last year £1,100. Panel 1,150. Mod in detached house (4 bedrooms etc.) with garage and garden. Premium £1,200.

- 12 LONDON—Well established suburban district. Receipts last three years averaged £1,060 p.a. Fees range from 10/6 to £8 8s. House containing 10 rooms would be sold for £900 or let at £50 p.a. on lease. Good introduction. Premium £1,800.
- 13 KENT—Old-established and steadily increasing PRACTICE (in hands of Medical Woman) in rapidly developing district. Receipts last year £680. No panel. Visits mostly 5/ medicine extra. Suitable residence could be obtained. Excellent scope. Premium £1,000.
- 14 N WALES WATERING PLACE—PARTNER in middle and upper-class Practice averaging nearly £3,800 p.a. including selected panel 245. Fees 5/ to 10/6 without medicine—some £1 1s. Detached house (4 bedrooms etc.) with good garage and small garden to rent on lease. Premium one half share £3,900 to include surgery fittings drugs and book debts. Hospital.
- 15 ESSEX—Old-established PRACTICE in outlying Suburban District. Receipts average £2,125 p.a. including appointments worth about £260 p.a. and a panel of 1,784. Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance. Garage and fair size garden. Rent £120 on lease. Premium two and a quarter years purchase. Purchaser must be English Scottish or Irish.
- 16 NE COAST—PARTNERSHIP (after preliminary Assistantship) in mixed Practice about £3,300 p.a. in seaport town. Panel 2,600. A suitable house could be obtained. One third share at first to suitable man at two years purchase (or near offer) with option to increase to two-fifths in three years and to four-ninths later.
- 17 S OF ENGLAND—Old established PRACTICE in agricultural district about two miles from the sea. Cash receipts 1936 1995 including panel of 450. Fees 2/6 to £1 1s. Medicine extra. Good house (5 bedrooms) 2 box rooms etc.) in half acre of ground with garage. Central heating. Electric light. Price freehold £2,200. Scope for increase. Premium £1,730.
- 18 S DEVON—Increasing PRACTICE of £1,000 in delightful country district. Panel 600. Fees 7/6 to £2 2s. House with 5 bedrooms garage and garden etc. to rent at £50 p.a. Scope. Premium £2,000 or near offer.
- 19 LONDON SW—Well-established PRACTICE (held by Medical Woman) in outlying suburban district. Cash receipts average £940 p.a. No panel but scope if desired. Purchaser could have use of surgery premises and living accommodation with services by arrangement. Premium one and three-quarter years purchase.
- 20 S COAST—PARTNERSHIP in very old established good middle-class Practice. Receipts last year £1,100. Panel 400. Mod in detached house (4 bedrooms) with garage and garden. Price £1,700. Suitable house obtainable. Scope for increase. Premium £1,200.
- 21 NE COAST—Old established and easily worked middle and lower working-class PRACTICE averaging £1,100 p.a. in seaport town. No panel but a few contracting em p. A suitable house could be obtained. Good introduction. Premium £1,200.

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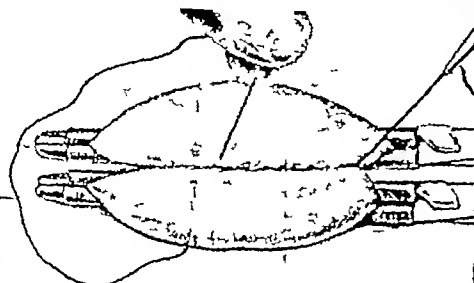
- 1 EASTERN COUNTIES—Mixed-class PRACTICE in pleasant agricultural district producing for last 12 months over £1 300 p.a. Fees 3/6 to 2/11. Nice house in good position with 2 reception, 4 bedrooms, dressing room etc. Separate professional accommodation. Modern conveniences. Garden, garage. Price for freehold £1 300. Sport of all kinds and schools within reach.
- 2 MONMOUTHSHIRE—Middle-class PRACTICE established 20 years and producing for last 12 months £1 430 p.a. including small Panel of about 300. Fees 3/6 to 2/11. Good house with 2 reception, 6 bedrooms etc. Separate professional rooms. Garden garage. Rent £125 p.a. Premium 1½ years purchase.
- 3 EAST ANGLIA—WITHIN REACH OF TWO GOOD TOWNS—Old established unopposed country PRACTICE averaging over £1 000 p.a., including Panel producing over £450 a year. Low expenses. Detached house in own grounds containing 2 sitting rooms, 5 bedrooms etc. Rent £70 a year. Premium £1 750.
- 4 NORTH WALES—Chiefly working-class PRACTICE producing for last 12 months £1 025. Including Panel worth £438 p.a. and appointments worth over £400 p.a. Low expenses. Suitable surgery premises for sale. Premium to include surgery £950.
- 5 LONDON—NORTH WEST—Recently established and steadily developing PRACTICE producing for last 12 months approximately £1 000 and increasing at the rate of about £200 p.a. Suitable house can be rented or flat obtainable. Premium 2 years purchase.
- 6 DEATH VACANCY—CUMBERLAND—Old-established unopposed PRACTICE held by late incumbent thirty years. Gross cash receipts average about £800 p.a. including Panel worth over £250 p.a. and appointments worth nearly £80 p.a. Suitable 8-roomed house with bathroom surgery dispensary etc. garden garage. Rent £30 p.a. Shooting fishing golf etc. Premium, offers invited.
- 7 LONDON, SOUTH WEST—OUTLYING SUBURB—Old-established good middle-class PRACTICE averaging between £1,350 and £1,500 p.a. including Panel of about 1 300. Suitable house with 2 reception, 5 bedrooms, etc. can be rented at £80 p.a. Premium 2 years purchase or near offer illness reason for sale.
- 8 EASTERN COUNTIES—Very sound unopposed middle and working-class PRACTICE in agricultural district averaging £1 150 p.a. including Panel worth about £460 p.a. Fees from 3/. Nice house with 2 reception, 6 bedrooms, etc. electric light garden garage. Premium for Practice and house £3 350.
- 9 NORTHERN SUBURB WITHIN 10 MILES OF HYDE PARK—Recently established better-class PRACTICE, steadily increasing and producing for last 12 months £760. Panel of about 560 and appointments worth £40 p.a. Good freehold house with 4 bedrooms etc., garden, garage. Price £1 450. Premium £1 450 or near offer. Vendor retiring.
- 10 OUTLYING NORTHERN DISTRICT—Old-established non Panel, good mixed-class PRACTICE held by vendor (who is now retiring) many years. Average gross cash receipts approximately £1 400. Fees 3/6 to 1/5. Good house with 2 reception, 7 bedrooms, etc. garden, garage. On rental. Premium 2 years purchase.
- 11 LONDON—SOUTH WESTERN DISTRICT—Well-established mixed class PRACTICE. Gross cash receipts for last 12 months approximately £850 including Panel of 1 200. Fees from 2/6. Suitable house stated to be in good repair. Good scope for increase. Moderate premium.
- 12 EASTERN COUNTIES—COUNTY TOWN—Well-established PRACTICE averaging about £1 100 p.a. including Panel of 1 061 and clubs producing about £300 to £400 p.a. Vendor retiring through ill health and age and states there is excellent scope for increase.
- 13 PARTNERSHIP—BORDERS OF LINGS AND NOTTS—A ONE THIRD SHARE (producing about £1,200 p.a.) offered in very sound unopposed country Practice within easy reach of two good towns. Particular nice house specially built with 5 bedrooms, etc. Freehold for sale or might be rented. Premium 2 years purchase.
- 14 LONDON, N.W.—Recently established PRACTICE at present producing £200 p.a. but capable of great increase. Fees from 5/. Small flat available at £90 p.a. but could be worked as a lock-up. Premium 1 year's purchase.
- 15 OUTLYING NORTHERN DISTRICT—Recently established PRACTICE at present producing over £140. Suitable house on rental at £90 p.a. Premium £350.
- 16 ESSEX COAST TOWN—PARTNERSHIP—A share producing about £1 000 p.a. is offered in a very sound and increasing, mixed-class Practice at present bringing in about £400 p.a. with substantial Panel. Suitable house with 2 reception, 4 bedrooms etc. Small garden, garage. Rent £120 p.a. Premium 2 years purchase.
- 17 SOUTHERN COUNTIES—Well established non Panel PRACTICE producing about £1 000 p.a. Fees from 5/. Suitable house can be rented £90 p.a. but stated to be capable of considerable increase. Chance of future Partnership introduced in place of, as vendor retiring.
- 18 NORTH EAST COAST—Old established PRACTICE producing about £900 p.a. but stated to be capable of considerable increase. Chance of future Partnership introduced in place of, as vendor retiring.
- 19 EAST COAST TOWN—PARTNERSHIP—A share in a Practice at present producing about £1 000 p.a. is offered in a very sound and increasing, mixed-class Practice at present bringing in about £400 p.a. with substantial Panel. Suitable house with 2 reception, 4 bedrooms etc. Small garden, garage. Rent £120 p.a. Premium 2 years purchase.
- 20 MIDLANDS—FAVOURITE RESIDENTIAL TOWN—Chiefly better class non-dispensing PRACTICE, producing for last 12 months over £1 600. Panel of 560 and one appointment worth £110 p.a. Fees 3/6 to 2/11. Very nice house with ample accommodation garden and garage. Freehold for sale. Premium 2 years purchase.
- 21 SOUTH EAST COAST—RESIDENTIAL TOWN—Old-established non dispensing better-class PRACTICE averaging for last 3 years about £1 450. Selected Panel of 500. Fees 3/6 to 2/11. Ground floor flat containing large hall consulting room 2 reception, 3 bedrooms, etc. Inclusive rent £190 p.a. Premium 2 years purchase.
- 22 CENTRAL LONDON—PRACTICE is worked as a Lock-up and averages about £1 000 p.a. Fees from 2/6. Suitable accommodation can be obtained. Premium 2 years purchase.
- 23 CROYDON AREA—Recently established PRACTICE. Receipts for last 12 months over £660 including Panel of 350. House with 3 bedrooms, etc. garden and garage can be rented at £85 p.a. Premium £750.
- 24 OUTLYING NORTHERN DISTRICT—Mixed-class PRACTICE receipts last 12 months £1,290 including Panel of 1 000. Suitable flat above surgery premises. Inclusive rental £104 p.a. Premium 2 years purchase.
- 25 SUSSEX—ATTRACTIVE DISTRICT NEAR SEA—PARTNERSHIP—A ONE FOURTH SHARE is offered (after preliminary assistantship of 6 to 12 months) in old-established Practice having good scope. Gross cash receipts for last 12 months approximately £3,275. Panel of about 1 300. Appointments worth over £300. Choice of houses on rental for incoming partner. Premium 2 years purchase.
- 26 SURREY—RAPIDLY DEVELOPING AREA—Recently established PRACTICE producing for last 12 months £720, including Panel of 650. Suitable house can be purchased. Moderate premium. Ill health reason for sale.
- 27 NORTH LONDON—Sound mixed class PRACTICE. Established over 40 years, producing last 12 months nearly £2 900. Substantial panel. Nice house in good repair. Rent £104 p.a.
- 28 NORTH LONDON—Old-established PRACTICE producing about £700 p.a. including Panel of nearly 600 patients. Suitable house ample accommodation and good garden garage to rent at £100 p.a. Premium £1,200.
- 29 LONDON WESTERN AREA—Mixed class PRACTICE in populous district. Gross cash receipts for last 12 months about £700 but capable of increase. Panel of 500. Well situated house with ample accommodation will be put into thorough repair. Good garden. Price for Practice and house £2,500. £500 down.
- 30 WELSH BORDERS—Unopposed chiefly agricultural PRACTICE in beautiful district. Average gross cash receipts £913 p.a. (last year 1935). Panel produces about £370 p.a., and appointments worth about £132 p.a. Very low expenses. Suitable house in own grounds with tennis court etc. containing 2 reception, 6 bedrooms, etc. Freehold for sale £1,200. £700 on mortgage. Premium £1,500.
- 31 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 32 LONDON SOUTH EAST—Old-established PRACTICE producing about £1 830 p.a. including select panel of 400. Fees from 3/6. Suitable house available with 2 reception 5 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 33 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1 100 p.a., including selected panel of about 350. Fees from 5/. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.
- 34 NORTH WALES—FAVOURITE SEASIDE RESORT—A ONE THIRD SHARE (with increase later) is offered after short preliminary assistantship in old-established better-class practice producing about £3 400 p.a. Panel of 1 100. Suitable flat available for incoming partner who should be experienced. Premium 2 years purchase.
- 35 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing for last 12 months approximately £940. Selected panel of 400 to 450 patients. Visits from 5/. Very nice house in good repair with ample accommodation. Garden. Garage. Price for freehold £2,050. Premium £1,250.
- 36 MIDLANDS PARTNERSHIP—ONE HALF SHARE in mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1,300 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 12 years purchase.
- 37 MIDLANDS—PARTNERSHIP—A SHARE representing approximately £1 300 p.a., with increase later, is offered in exceptionally sound good mixed class practice averaging about £900 p.a. with substantial Panel and very good appointments. Excellent scope for major surgery. Suitable house available. Premium 2 years purchase.

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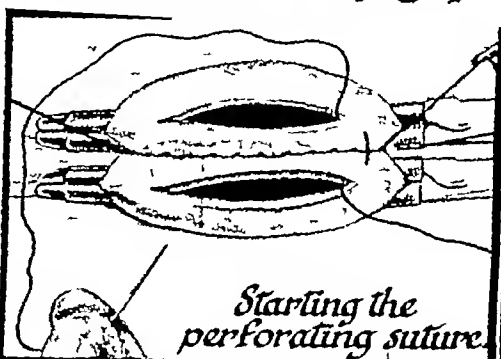
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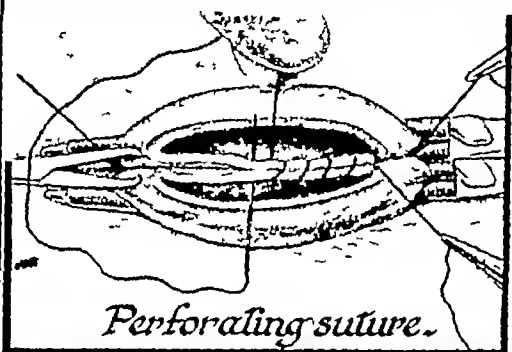
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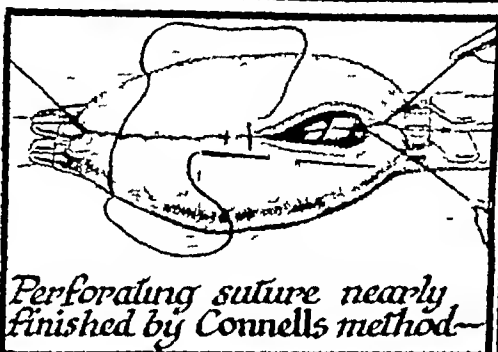
First sero-muscular suture.



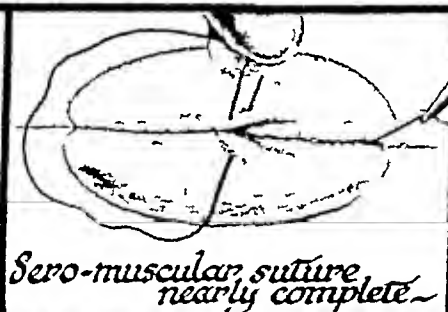
Starting the perforating suture.



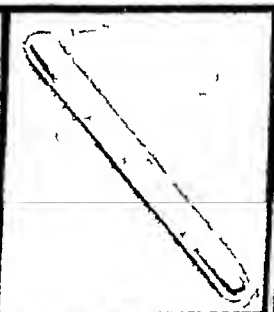
Perforating suture.



Perforating suture nearly finished by Connell's method.



Sero-muscular suture nearly complete.



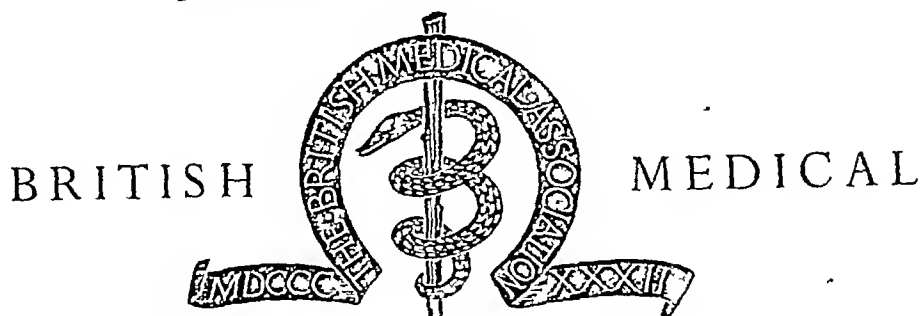
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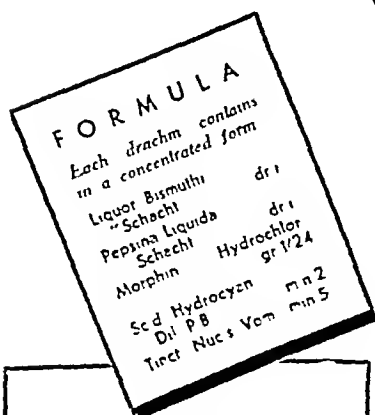
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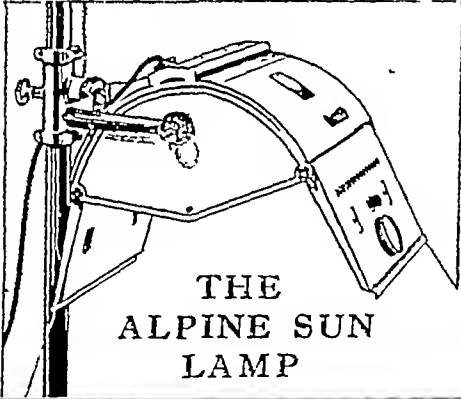
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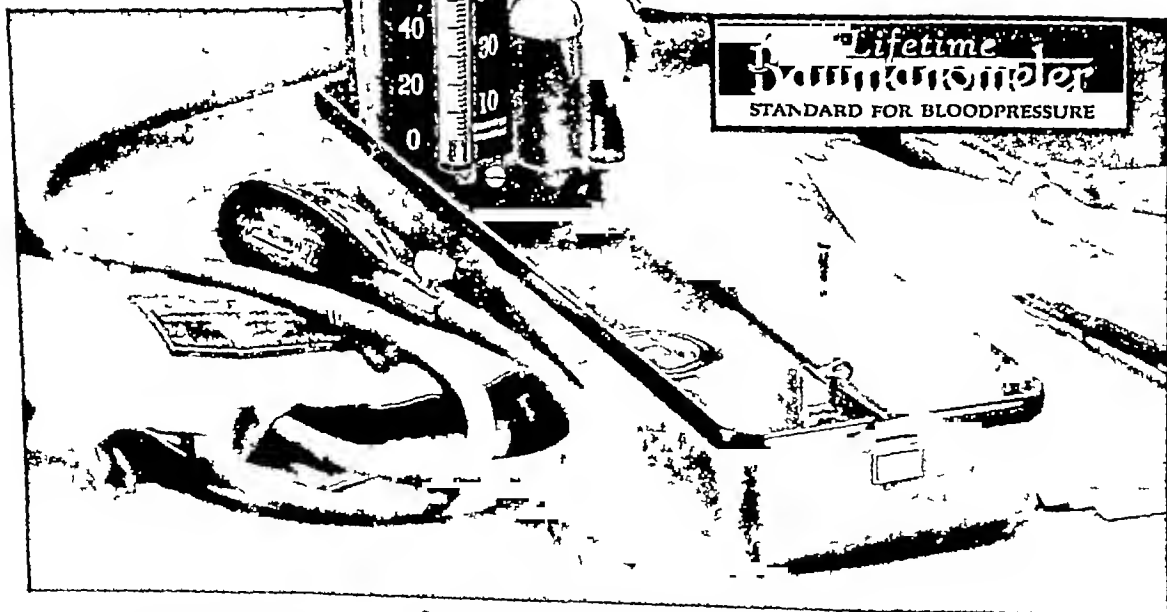
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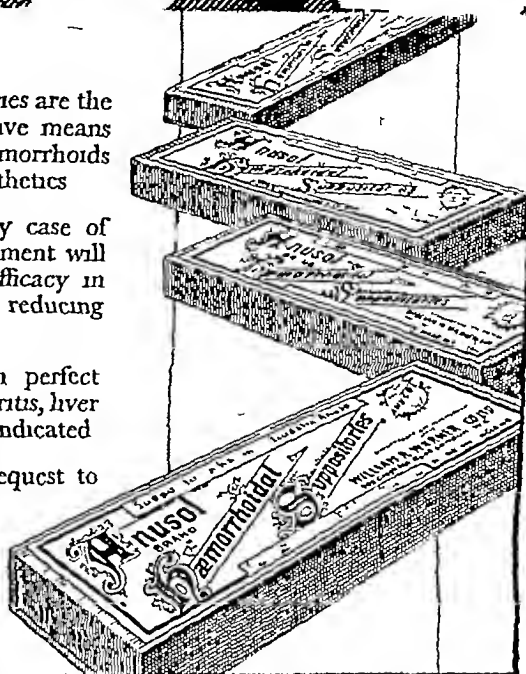
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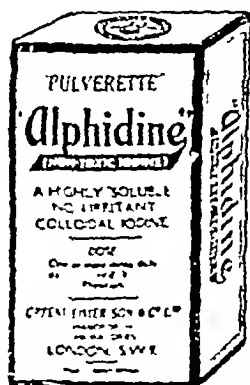


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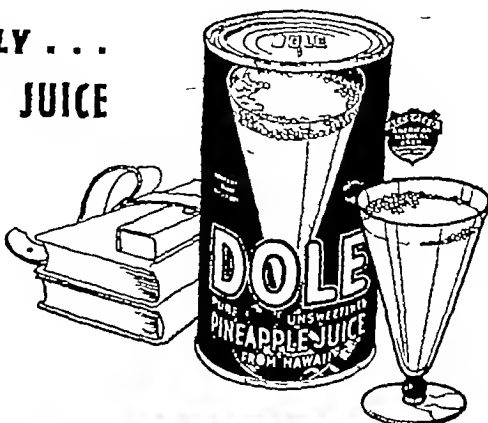
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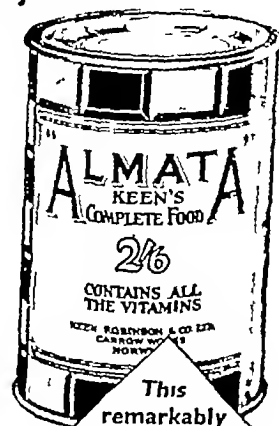
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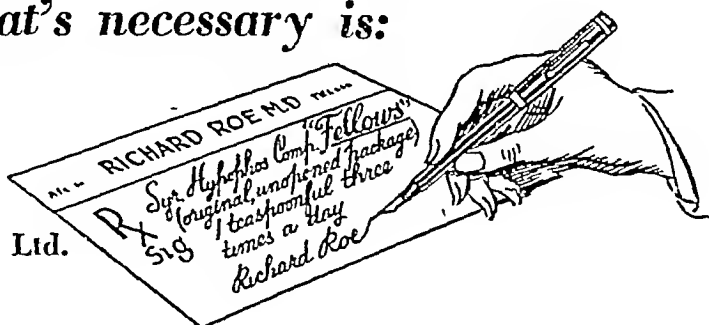
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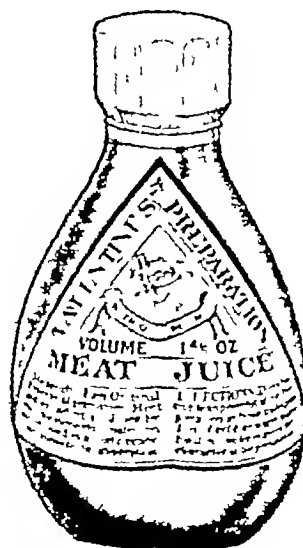
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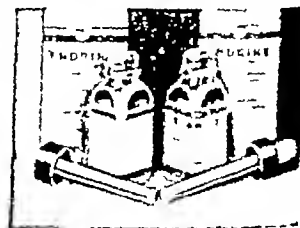


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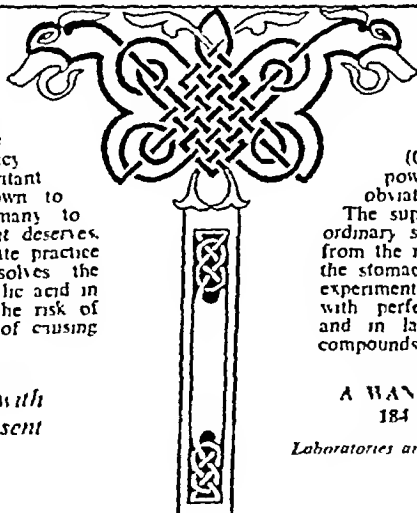
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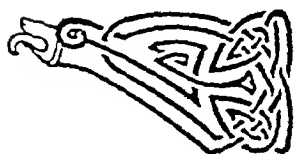
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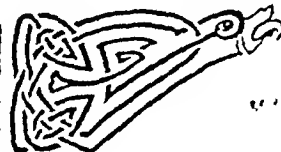
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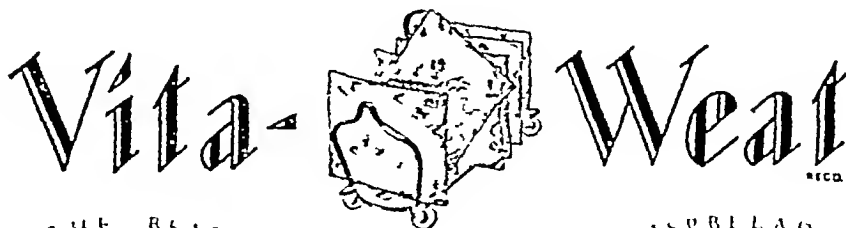
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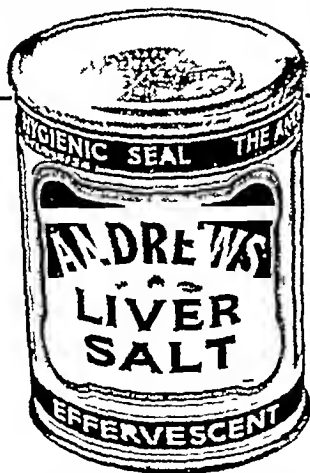
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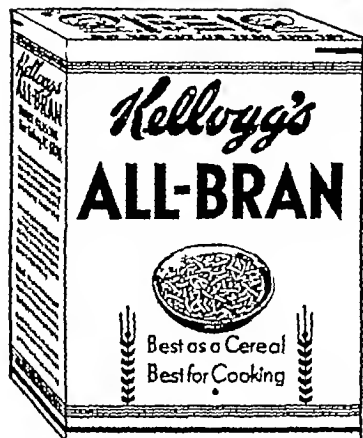
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ALL-BRAN cleanses like a *water-softened sponge*. Within the body the soft "bulk" of ALL-BRAN gently exercises intestinal muscles, and

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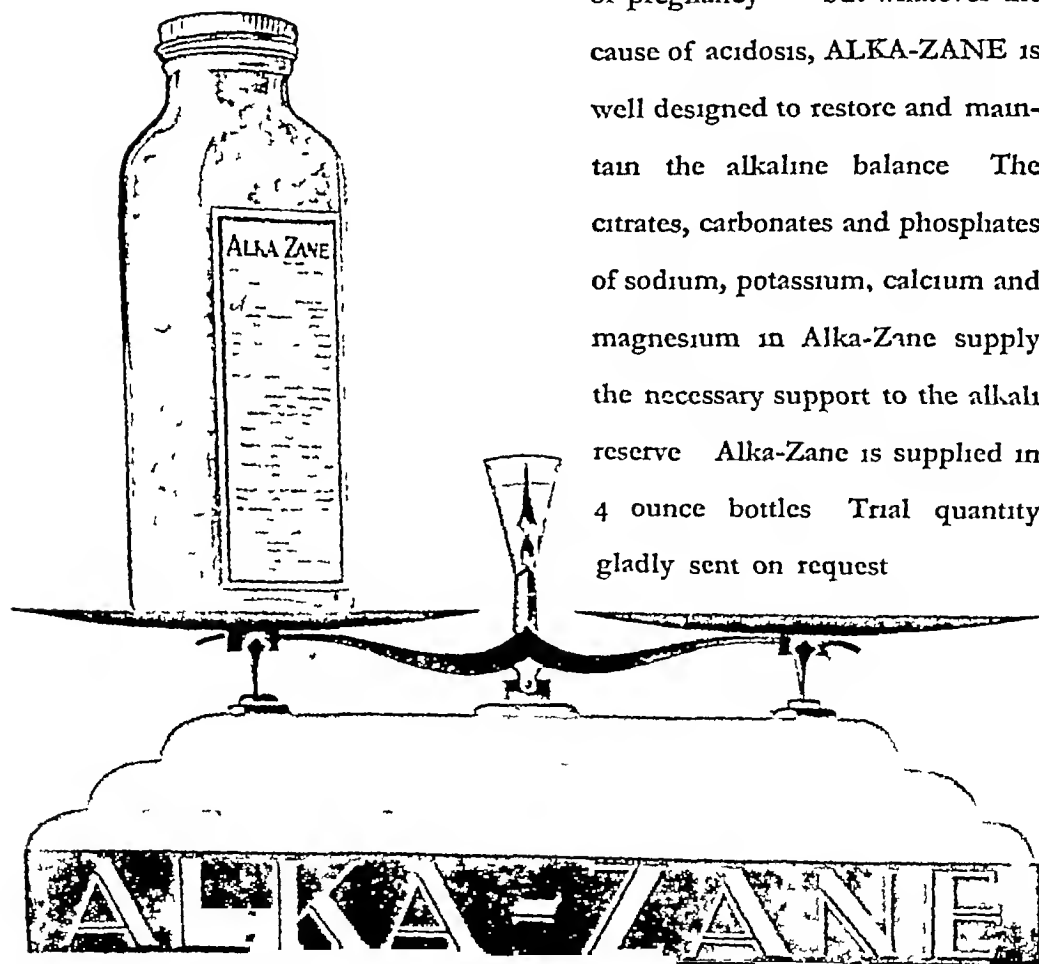
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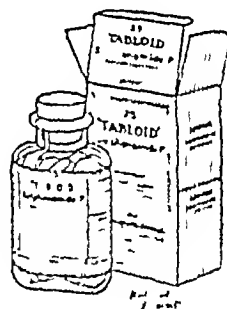
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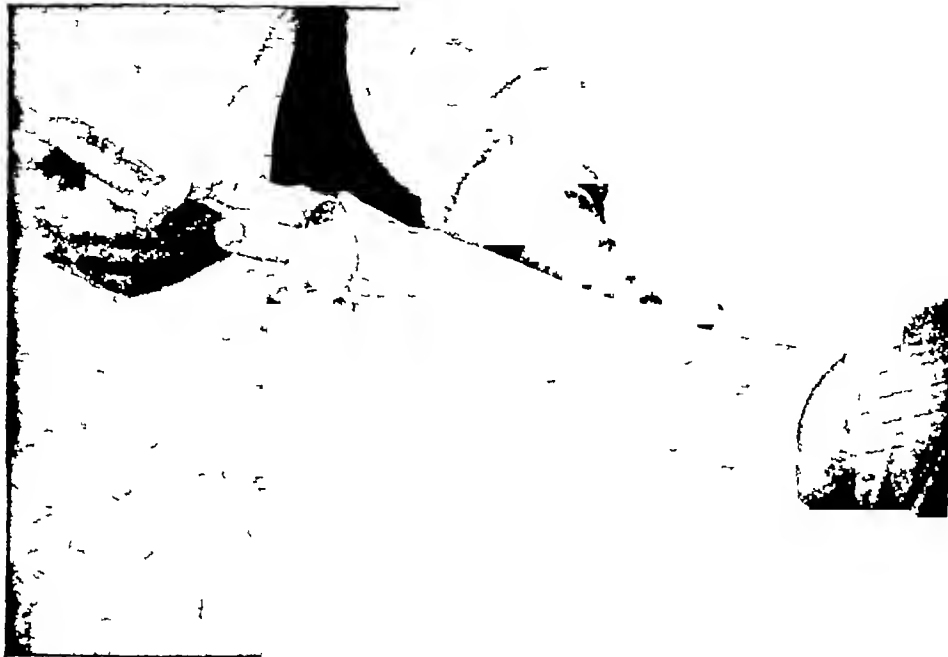
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BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 12 1937

AN OUTBREAK OF MILK-BORNE SCARLET FEVER AND TONSILLITIS IN DONCASTER

by

R. WATSON, M.A., M.B., D.P.H.

Medical Officer of Health, Doncaster County Borough

Many outbreaks of tonsillitis and scarlet fever due to the drinking of infected milk have been reported, but the outbreak which occurred in Doncaster in December 1936 had several points of interest which appear to make it worth while adding to the literature on the subject. The outbreak was a comparatively small one extending over a period of not more than twelve days from December 9 to December 20 inclusive and as the infected milk amounting to about fifty gallons a day all came from one farm and was distributed by one retailer unmixed with milk from other sources investigation was made comparatively simple. The number of cases affected however is large enough to warrant certain conclusions being drawn.

Source of Infection

The first cases came to my notice about midday on December 11 and by the evening of that day fifteen cases of scarlet fever had been notified, all in the same part of the town. Suspicion fell on a certain milk supply and arrangements were made for four samples of this milk to be taken for bacteriological examination that afternoon. Later in the day sufficient evidence had been collected to warrant a notice being issued under the Milk and Dairies Acts and Orders prohibiting the sale of this

December 15, and the milk when not pasteurized was then used for other purposes and not distributed direct to consumers.

Bacteriological Investigations

In the meantime it had been found that the milkman suspended from duty had a child who had been suffering from otorrhoea since December 2 and that he had been dressing the ear. On December 14 arrangements were made with Dr. Griffith of the Ministry of Health Laboratory for the typing of the haemolytic streptococci which had been found to be present in the discharge from this child's ear and in swabs taken from the throats of the milkers and several of the patients who had been admitted to the isolation hospital. On December 15 the cows forming the herd supplying the infected milk were examined by the chief veterinary officer of the West Riding County Council, Major D. S. Rabagliati, and group samples were submitted to Dr. Griffith for examination. The only clinical abnormality discovered in the herd was that one of the cows was suffering from an induration of one teat, the condition being diagnosed as a crushed teat. It was stated to have been crushed by a tread about a fortnight previously. There was no external lesion.

Only a few cases associated with the milk supply were notified in the rural district area, and these do not materially affect the total figures

Very early in the outbreak it was noticed that many patients had only tonsillitis with no signs of a rash. In an attempt to obtain a complete picture of the effect of the mass infection I have recently completed an investigation of all the families known to be taking the milk during the period in which it was infected. The results of this inquiry are shown in the following tables and charts.

The milk was delivered by the retailer to 380 families in Doncaster, and of these 205 families (54 per cent) were affected to a greater or less degree, the infection being fairly equally distributed over the whole area of supply. The 380 families contained 1,343 persons and were made up as follows: children aged 0 to 4 years, 62; children aged 5 to 14 years, 218; persons aged 15 years and over, 1,063. The number of persons attacked and the attack rates are shown in Table I.

TABLE I—The Number of Persons Attacked and the Attack Rates in Varying Age Groups

Age Group (Years)	No. of Persons at Risk	Cases of Scarlet Fever	Cases of Sore Throat	Total Cases Affected
0-4	62	26 (41.9%)	8 (11.3%)	34 (53.2%)
5-14	218	53 (23.9%)	37 (16.9%)	90 (40.8%)
15 and over	1,063	56 (5.3%)	184 (17.4%)	240 (22.7%)
Totals	1,343	135 (10.0%)	229 (17.0%)	364 (27.1%)

TABLE II—Cases of Scarlet Fever and Sore Throat due to Infected Milk. Age and Sex Distribution (December 1936)

Age Group (Years)	Scarlet Fever Cases			Sore Throat Cases			Total Cases Attacked		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
0-4	16 (26.2%)	10 (13.5%)	26 (19.2%)	4 (4.2%)	4 (3.0%)	8 (3.5%)	20 (12.7%)	14 (6.7%)	34 (9.3%)
5-9	13 (21.3%)	20 (27.0%)	33 (24.4%)	8 (8.4%)	7 (5.2%)	15 (6.5%)	21 (13.4%)	27 (13.0%)	48 (13.3%)
10-14	10 (16.4%)	10 (13.5%)	20 (14.9%)	11 (11.4%)	11 (8.4%)	22 (9.6%)	21 (13.4%)	21 (10.3%)	42 (11.5%)
15-19	3 (5.0%)	9 (12.1%)	12 (8.9%)	11 (11.4%)	7 (5.2%)	18 (7.9%)	14 (8.9%)	16 (7.7%)	30 (8.2%)
20 and over	19 (31.1%)	25 (33.9%)	44 (32.6%)	62 (64.6%)	104 (78.2%)	166 (72.5%)	81 (51.6%)	129 (62.3%)	210 (57.7%)
Totals	61 (100%)	74 (100%)	135 (100%)	96 (100%)	133 (100%)	229 (100%)	157 (100%)	207 (100%)	364 (100%)

TABLE III—Cases of Scarlet Fever in Doncaster other than those due to Infected Milk (1935 and 1936)

Age Group (Years)	Male	Female	Total
0-4	16 (21.8%)	27 (13.4%)	63 (17.2%)
5-9	61 (76.9%)	84 (41.6%)	145 (39.5%)
10-14	49 (29.7%)	94 (24.7%)	99 (27.0%)
15-19	5 (1.0%)	7 (3.5%)	12 (3.3%)
20 and over	14 (8.6%)	34 (16.8%)	48 (13.0%)
Totals	165 (100%)	202 (100%)	367 (100%)

These figures are interesting as they show how, with presumably the same infecting organism, the incidence of a rash symptomatic of scarlet fever appears to vary according to the age of the person attacked. Having regard to the number at risk in the different age groups, they also seem to indicate how much more children are affected than adults, especially children under 5 years of age. They also bear out findings collected by Professor Picken (1936) to the effect that in a milk outbreak adults may form a large proportion of the total cases suffering from clinical scarlet fever. The distribu-

tion of cases, of both scarlet fever and sore throat, according to age and sex is shown in Table II. For comparison with the scarlet fever group the distribution of these cases for the years 1935 and 1936 (excluding those cases associated with the milk outbreak) is appended (Table III). These latter figures should form a fair basis of comparison, as they do not include any cases which were associated with a milk-borne epidemic.

So far as cases of clinical scarlet fever were concerned in the milk outbreak the percentage of the total cases occurring among adult males was nearly four times the normal expectation. Among adult females the percentage was about twice the normal. Children of school age in proportion showed a lower percentage incidence than the normal rates would lead one to expect. The effect of the outbreak must, however, be judged on the total number of cases of tonsillitis and scarlet fever, for which, unfortunately, no comparison with the normal expectation is possible. From the figures in Table II it will be seen that among males 51.6 per cent of the total cases of scarlet fever and tonsillitis were adults, and for the adult females this figure was 62.3 per cent. The only comparable figures are those respecting the Chelmsford outbreak, to which the Doncaster figures approximate fairly closely. It is of interest to know that both the Chelmsford and the Doncaster outbreaks were caused by a Type II haemolytic streptococcal infection of milk. No evidence has been forthcoming to account for the high percentage of the adults attacked, possibly this might be due to a previous absence of Type II infection in the areas.

Course of Outbreak

The accompanying charts, which show the day-to-day occurrence of cases, whether of tonsillitis or scarlet fever, according to the ascertained date of onset of the disease are of some interest in showing the course of the outbreak and the effects of action taken to bring it to an end. Chart I shows the number of 'milk' cases, of both scarlet fever and tonsillitis, the 'seasonal' cases of scarlet fever being superimposed. From the chart it would appear that the milk outbreak can be limited between December 9 and December 20. The two cases occurring on December 5 and 6 respectively might not be associated with the milk outbreak and the two cases appearing on December 23 and 27 respectively were, so far as can be ascertained, secondary cases. Other ascertained secondary cases were noted as follows: December 13 one case; December 14 one case; December 17, three cases; December 18 three cases; and December 19 two cases. There may have been more secondary cases but without definite proof of this secondary character could not be established the cases have been counted as original milk infections.

The omission of these secondary cases makes it clear that there were no new cases from mass infection of the milk after December 17, and this would correspond with the fact that infected milk ceased to reach consumers after midday on December 15. The odd cases with an

Streptococci pyogenes Type II were isolated on December 15 as the infected milk could not have directly infected the milk after December 11. The infection of the cow's teat was clearly at an early stage when first discovered but Dr Minett has reason for believing that this cow was

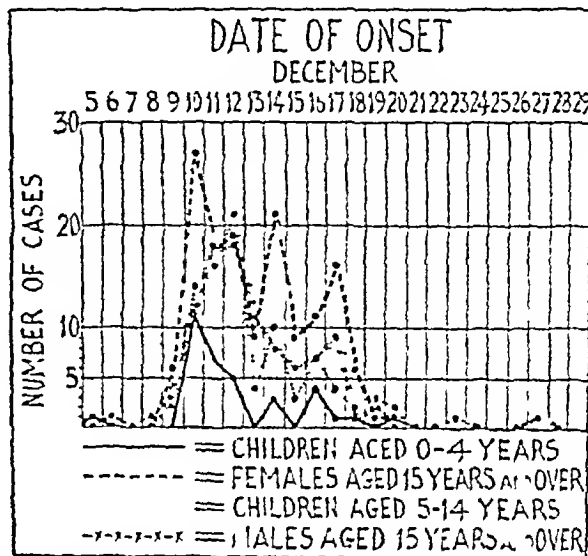
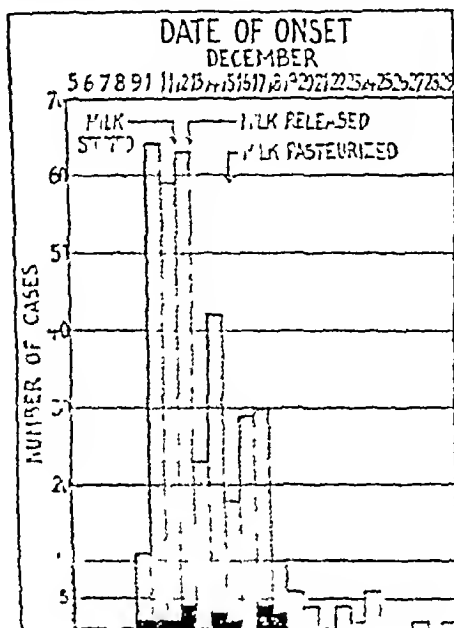


CHART 2.—This shows the day-to-day occurrence of cases of scarlet fever and tonsillitis associated with infected milk in different age groups and sexes.

or shooting pain in the throat, and many patients were almost able to state the hour at which this symptom occurred. Some two hours afterwards they had difficulty in getting undressed when they realized that it was imperative that they should go to bed. There were, of course, several cases of a very mild nature, but the majority of patients were suffering sufficiently severely to necessitate their staying in bed for several days.

The throat conditions appeared to vary, but could be roughly divided into the three main types described by Dr Camps in the Chelmsford cases (1935). The cases of scarlet fever were noted as being of a much more serious type than those normally seen. Rash, when present, tended to be marked and to be of a rather coarse nature, desquamation followed the normal course. In the more severe cases pain was a marked feature, and the tonsillar glands were easily palpable. An interesting point is that one dog (an Airedale) appears to have been affected, though the nature of the infection was not confirmed bacteriologically. It became ill a day before any human case occurred in that particular household, became rapidly collapsed, with marked swelling and obvious pain in the region of the fauces, and was described as being "paralysed" for a week.

Complications

The chief complications noted were adenitis, otitis media, quinsy, and polyarthritic symptoms. One case of nephritis, one of acute appendicitis, and one with a diffuse herpetiform eruption were associated with initial throat infections. These complications made their appear-

ance, but this was by no means the case, as in the early days of the outbreak the presence or absence of a rash was often the deciding factor in the request for removal to hospital, and many of the cases showing no signs of a rash were acutely ill. Nor is it believed that the assessment of complications was very much more accurate among cases nursed in hospital. As will be mentioned later, the possible cause of the comparatively large numbers of complications among the hospital patients was that cross infection occurred owing to the admission of cases of scarlet fever associated with a coincident "seasonal" outbreak of the disease.

For all cases the percentages of complications were as follows: in the 0 to 4 age group, 38.2 per cent; in the 5 to 14 age group, 25.5 per cent; in patients aged 15 and over, 25.4 per cent. This gave a total incidence of 26.6 per cent. These percentages are high and the results serious. Apart from many cases suffering from resultant debility there is little doubt that a late spread of infection from the cases of adenitis and otorrhoea resulted in an increased number of cases of scarlet fever in the district during the three months succeeding the outbreak, and has been responsible for an outbreak of tonsillitis with associated scarlet fever in the Doncaster Royal Infirmary which necessitated the closing of one unit for a short period.

Two deaths have definitely been associated with the epidemic—one in a child aged 2 years suffering from severe scarlet fever, who died within twenty-four hours of the onset of the disease, and one in a male aged 33, who developed adenitis following a severe attack of ton-

TABLE IV—*The Incidence of Complications in Cases Treated in Hospital as Compared with those Treated at Home*

Cases Treated in Hospital							
Age Group (years)	Adenitis	Otorrhoea	Quinsy	Arthritic Symptoms	Total Cases	Total Complications	Percentage Incidence of Complications
0-4	—	1 (4.0%)	—	2 (10.0%)	20	3	15.0
5-14	6 (16.2%)	5 (13.5%)	—	4 (10.8%)	37	15	40.5
15 and over	1 (2.2%)	1 (2.2%)	1 (2.2%)	7 (15.5%)	45	10	22.2
Totals	7 (6.8%)	7 (6.8%)	1 (0.9%)	13 (12.7%)	102	28	23.8
Cases Treated at Home							
0-4	5 (35.7%)	5 (35.7%)	—	—	14	10	71.3
5-14	4 (7.5%)	1 (1.9%)	2 (3.8%)	1 (1.9%)	53	8	15.1
15 and over	18 (9.2%)	—	11 (5.6%)	22 (11.3%)	195	51	26.2
Totals	27 (10.3%)	6 (2.3%)	13 (4.9%)	23 (8.8%)	262	69	26.4

ance at intervals varying from three days to three weeks after the onset of the illness, but the majority were seen at the end of the first week. The arthritic symptoms tended to appear a little later than this and were very persistent. They were not the transient joint pains common with streptococcal throat infections; many patients were still complaining of these arthritic pains three months after the outbreak had ended.

Although the figures are too small to be of much value it is interesting to compare the occurrence of complications among those cases nursed in hospital and those nursed at home as shown in Table IV.

From these figures it would appear that except in the 0 to 4 years age group hospital treatment does not appear to have had any beneficial effect upon the reduction of complications. All cases treated in hospital received streptococcal antitoxin (scarlatina) serum but only two cases nursed at home received any serum. It might be argued that only the worst cases were admitted to hos-

pital. One other death was that of a woman aged 38 who developed clinical scarlet fever on December 6 and cannot therefore be definitely associated with the outbreak, although she was taking the milk which later proved to be infected. In all cases death appeared to be due to toxæmia. Unfortunately post mortem examinations were not possible nor were swabs taken at the time of the original throat infections for bacteriological examination. It is worth while noting that no cases of puerperal fever occurred during this period or the succeeding months and that only one case of erysipelas was definitely associated with the outbreak.

Administrative Problems

From the administrative point of view several problems were raised. Once the outbreak had begun it was quickly realized by the general practitioners that the cases of tonsillitis and scarlet fever were of the same origin and the question arose as to whether all cases should be

notified as scarlet fever. Several cases exhibiting no exanthem were in fact notified. This accounts for the fact that the figures in this report do not exactly correspond with those in a preliminary annotation published in the *British Medical Journal* (1937, 1, 26). Rightly or wrongly it was decided to ask for notification only in cases of clinical scarlet fever. In view of the fact that direct case-to-case spread was very limited once the outbreak had begun, the notification of all cases of tonsillitis irrespective as to whether they were associated with the milk infection would have served no useful purpose. It would have been only of limited statistical value unless every case could have been properly investigated by the sanitary inspectors or health visitors as is done in all cases of notifiable infectious disease, and this would have placed an unbearable strain on these staffs whose services at that time were much more usefully applied in other directions.

With regard to isolation hospital accommodation the question of the presence or absence of a rash did not apply. It is true that the majority of cases admitted to hospital were cases of clinical scarlet fever, but cases of tonsillitis were admitted where nursing facilities at home were inadequate. One patient with tonsillitis who developed an acute appendicitis was admitted to hospital for operative treatment, as was also a case of diffuse herpetiform eruption clearly associated with a recent throat infection. One child who had been nursed at home with scarlet fever and had developed otorrhoea was removed to hospital as his mother was expecting to be confined. When home facilities were satisfactory, therefore, cases were nursed at home, but, nevertheless, between December 5 and December 29, 131 patients were admitted to hospital, 102 of these being cases associated with the milk outbreak. Luckily the hospital was nearly empty at the beginning of December, but even then the patients in the sanatorium section had to be given "Christmas leave" to create extended temporary accommodation for scarlet fever cases.

Patients were retained in hospital for three weeks unless complications had ensued. No "return" cases have come to my notice. Some patients developed secondary attacks of tonsillitis in their third week, and this was probably due to cross infection from "seasonal" cases. Some of the "complications" may have been due to this cause. At the very beginning of the outbreak it had been realized that the sudden spate of cases would probably be infected by an organism of one serological type and they were accordingly separated from the few cases of scarlet fever already in hospital. Unfortunately as will be seen from Chart 1 what was apparently a "seasonal" outbreak of scarlet fever began about the same time as the milk outbreak and with the rush of cases it proved impossible to segregate cases strictly according to their probable source of infection, and cross infection occurred. These "seasonal" cases were mainly associated with haemolytic streptococci Type IV, though there was one case of Type I infection which ended fatally. The difficulties associated with cross infection were however most noticeable during the three months succeeding the milk outbreak when as has been stated there was an increase over the usual expected number of scarlet fever cases.

During the period of the outbreak typing of haemolytic streptococci from patients was carried out by Dr Griffith at the Ministry of Health Laboratory. Following the outbreak through the kindness of Dr Camps of Chelmsford all new scarlet fever admissions to hospital have been typed. The point of interest is that, despite the heavy Type II infection in the milk outbreak, this type completely disappeared during the six weeks following

the end of the outbreak and was replaced by a bewildering number of different types which made segregation in hospital a matter of great difficulty. About the middle of February Type II organisms again began to appear, only to disappear early in March.

The other main administrative actions taken early in the outbreak were to inspect the schools in the district chiefly affected to exclude all children showing signs of sore throat and to recommend their parents to obtain medical advice, and to circularize the doctors in the district regarding the epidemic. This circular letter pointed out that few immediate secondary cases were to be expected, but that danger would arise from cases of otorrhoea, etc. resulting from the infection. The danger was made apparent early in January when a few cases of mastoiditis and adenitis found their way to the wards of the Royal Infirmary and precipitated the throat infection there already referred to. The circular also advised the following quarantine periods:

Cases of scarlet fever and severe tonsillitis—three weeks from the date of onset

Cases of mild tonsillitis—one week after the subsidence of symptoms

Cases with throats positive for haemolytic streptococci—one week if no clinical signs of infection appeared. (A good number of these cases were found as interest grew, and caused considerable administrative difficulties.)

Contacts especially school children were advised quarantine for one week unless negative throat swabs had been obtained.

The midwives were also circularized and advised to take special precautions for a considerable period, and the necessity for wearing adequate masks was re-emphasized. All visiting was stopped at the Municipal Maternity Home. Several administrative problems of a minor nature occurred during the course of the outbreak, and with these, as with the greater problems much help was obtained from the Ministry of Health, and especially from a personal visit by the late Dr Vernon Shaw, who visited Doncaster on December 16.

Summary and Conclusions

1 An outbreak of scarlet fever and tonsillitis due to infection of a milk supply with *Streptococcus pyogenes* Type II, and the administrative action taken to minimize the effects of the outbreak are described and discussed.

2 The distribution of cases shows a heavy attack rate among pre school children, and also that adults form a larger proportion than normal of the total cases.

3 The primary infection of the milk appears to have been by the cow becoming infected, but on the evidence obtainable locally the possibility of direct contamination of the milk by a milker cannot be entirely disregarded.

4 The complications subsequent upon infection are enumerated, and from this point of view, apart from children under 5 years of age, hospital treatment appears to have been of doubtful value.

5 The only adequate method of controlling an outbreak is by stopping the milk supply or by having it efficiently pasteurized.

6 To avoid a sense of false security being given in the search for haemolytic streptococci in milk small group samples must be taken.

My thanks are due to Dr F. Griffith, Dr F. C. Missett, and Dr F. E. Camps for the help and for advice they have given to me in the preparation of this report.

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THE ADRENAL CORTEX ITS SUPPOSED FUNCTIONS AND SUGGESTED USES OF CORTICAL EXTRACTS*

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The adrenal gland has been the object of intensive research since Thomas Addison, in 1855, first disclosed its relation to a comparatively uncommon disease, to which his name has been attached. The massive volume of literature on this relatively small paired gland is scarcely commensurate with our factual knowledge of its function in normal physiological processes (Grollman 1936). In spite of its smallness the adrenal gland must exert a vital influence in the organism, for the surgical removal of both glands soon leads to a complete breakdown of normal function in most of the organs and tissues of the body, rapidly terminating in death.

Each adrenal is situated in the posterior part of the abdomen, overriding the upper pole of the kidney like a 'triangular cocked hat with rounded corners'. The mammalian adrenal is a compound organ formed by the union of two originally separate tissues—namely, the cortex and the medulla. The cortex, which anatomically and physiologically constitutes the chief part of the gland, is usually of a deep yellow colour, due to the presence of lipids, while the medulla is small and pulpy and of a dark reddish colour due to the presence of blood.

In man and the anthropoid apes the medulla is a post-natal development, being represented at birth by a small strip of undifferentiated tissue only. The cortex, on the contrary, is the whole pre-natal adrenal, which at birth is one-third the size of the kidney. Shortly after birth the foetal adrenal cortex begins to involute, being gradually replaced (the process is not complete until the end of the third year of life) by a permanent cortex and medulla. (In my opinion this period of the switch over from the old cortex to the new is a potentially dangerous period in the life of the human infant, a too rapid involution of the foetal cortex and a too slow development of the 'permanent' cortex may constitute a hiatus in adequate cortical function which leads to severe symptoms or death.)

Although some variation exists in the cellular arrangement of the cortex in different species a more or less general pattern is present according to which the cortex is divided into three zones: the glomerulosa, the fasciculata and the reticularis. The first named is the layer immediately beneath the capsule. Time will not permit a more detailed description of the anatomy and histology of the adrenal gland.

The Medulla

The function of the adrenal medulla has been the subject of much study and speculation since Oliver and Schafer first directed attention in 1894 to the remarkable rise in blood pressure which follows the subcutaneous injection of a medullary extract. To-day the pharmacodynamic effects of adrenaline are well known but little has been definitely proved in regard to the medulla's normal physiological function. Whatever that function may be it certainly is not an indispensable factor in animal biochemistry, because the adrenalectomized animal can be maintained indefinitely in good health with a normal func-

tion provided an optimum amount of a potent cortical extract be daily injected or ingested. At post mortem examination there is seldom any hypertrophy of accessory chromaffin bodies if such be present.

The Cortex

Since investigators have failed to demonstrate any essential function of the adrenal medulla interest has gradually shifted to the cortex, as it appears to be the really important and essential part of the adrenal gland. The indispensability of the cortex in the maintenance of the functional integrity of the organism has been conclusively and absolutely proved in oft repeated adrenalectomies in animals and by clinical experience in cases of Addison's disease and established cases of adrenal haemorrhage. There cannot now be any doubt that the cortical cells of the adrenal gland elaborate a secretion, or secretions, of vital necessity to the continuity of life.

The mechanism by which this hormone exerts its effect is still unproved. However, a great advance in the study of cortical function has been made by the discovery of methods of extraction of the hormone or hormones, in sufficiently pure and potent form to permit their application to experimental and clinical research. Research into the effects of adrenalectomy on laboratory animals has done much to suggest rational hypotheses in answer to the question of cortico-adrenal function.

Chronic Adrenal Insufficiency

As early as 1856 Brown Séquard, inspired by Addison's classical description of the clinical picture of chronic adrenal insufficiency (Addison's disease), attempted to reproduce the Addisonian syndrome in animals. The rapidly fatal outcome, the animals surviving only a matter of hours, led him to conclude that the adrenals were indispensable to life. In recent years it has been frequently demonstrated that, with good surgical technique and an operation in two stages, complete adrenalectomy can be performed on all the common laboratory animals with recovery from the usually immediate lethal effects of the operation. However, in two, three, or four days dogs show the early signs of cortical insufficiency, and unless they are supplied with potent cortical hormone (cortin) they die in six or seven days. Recently it has been shown that the ingestion of large quantities of sodium chloride will prolong the life of the adrenalectomized animal.

When a two stage adrenalectomy has been completed on a dog and the animal recovers from the effects of the anaesthetic and the surgical procedure, one notices few or no abnormal signs for several days, the length of this symptom free period varying to a considerable extent with the animal's diet. Such an adrenalectomized animal like Dragstedt's thyroparathyroidectomized dogs (Dragstedt 1923) is very vulnerable to a meat diet and its post-operative life can be markedly shortened by such a meat rich diet.

The first unusual signs seen in the adrenalectomized dog are anorexia and listlessness. The animal becomes more apathetic and vomits a great deal. Usually diarrhoea is present which soon is very bloody. Muscular movements become slow and uncertain and weakness of the hind legs may cause the gait to be very unsteady. Eventually the animal lies prostrate. As insufficiency progresses the body temperature falls in warm blooded animals and the skin becomes cold and the mucosae turn pale. Muscular twitches or convulsions may appear. Respiration is first rapid and then slow. There is a terminal anuria. Death

* Read before a meeting of the O. or Soc.

occurs in coma, usually with respiratory failure while the heart is still feebly beating (Grollman, 1936). These objective signs of acute cortico-adrenal insufficiency are summarized graphically in Fig 1.

Marked anhydramia is a constant and striking feature of these adrenalectomized animals, and is due to the great loss of water and sodium chloride by way of the kidneys, owing possibly to impaired powers of resorption in the kidney tubules. This loss of water and electrolytes from the tissues and blood is such a marked feature of acute cortical insufficiency that some observers consider that the

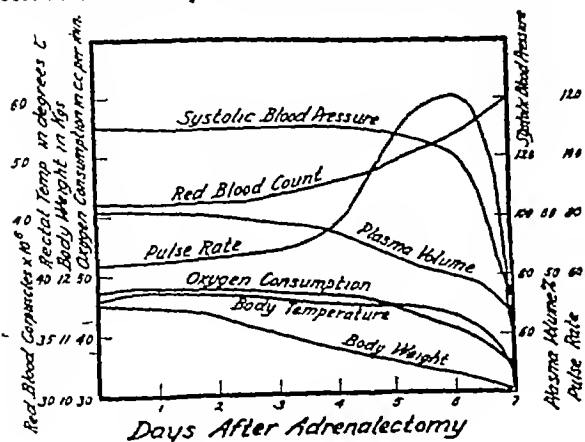


FIG 1

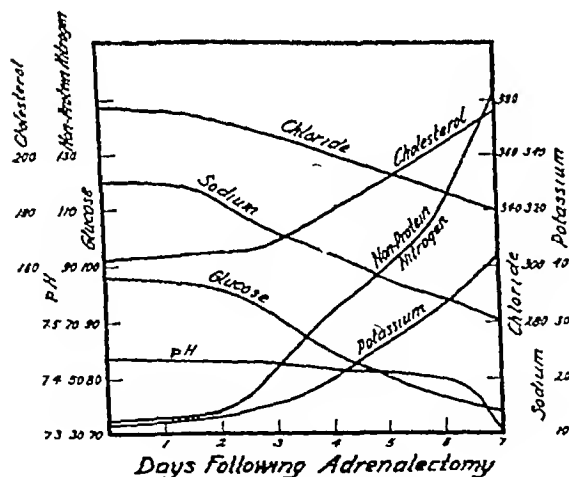


FIG 2

prime function of the adrenal cortex is the maintenance of salt and water balance. It is certainly true that the quantity of cortin necessary to maintain life in an adrenalectomized animal or in a person with Addison's disease can be materially decreased by simply increasing the sodium chloride intake. In acute cortical insufficiency there is inevitably a pronounced and constant change in blood chemistry. A rise in non protein nitrogen occurs early. Later there is a rise in cholesterol and potassium* and a fall in chlorides sodium, and glucose. The pH is that of a severe acidosis. These outstanding features of the blood chemistry are graphically represented in Fig 2.

* Recent work by Zwemer would indicate that inefficient potassium elimination is a potent factor in the origin of the classical signs of acute cortico-adrenal insufficiency.

Anatomical Changes Found Post Mortem

In comparison with the severity of the *in vivo* signs of acute cortico adrenal insufficiency few anatomical changes are found on post-mortem examination. The most constant of these findings are (Banting and Cairns, 1926) (1) an enlarged thymus gland, (2) enlarged mesenteric lymphatic glands, (3) degeneration and necrosis of the liver, (4) degenerative changes in the kidneys, (5) congestion and ulceration of the gastro intestinal tract. When a chronic or partial cortico-adrenal insufficiency is produced in dogs after the method of Crowe and Wislowski (1914) only the following findings were noted after the accidental or deliberate death of the dogs: (1) enlargement of the thymus gland, (2) enlargement of the mesenteric lymphatic glands, (3) hypertrophy of Peyer's patches, (4) visible tonsils (a rarity in a dog).

(It surely must be more than a coincidence that the above findings are the most constant and diagnostic found in infants in Vancouver who have died suddenly and for no apparent reason. In these cases—and there is on the average one a month in this city—the pathologist's diagnosis is invariably 'status lymphaticus'.)

Function of the Adrenal Cortex

The question naturally arises: What is the function of the adrenal cortex? While many aspects of cortical function are still obscure, experimental research during the past decade has thrown much light on this vital and hitherto little understood endocrine gland. The cortex constitutes the whole adrenal gland in foetal life. The fact that at birth it is one-third the size of the kidney (the adult cortex being one-fortieth) is an indication of its importance in the pre-natal development of the child. Just what that role is we can at present only surmise. At birth the foetal type of cortex (and it is histologically different from the post-natal cortex) begins to involute and the new cortex and medulla to develop. The post-natal development of the cortex is not complete until the end of the third year, according to Grollman. The question of the function of the "permanent" adrenal cortex is now our immediate concern.

Out of the extensive experimentation of the past decade there emerges evidence which suggests that the chief functions of the adrenal cortex are threefold:

- 1 To maintain normal blood volume by control of excretion and resorption (in the kidney tubules) of electrolytes and water.
- 2 To act as a general tissue and cell catalyst, particularly in regard to hepatic function.
- 3 To play an important part in carbohydrate metabolism particularly in respect to glycogenesis.

There is also considerable evidence to indicate that the adrenal cortex is closely related to urea formation to vitamin C storage to cholesterol metabolism, and to resistance to infection and toxæmia. Some observers believe that it is a factor in the normal healing of wounds and callus formation. Possibly it increases the production of leucocytes and heightens their phagocytic activity.

From the mere point of view of mathematical probability it is entirely reasonable to assume that many clinical syndromes whose aetiology is at present unknown are due to cortico-adrenal dysfunction or may be influenced favourably by increased cortico-adrenal function or the presence of cortin in increased quantities. In view of the freely admitted limitations of post-mortem study of the adrenals (due to rapid autolysis) it would seem that the

effective elucidation and recognition of new clinical forms of cortico-adrenal hypofunction must be initiated and controlled by open minded clinicians imbued with the spirit of clinical research so well exemplified by the distinguished career of the late Sir James Mackenzie and so well described by Sir Thomas Lewis (1930)

Subjects for Research

In this spirit of clinical research may I suggest that the members of the Osler Society give their open minded and earnest consideration to the following entities as worthy of the clinical trial of cortico-adrenal therapy

- I The so-called thymic syndrome (status lymphaticus)
- II Cyclic vomiting.
- III Infantile diarrhoea of uncertain aetiology
- IV The vomiting of pregnancy
- V Severe infections
- VI Severe burns

I The "Thymic Syndrome"

Paediatricians practising in the Pacific North-West are well aware of the existence of a real clinical syndrome of uncertain aetiology which, like the Angel of Death, may cause the death of apparently healthy infants as they lie in their cribs presumably asleep. Post mortem examination in these cases (I quote from the data available from a series of forty-seven such unexpected fatalities in Vancouver in the eight-year period from January, 1925, to October, 1932) reveals little anatomical pathology. Usually the thymus gland is enlarged to a varying degree (assuming the normal maximum weight of this gland in Vancouver children to be similar to that found by Anderson and Cameron (1927) in Glasgow—namely, 15 grammes). The mesenteric lymphatic glands are almost invariably enlarged (tuberculosis being excluded). Petechial haemorrhages are often seen in the serous membranes of the heart and lungs. Peyer's patches are usually enlarged. In such cases the diagnosis of our pathologists (Drs A W Hunter and H. H Pitts) is invariably status lymphaticus.

In 1931, before the International Congress of Anaesthetists in New York, and a year or so later before the Vancouver Medical Association, 1933, I presented data in support of the hypothesis that these infants die because of an acute exacerbation of a temporary cortico-adrenal insufficiency, possibly predisposed by thyroid hypofunction. Time will not permit even a summary of these data here. Suffice it to say that the passage of time and the clinical trials of this therapy by my colleague Dr R P Kinsman have made me still more confident of the soundness of the original hypothesis. In brief, I believe that time and repeated therapeutic trials will eventually demonstrate that status lymphaticus and the so-called "thymic syndrome" are essentially the same being an endocrinopathy primarily involving the adrenal cortex. The final proof (or disproof) of this hypothesis (or some other yet to be formulated) is the responsibility of paediatricians who from time to time are called to treat patients for attacks of this mysterious and often fatal syndrome. The attacks referred to are often termed breath holding spells and are generally accepted as evidence of the presence of the thymic syndrome. In my opinion these syndromes are clinical manifestations of status lymphaticus differing only in degree from the tragic cases of sudden death referred to in the opening paragraph. These little patients should be given both for clinical research and for therapeutic purposes cortical extract in appropriate dosage. Dr R P Kinsman has found 14 grains of Armour's desiccated extract an effective daily dose. Certainly one need have

no fear of giving too much. If, as I hopefully expect, this therapy proves valuable, then real progress will have been made in the elucidation of one of the most tragic and puzzling problems of Pacific North-West medicine. Inasmuch as status lymphaticus snuffs out life in its early stages it is possibly of greater importance than the more widely published problems of tuberculosis and carcinoma.

II Cyclic Vomiting

I am indebted to Dr Frederic Fenger of Chicago for the suggestion that cyclic vomiting may possibly be related to adrenal cortical function. The usual teaching in regard to this well known clinical paediatric problem has been to the effect that the causative factor is ketonaemia due to incomplete oxidation of the fatty elements in the child's diet. The praiseworthy clinical researches of Dods (1935) have definitely shown that ketonaemia and ketonuria are concomitant phenomena and not aetiological factors in cyclic vomiting. The real cause still remains obscure. However, the prodromal symptoms of languor (even prostration), headache, and pallor which precede the vomiting attack, and the vomiting itself which features the syndrome, all indicate a severe metabolic disturbance that suggests cortico adrenal insufficiency as the most likely basic endocrinopathy. The adequate therapeutic use of a potent liquid extract of the adrenal cortex would do no harm and might prove valuable.

III Infantile Diarrhoea of Uncertain Aetiology

Severe diarrhoea is an invariable sequel of complete adrenalectomy in dogs. May it not be possible that in some cases of diarrhoea in infants insufficiency of cortico-adrenal function may be the aetiological factor?

IV The Vomiting of Pregnancy

In suggesting the use of adrenal cortex therapy for this universally common clinical entity, so common that some consider it "physiological," I feel that here at least I am on firm ground. With the co-operation of Vancouver colleagues, in general practice and specializing in obstetrics, I recently (1934) reviewed 200 consecutive cases of hyperemesis gravidarum that had been treated with adrenal cortex, with undoubted success in 85 per cent of cases. This series is of interest also for the reason that it shows that the oral use of adrenal cortex is effective.

V Severe Infections

As Grollman (1936a) points out, in patients who have died as a result of a severe acute bacterial toxæmia focal necroses have often been observed in the adrenal cortices. Cloudy swelling and oedema of the cortical cells, congestion and small focal haemorrhages are also common findings. The question arises, To what extent are the symptoms of asthenia, anorexia, vomiting etc., that characterize the course of the clinical condition, and which we account for by 'toxæmia,' the results of the coexisting cortical insufficiency? It is well known that adrenal ectomized animals are much more vulnerable to toxins of all kinds than are their litter mate controls. Accordingly it is reasonable to postulate for purposes of clinical research that the fatal outcome in cases of severe bacterial infection is probably due in part at least to acute adrenal insufficiency caused by the bacterial toxæmia.

VI Severe Burns

According to Grollman (1936b) in uncomplicated cases of superficial burns characteristic changes occur in the

adrenals They become swollen and deep red On section extensive haemorrhages may be found The cells are pale and swollen, and are in a process of hydropic degeneration While it is now generally supposed that the absorption of toxins from the injured skin (histamine shock) is the prime factor in the fatal outcome, the marked pathological changes found in the adrenal cortices suggest that acute cortico adrenal insufficiency (secondary to the above mentioned pathological changes in the cortex) plays a prominent part in these deaths It is quite within the bounds of reason to expect that the generous administration of cortin in such cases would prevent an otherwise inevitable fatality

Summary

In summary may I recall to you that we have briefly reviewed the probable functions of the adrenal cortex (it being the 'vital' part of the adrenal gland), and have suggested the use of a potent cortical extract in certain clinical entities, including the so called "thymic syndrome, cyclic vomiting certain cases of infantile diarrhoea, the vomiting of pregnancy, severe infections, and severe burns May I suggest in conclusion that it is only by applying clinically the findings of the experimental physiologist that real progress can be made in the solution of our medical problems Such experimental clinical research can readily be made compatible with the best interests of the patient

* * An account of the discussion on this paper will be found at page 1221

[Figs 1 and 2 are reproduced from *The Adrenals* by A Grollman (The Williams and Wilkins Company Baltimore 1936)]

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A congress of the International Union for the Study of Population Problems will be held in Paris from July 28 to 31 under the presidency of Professor Adolphe Landry A large number of papers will be read upon a diversity of populational, biometric, and demographic subjects A 50 per cent reduction on the French railways to and from Paris will be accorded to members attending and their families, with free entrance to the Paris Exhibition during the Congress The British National Committee of the Union is the British Population Society, founded in 1928 to develop in Great Britain and Northern Ireland scientific studies pertaining to problems of population Membership of this society is open to all those whose scientific or other special qualification will enable them to forward the objects of the society, and carries with it membership of the International Population Union with the right to attend and speak at meetings of the Union and to contribute papers upon populational subjects Associate membership is open to all interested in populational problems and includes the right to attend the International Congress The official journal of the Union is *Population* Full particulars of the British Population Society may be obtained from the hon secretary Dr C Conyers Morrell, D P H., Mudeford House, Mudeford Christchurch Hants

CHRONIC AGRANULOCYTOSIS SUCCESSFULLY TREATED WITH LIVER

By

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AND

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A pastrycook aged 25 was admitted to St Bartholomew's Hospital on May 22, 1936, for dimness of vision He was quite well and healthy, with normal eyesight, till five years before, when his eyes became inflamed and his vision impaired He was partially relieved of symptoms for the time being by hospital treatment, but attacks recurred and alternated with intervals of relief Both eyes were affected by chronic iridocyclitis, of which investigation failed to reveal the cause In the course of these investigations he was found to have a very low white blood count It was naturally wondered whether the leucopenia was in any way connected with the iridocyclitis, its origin or its treatment, and whether restoration of the white count to normal would improve the condition of the eyes

Case History

Apart from the iridocyclitis the only abnormality was a shallow ulcer on the inner aspect of the cheek The ulcer was first noticed by the patient about nine months before, and it appeared and disappeared at irregular intervals without any treatment The family and personal history were good and there was no history of allergy in the patient or his relatives Nine months ago he took a proprietary tonic which then contained amidopyrine of which he probably had some 30 grains in all About the same time he had one or more injections of gold for the eyes without any benefit.

The blood count on May 20 1936, was red cells 6 140 000 per c.mm, haemoglobin 102 per cent platelets 250 000 white cells 3,600 of which 1 188 were polymorphonuclear cells Two days later the white blood count was 2 800 of which 812 were polymorphonuclear cells The differential count on the bone marrow obtained by sternal puncture on June 4 1936 was as follows

Myeloblasts	3%	Eosinophils	2%
Premyelocytes	3%	Lymphocytes	4%
Myelocytes	32%	Monocytes	0.5%
Metamyelocytes	10%	Reticulum cells	0.5%
Staff neutrophils	13%	Macroblasts	11%
Segmented neutrophils	1%	Erythroblasts	20%
Basophils	0%		

The most notable feature of the marrow smear is the excessive proportion of myelocytes, apparently due to a failure in their development into polymorphonuclear cells Maturation has been arrested, though at a later stage than in a previous case, in which the cells had not advanced beyond the myeloblast level (Witts 1936) The myeloid cells especially the myelocytes seemed more fragile and more easily smudged than in health, their granulation was scanty and often lacked uniformity The nucleated red cells were less mature than in the normal marrow smear and there were few pyknotic nuclei In view of the changes in the erythropoietic tissue and of the subsequent response to liver it is interesting that the fractional test meal revealed achlorhydria unfortunately the effect of histamine was not observed

Failure with Nucleotide Therapy

It was concluded that the patient was suffering from a chronic form of agranulocytosis, possibly the effect of

the amidopyrine and gold which he had received. In previous work on agranulocytosis (Witts, 1936) we had had troublesome reactions on treatment with pentnucleotide. Pentnucleotide is an approximately equimolecular mixture of the sodium salts of the four nucleotides obtained by the hydrolysis of yeast nucleic acid. These nucleotides are all compounds of bases with *d*-ribose and phosphoric acid. The four nucleotides are adenylic acid (adenine ribo-phosphoric acid), guanylic acid (guanine ribo-phosphoric acid), uridylic acid (uracil ribo-phosphoric acid), and cytidylic acid (cytosine ribo-phosphoric acid). Of these nucleotides the first two are derived from purine bases and the second two from pyrimidine bases. Dr A. L. Bacharach suggested to us that, in view of the pharmacological action of adenosine on the cardiovascular system, it was possible that the adenylic acid was responsible for the reactions occurring after injection of pentnucleotide and that they might be avoided by omitting the purine derivatives. The Glaxo Laboratories kindly supplied us with an equimolecular mixture of the two pyrimidine nucleotides, cytidylic and uridylic acids. It was put up in the same concentration as pentnucleotide, 0.7 gramme per 10 c.c.m. Ten cubic centimetres were injected twice daily for six days, but there was little effect on the total or the differential white cell count. After a few days' interval the patient was treated with pentnucleotide in doses of 10 c.c.m. twice daily intramuscularly for nine days, this too failed to produce any increase in the white count or the polymorphonuclear cells. Neither the pyrimidine nucleotides nor pentnucleotides gave any troublesome reactions in this patient.

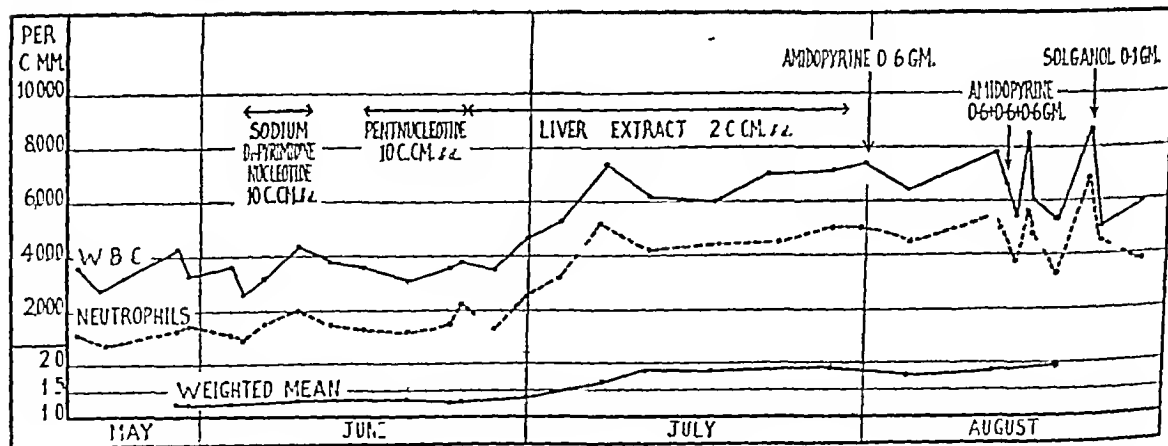
Results of Liver Treatment

Nucleotide therapy having failed, the patient was treated with liver extract (hepatex), which was given in doses of 2 c.c.m. twice daily intramuscularly. An improvement in

treatment, though it was still below the normal limit, and large mononuclear cells, which had constituted about 20 per cent of the white cells, fell to about 6 per cent at the end of the treatment. The total white cells, neutrophils, and weighted mean are shown graphically in the chart. Sternal puncture was done again at the end of liver treatment, when a preponderance of polymorphonuclear leucocytes was found and the differential count was as follows:

Myeloblasts	4%	Eosinophils	1%
Premyelocytes	2%	Lymphocytes	10%
Myelocytes	11%	Monocytes	0.5%
Metamyelocytes	6%	Reticulum cells	0.5%
Stiff neutrophils	35%	Macroblasts	3%
Segmented neutrophils	14%	Erythroblasts	12%
Basophils	0%		

From the examination of the blood and of the sternal puncture material the patient now appeared to be in a normal haematological state, but his dimness of vision persisted. It was decided, by giving a therapeutic dose, to find out if he was susceptible to amidopyrine. With this view the diurnal variation of the leucocytes from 10 a.m. to 6 p.m. was first observed, the patient being kept in bed during the whole time but having the usual diet. Next the effect of a single dose of amidopyrine and of three successive doses of the drug were noted. No immediate effect on the total white cells and the neutrophils was apparent after single or repeated doses, though there was a suggestion of a slight delayed action. As the patient had had injections of gold for his eye trouble the effect of 0.1 gramme of solganol intramuscularly was noted. The white cells fell from an unusually high level of 9,200 (neutrophils 6,800) to a minimum of 5,000 (neutrophils 2,000) six hours later, and they remained at a lower level than previously for the remainder of the period of observation. It is doubtful, however, whether



the total white cell count and the neutrophils was noticed on the fifth day. This improvement continued and reached a maximum on the thirteenth day of the liver treatment when the total white cells had risen from 3,800 to over 7,000 per c.m.m., of which more than 5,000 were neutrophils. Liver treatment was continued for thirty-five days during which time the total white cells fluctuated between 6,000 and 7,000 per c.m.m., with a total neutrophil count of 4,000 to 5,000 per c.m.m. The weighted mean of the nuclear lobes in the Arneith count which was very low to start with was much higher at the end of the liver

treatment, though it was still below the normal limit, and large mononuclear cells, which had constituted about 20 per cent of the white cells, fell to about 6 per cent at the end of the treatment. The total white cells, neutrophils, and weighted mean are shown graphically in the chart. Sternal puncture was done again at the end of liver treatment, when a preponderance of polymorphonuclear leucocytes was found and the differential count was as follows:

He was seen again in May 1937. He was much better in himself but there was no change in the eyes and the iritis continued to flare up at intervals. He had had

no treatment except atropine drops. The blood had been examined several times and found normal. The count on May 4, 1937 was red cells, 4,940,000 per c.mm., haemoglobin, 110 per cent., white cells, 7,100 per c.mm., colour index 1.1. The differential white count was lymphocytes 14 per cent., polymorphs 77 per cent., eosinophils 1 per cent., basophils 1 per cent., metamyelocytes 2 per cent., and monocytes 5 per cent.

We do not know why some patients with agranulocytosis respond to nucleotide, others to liver, and others again to neither of these substances. In acute cases, most of which are due to sensitivity to amidopyrine, the predominant cell in the marrow is the myeloblast or stem cell. It is in cases of this kind that nucleotide has had most success. Our patient's illness was chronic, and the development of his white cells was apparently arrested at the myelocyte level. He responded to liver but not to nucleotide. It may be, then, that the results of treatment are to some extent determined by the level at which leucopoiesis is arrested, but our data on these matters are still too fragmentary to be regarded as reliable evidence.

Summary

A man who had suffered for five years from an unexplained iridocyclitis was discovered during the course of a routine investigation to have a mild chronic agranulocytosis. Sternal puncture revealed arrest of maturation of the myelocytes in the bone marrow. The patient had taken amidopyrine and gold in the past, but no clear evidence of sensitivity to either of these drugs was obtained. There was no response to pyrimidine nucleotides or to pentnucleotide, but on treatment with intramuscular liver extract the white cells returned to normal levels and the bone marrow was restored to normal. The blood has remained normal without further treatment, but the iridocyclitis has not greatly improved.

REFERENCE

Witts L. J. (1936) *Proc. roy. Soc. Med.* 29 671

L. J. Lindström (*Finska Läk.Sällsk. Handl.* March, 1937, p. 207) calculates that from 2 to 3 per cent. of all males suffer from undescended testicle, and that at least thirty different operations have been devised for its cure. At the Vasa Hospital he has practised the operation devised by the American Torek on seven patients whose ages ranged from 1½ to 33 years. One of the patients, aged 22, was so pleased with the results of the first stage of the operation that he refused the second stage as superfluous. In every case the wounds healed by first intention, the testicle remained within the scrotum, and the patient was very pleased with the final results. At the first stage of the operation the testicle is detached from the surrounding structures, the cord being freed from fibres of muscle and connective tissue and the pampiniform plexus. After the testicle and scrotum have been secured to the inner side of the thigh the second stage of the operation is undertaken from four to six months later, and the testicle and scrotum are secured in the normal position. For children it may be well to give hormone treatment as a preliminary to the operation, which should preferably be undertaken at the age of 12 to 14 if a hernia or other complication has not required an earlier intervention. Waiting till puberty may render any operation superfluous, and in this connexion the author refers to the experience of Bjerke, who in 1935 gave an account of 188 Danish boys with undescended testicle. In 63 per cent. spontaneous descent occurred the arrival of the testicle within the scrotum taking place in most cases between the ages of 10 and 15.

CANCER OF OESOPHAGUS TREATED BY DEEP X-RAY THERAPY

(SYMPTOM FREE NEARLY TWO YEARS)

BY

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This brief communication refers to a patient in whom cancer had developed in the mid-thoracic region of the oesophagus. The case-history seems worthy of publication because the method employed by Dr Levitt (*vide infra*) for distal irradiation of the lesion was followed by a much longer freedom from recurrence than had hitherto come within my personal experience. This had been limited to local therapy, which during the past ten years or so involved the implantation of platinum-screened needles containing radium element or its emanations in glass "seeds".

It is scarcely necessary to add that, by direct oesophagoscopy, these were inserted into the visible growing margins of the lesion and its deeper peripheral extensions in so far as these could be gauged by careful inspection of the diagnostic x-ray film. Perhaps it may be permitted me to state that having been associated with the Radium Institute since its foundation in 1910, an exceptional amount of material has been at my disposal for testing various techniques which, each and all, have aimed at providing uniform and efficient irradiation of oesophageal cancer. Yet in spite of such advantages the results have been very disappointing. I cannot recall to mind a single patient who did not succumb to the disease within twelve months from the commencement of treatment.

In making this statement it would be only fair to add that a large majority of those patients belonged to the poorer classes and did not seek relief from their chief symptom, dysphagia, until the primary lesion was far advanced and not infrequently associated with near or distant secondary deposits. In such circumstances it was only possible to destroy the obstructive portion of growth and thereby restore the power of swallowing. As might be expected, considerably longer respites were afforded to patients more happily situated provided that their lesion was treated in its earlier phases. But even so, I think it will generally be agreed by experts that luck has played a considerable part when a patient has enjoyed a comparatively long freedom from recurrence, because this implies that, by mental visualization alone, the surgeon has been fortunate enough to implant the radium needles in the deeper, peripheral, and actively growing areas of the growth (*vide H. S. Souttar, British Medical Journal* May 1, 1937). On the other hand, it cannot be denied that those who have mastered the technique of local irradiation will secure better results than the occasional operator—which seems to support the definition of "luck" as an accident which rarely happens except to the competent.

Be that as it may, I had seen a few patients who, after treatment by deep x-ray therapy, had secured far longer periods of freedom from recurrence than any obtained by me with local irradiation, and the following case-history seems to warrant the advice which was given to the patient.

Clinical Record

H. S., aged 75, was referred to me on July 7, 1934, with the history of "difficulty in swallowing," which had been slowly increasing since it was first noticed some three

months earlier. Otherwise he was a well built, healthy-looking man who appeared to be much younger than his years. A medium sized oesophageal bougie met with complete obstruction about four or five inches below the cricoid constriction. The patient was referred forthwith to Dr Walter Levitt with the expressed wish that he should treat the case by deep x-ray therapy provided that my provisional diagnosis of a malignant lesion was confirmed by x-ray examination of the strictured region. He sent the patient to Dr John Sparks, who returned a "true bill" within a few hours, and thenceforward Dr Levitt took charge of the case. It may be of interest to those engaged in radiotherapeutics to read the following description of and comments on the method he adopted, together with other details which should be of value to surgeons who are practically concerned with cancer of the oesophagus.

Notes by Dr Walter M Levitt

The Method—(1) The rays are entered through long narrow fields centred over the oesophagus—long because of the tendency of the disease to spread submucously up and down the oesophagus and narrow in order to limit the irradiation of normal tissues. (2) Usually six fields are employed, and these are grouped about the mid line, three anteriorly and three posteriorly. A geometric method of planning them is used in order to ensure accuracy of firing. (3) The treatment is applied daily for about a month. (4) The technical details of the treatment are so adjusted that a certain minimum intensity ("brightness of illumination") is obtained at the growth, and a certain daily dosage. (5) Severe skin reactions which arise as a result of giving the requisite dosage invariably clear up rapidly and without any difficulty.

Results—A good palliative result is obtained in a high proportion of cases—over 60 per cent. The growth apparently disappears and swallowing is restored. The ultimate prognosis, however, varies in the different sections of the oesophagus. The best situation is the upper third of the oesophagus. One patient with a carcinoma in this region is alive and well three and a half years after treatment and another three years after treatment. It seems likely that a certain number of permanent cures may be obtained in this region. The middle third growths do very well for a time, perhaps a year or two but so far no patient has survived longer than two and a half years. The lower third growths give the worst results, as to both immediate result and duration. Growths originating in the cardia of the stomach and invading the oesophagus should not be treated.

Complications—The two most common are mediastinitis and lung changes. Mediastinitis results when an extensive infiltrating growth is rapidly absorbed leaving the oesophageal wall porous to the oesophageal contents, thereby allowing the mediastinum to be infected. This is not a common complication. Lung changes, although their incidence has been reduced, still occur in a proportion of cases especially in the middle third growths and they vary in severity. If the patient survives long enough they tend to improve but at any stage the patient may succumb to an ordinary acute respiratory infection.

In Mr S's case the treatment was applied from July 9 to August 28 1934 and it will be remembered that the lowest portion of his stricture always showed a suspicious roughness after the treatment. I cannot help feeling that I did not carry my fields down as low as I ought to have done if I had the result might have been better.

Subsequent History

On September 18 and November 29 1934 Dr Levitt reported that there was "no sign of any growth and food was being swallowed without any difficulty. This satisfactory condition was maintained for approximately eighteen months when the patient again began to notice

a slight obstruction to the passage of 'stringy foods and the skins of certain fruits'. On May 6, 1936, under a general anaesthetic and by direct oesophagoscopy, I found that the upper end of the original ulceration was represented by a dull white ring of scar tissue through which it was only possible to pass a No 14 bougie, and this met with a second constriction about two inches further down. It was soon found that if the bougie was passed through both of these and left *in situ* for five minutes semi solid food could be swallowed without difficulty. The patient quickly learned to carry out the manipulations without assistance. Nevertheless it was impossible not to regard seriously the recurrence of some degree of dysphagia, however much one hoped it might be due to a later development of scar tissue in the lumen of the original growth. But had there been any doubt as to its recrudescence this was soon dispelled by the supervention of hoarseness, which on September 17 last I found to be caused by "recurrent paralysis" of the left vocal cord, and obviously implied a mediastinal extension of the oesophageal growth.

Thenceforward difficulty in swallowing increased rapidly, and finally liquid nourishment was in great part regurgitated. Consequently on December 14 I inserted a Symonds gum-elastic tube, which afforded an easy passage for fluid nutriment. It remained *in situ* for three weeks, by which time maceration had brought about its collapse and therefore an almost complete inability to swallow liquids. On January 5, 1937, a fresh tube was inserted, and this sufficed the needs of the patient until March 21, when he died in his sleep.

Comment

The dates given in the above case-history show that from the completion of the treatment the patient lived four months short of three years. During that time he was entirely symptom free for a year and eight months, and for the following eight months there was little difficulty in swallowing soft foods after the passage of a No 14 oesophageal bougie. Furthermore, until the late autumn of last year the patient was able to enjoy all the amenities of his country life, which included riding and shooting. None of my previous early cases treated by local irradiation had lived more than fifteen months, and few reached the anniversary of such intervention. Nor am I aware of any records which prove that other surgeons have secured more favourable results. Had the case above reported been so exceptional as to merit the criticism that "one swallow does not make a summer" I should have hesitated to draw any deductions from my solitary harbinger, but seeing that Dr Levitt (*vide supra*) had been able to prove the existence of others, I feel tempted to believe that the winter of our discontent with local irradiation of oesophageal cancer has been made brighter by what is termed deep x ray therapy.

A Hagedoorn (*Brit J Ophthal* May, 1937, p 234) describes the changes occurring in a woman of 56 years who had been under treatment for trachoma since childhood. Several photomicrographs minutely described illustrate the paper. After two years treatment the eye and posterior parts of the lids were excised. On examination sections indicated a precancerous condition. One year later a small recurrent tumour appeared confirming the diagnosis of cancer though no other metastases were discovered. Only one case of cancer associated with trachoma has been previously recorded.

ORAL ADMINISTRATION OF OESTRIN TO PREMATURE BABIES

BY

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*The premature infant has a very precarious hold on life, and the neonatal mortality of these babies is high. Therefore any treatment likely to reduce this loss will be eagerly received by both obstetricians and paediatricians.

In an article in the *Archives of Disease in Childhood* Moncrieff (1936) gives the results of an investigation at Queen Charlotte's Hospital into the use of subcutaneous injections of oestrin for premature babies, in this he reports that Aschheim (1927) suggested that premature babies might be benefited by the administration of oestrin. The arguments in favour, according to Martin (1929) are

- 1 The blood of newly born babies contains a comparatively large amount of oestrin
- 2 This is rapidly excreted by the kidney, and the urine is oestrin-free after about four days
- 3 A baby born prematurely is at a disadvantage because it lacks the stimulus of the oestrin which would normally have been present in its blood had it remained *in utero*
- 4 The administration of oestrin helps to make up this deficiency

Moncrieff gives a résumé from the literature of previous experience with oestrin and then adds the results of his own investigations. His conclusions, based on the results with eighty premature babies, some treated and some as controls, were that 'subcutaneous injections of oestrin during the first seven days of life have a slight stimulant effect as indicated by a better gain in weight than in babies not so treated. This improvement is more obvious in girl babies than in boy babies.' Moncrieff does not consider the advantage definite enough to justify the use of oestrin as a routine treatment, however.

Since about September, 1936, oestrin has been used orally for premature infants at the Bristol Maternity Hospital. In personal experiments in feeding mice with oestrin it was found to act as well given orally as when injected, although a larger dose was necessary. Therefore it was decided to give the babies an oral preparation to avoid the unnecessary trauma of daily or more frequent injections, and Schering's preparation of progynon dragées was selected for use. Lately these have been supplied free by Messrs Schering Ltd.

The dose decided upon and found satisfactory was half a dragée twice daily. This is equivalent to 500 international units twice daily. One dragée was dissolved in two drachms of warm (not hot) water and one drachm given as a dose. At first the oestrin was given with little faith in its efficacy, but the nursing staff soon reported that the premature babies were causing less anxiety, the initial loss of weight appeared to be less, and this was usually made up sooner. These babies were very carefully tended but only under the same conditions as could be obtained in any ordinary home.

Since using oestrin no premature baby born at this hospital to whom it was administered has died, a number of the babies were under 4 lb at birth and all have been born during the coldest six months of the year.

Therefore, although the series was only a small one, it seemed to be worthy of record.

Before giving details of the premature babies it might prove of interest to mention one sick infant, a boy, who appeared to be benefited by progynon. In this case the maternal history revealed the presence of toxæmia, albumin ++, and marked oedema, the blood pressure was 168/110. Medical induction took place on November 23, 1936, at thirty-nine weeks. The baby weighed 7 lb at birth, and, the mother having no breast secretion, was artificially fed, he developed gastro-enteritis. His weight fell to 4 lb 14 oz at 2 weeks, and he was very ill. At this stage, his weight being under 5 lb, it was decided to add progynon to the other treatment, and this appeared to help. The baby eventually did well, gaining 1/2 lb weekly and weighing 12½ lb at 4½ months.

Two premature babies not born in the Bristol Maternity Hospital are included in the following series as they were born during the period under review and received the progynon treatment.

Case Histories

Cases 1 and 2—Premature girl twins. The mother had albuminuria, hydramnios and oedema of legs. The first baby weighed 4 lb 7½ oz. at birth and 4 lb 7½ oz. at 2 weeks, and the second baby 3 lb 10 oz. at birth and 3 lb 10½ oz. at 2 weeks. Both did well and were discharged at 2 weeks.

Case 3—Baby girl born September 9, 1936, at thirty-five weeks of healthy parents. Weight 3 lb 12 oz. There was a large swelling of the head below the occiput and extending downwards into the neck. The swelling was mostly cystic with a small portion more solid. The skin was deficient over this swelling. Operation was performed at twenty-four hours, a meningocele and a small encephalocele being removed with redundant skin, etc. and the healthy skin sutured. The patient was feeble at first, but always took feeds well. She was discharged at 4 weeks, 3 lb 14 oz. in weight. At 6 months she weighed 11 lb and seemed normal in every way.

Case 4—Baby girl. Third pregnancy, Terminated November 23, 1936. Maternal history: first baby premature, lived one week; second baby normal, but pre-eclampsia present during the pregnancy. No evidence of toxæmia but labour started spontaneously at thirty-three weeks. Baby 3 lb 12 oz. at birth. She lost weight for over a week, but gained 1 oz. daily for last four days and was discharged at 2 weeks, weighing 3 lb 10 oz.

Case 5—Baby girl. Maternal history: toxæmia, albuminuria + oedema + blood pressure 190/90. Medical induction took place at thirty-eight weeks on November 19, 1936. The infant weighed 4½ lb at birth and 5 lb at 2 weeks.

Case 6—Baby boy. Maternal history: chronic nephritis two previous miscarriages. The mother had been on diet and treatment throughout pregnancy but had become very toxic, blood pressure 210/144, oedema +, albuminuria ++. Surgical induction on February 3, 1937, at thirty-three weeks, weight of baby at birth, 3 lb 13 oz. at 18 days 4 lb 1 oz.

Case 7—Baby girl. Maternal history: mother pre-eclamptic, blood pressure 176/110, oedema +, albuminuria ++, no improvement with treatment. Medical induction performed on February 8, 1937, at thirty-six weeks. Weight at birth, 3 lb 8 oz. Patient discharged at 17 days weighing 4 lb 2½ oz.

Cases 8 and 9—Twins (monovular girls). Maternal history: mother 36 years old, this being her second pregnancy, there was toxæmia, albuminuria + oedema ++, and the blood pressure was 160/110. Case 8 weighed at birth 4 lb 7½ oz., and at two weeks 4 lb 12 oz. Case 9 at birth was 4 lb 1½ oz., and at 2 weeks 4 lb 7½ oz. The weights at 3 weeks were Case 8 5 lb., and Case 9 4 lb 13 oz.

Case 10—Baby boy. Maternal history: the mother was 36 years old, and had been married ten years. This was her

first pregnancy Spontaneous labour occurred at thirty six weeks with a difficult breech delivery The baby was some what shocked and weighed 4 lb 15 oz. at birth On discharge at 2 weeks his weight was 5 lb 4 oz.

Case II—Baby boy Normal healthy parents. Spontaneous delivery at thirty five weeks. His weight was 5 lb 3½ oz. at birth 5 lb 5 oz. at 2 weeks and 8 lb 12 oz. at 2 months

Table of Results (No Deaths)

Case No	Sex	Weight		Age on Discharge
		At Birth	On Discharge	
1	Girl	4 lb 7½ oz.	4 lb 7½ oz.	2 weeks
2	"	3 lb. 10 oz.	3 lb 10½ oz.	2 "
3	"	3 lb 12 oz.	3 lb 14 oz. + operation	4 "
4	"	3 lb 12 oz.	3 lb 10 oz.	2 "
5	"	4 lb. 8 oz.	5 lb 0 oz.	2 "
6	Boy	3 lb 13 oz.	4 lb 1 oz.	2½ "
7	Girl	3 lb 8 oz.	4 lb 2½ oz.	2½ "
8	"	4 lb 7½ oz.	4 lb 12 oz.	2 "
9	"	4 lb 1½ oz.	4 lb 7½ oz.	2 "
10	Boy	4 lb 15 oz.	5 lb 4 oz.	2 "
11	"	5 lb 3½ oz.	5 lb 5 oz.	2 "

Summary

Details are given of eleven premature and one sick baby treated with progynon This preparation of oestrin, given orally, appears definitely helpful to premature infants The babies cause less anxiety The feeds are taken better, the initial loss of weight appears less and is usually made up sooner No baby to whom it was given died

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 Martin E (1929) *Msehr Geburtshl Gynäk* 82, 66
 Moncrell (1936) *Arch Dis Child* 11 2

R Opsahl (*Norsk Mag Laegevidensk* April 1937, p 9) has scrutinized the records of necropsies at the Ullevaal Hospital in Oslo for the twenty-year period 1916-35, with special reference to primary malignant disease of the lungs During this period 2,005 cases of carcinoma and sarcoma came to necropsy the malignant disease being in some of these cases an incidental finding In addition to the fifty six established cases of primary malignant disease of the lungs (twenty-eight men and twenty-eight women) there were fourteen cases in which this diagnosis was uncertain and eight in which it was possible but not probable The age incidence was greatest between 50 and 60 (seventeen cases)—a little earlier in life than in other forms of malignant disease which reached their maximum frequency between 60 and 70 Only in eleven of the fifty six cases were the new growths diagnosed clinically The duration of the disease was usually between four and twelve months The fifty six cases were classified in four five-year groups and in relation to the total number of cases of malignant disease in each five-year group In the first five years primary malignant disease of the lungs constituted 1.8 per cent of all the cases of malignant disease in this period The corresponding figures for the next three five-year periods were 2.7 3.1 and 3.1 respectively Putting these figures to the test of modern statistical criteria the author comes to the conclusion that his material gives no support for the assumption that there is a real increase in the incidence of primary malignant disease of the lungs.

VACCINE TREATMENT OF MEASLES

BY

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Measles is typically a disease of childhood, the majority of the patients being attacked in the first five years of life, and although it is still regarded by the general public as a trivial illness, its complications, both immediate and remote, are severe enough to constitute a major medical problem Bronchopneumonia remains the most serious and dreaded complication, and is largely responsible for the present mortality rate

Wynn of Birmingham has for some years advocated the use of a special vaccine in the treatment of pneumonia and bronchopneumonia His results have apparently been good in those cases in which the diagnosis is made early and the appropriate vaccine treatment instituted in the first twenty-four to forty-eight hours of the illness The vaccine for bronchopneumonia contains equal numbers of pneumococci, haemolytic streptococci, and Pfeiffer's bacilli Fresh cultures are used and the organisms are killed by heat Wynn (1936) recommends 600 million organisms—that is, 200 millions of each organism—as a suitable injection dose for an adult Children require proportionately smaller doses, but at 1 year old 20 millions of each organism can be given with impunity Three such injections subcutaneously at intervals of twenty four hours are recommended

Production of Reactions

The vaccine treatment of acute infections has not found favour owing to the fear of producing reactions in a patient who is dangerously ill According to Wynn this is a fallacy, as reactions occur in chronic infections only when patients are sensitized and specific antibodies are present in the circulation In the early stage of an acute infection antibodies are absent, and therefore these reactions do not occur Immunotherapy by vaccine treatment aims at the production of antibodies at an earlier stage than would usually be the case Specific antibodies do not appear for several days, but the vaccine used is stated to have an immediate effect in that it stimulates the production of non specific antibodies—various bacterial substances which appear in the circulation These are later supplemented by the specific antibodies, but the greatest stress has been laid on the value of the non specific immediate response to the vaccine injections which if given sufficiently early are claimed to abort the infection

In measles bronchitis is present in the early stages in all but the mildest and modified cases It usually clears up in a few days, but occasionally, and especially in poorly nourished and debilitated children it progresses to bronchopneumonia The detection of bronchopneumonia is very difficult at times and it is only by taking into consideration the general condition of the patient, in conjunction with the various physical signs and symptoms, that one can hope to arrive at a reasonably accurate diagnosis Areas of lung collapse are met with in young children with acute bronchitis and may easily be mistaken for areas of pneumonic consolidation

In this investigation we decided to treat only those patients suffering from measles in the various stages of development up to the time of the appearance of the full blown morbilliform eruption All late cases with

fading rashes were therefore excluded. The question of using alternate cases on admission as controls was carefully considered, but this was regarded as impracticable, so it was decided to treat by vaccine those cases admitted to five specified wards and to treat as controls those admitted to five other wards. Admissions to the various measles wards were in strict rotation as vacancies occurred.

Treatment

The stock vaccine used was prepared in the Southern Group Laboratory under the direction of Dr J E McCartney. It was killed by heating at 60°C for thirty minutes, and was made from young active cultures. The vaccine was so constituted that there were 600 million organisms in each cubic centimetre, 0.1 ccm being regarded as a suitable dose for a child 1 year old, 0.2 ccm for a child 2 years old, and so on. The first injection was given for the most part on the day of admission but in a few instances, when the child was admitted late at night the injection was deferred until the next morning. The routine treatment consisted of three subcutaneous injections of equal amount at intervals of twenty-four hours. All cases of measles had a small prophylactic injection of diphtheria antitoxin on admission.

The following tables give briefly the incidence of the various complications in the specially treated group and in the corresponding set of controls.

TABLE I—*Chest Complications*

Series	Cases	Lobar Pneumonia	Bronchopneumonia (measles)				Bronchopneumonia (measles and pertussis)		Empyema (after)	Deaths (due to measles)		
			No.	%	Deaths	Mortality	No.	Deaths	No.	No.	%	
Vaccine	236	1	24	10.1	5	20.8	2	1	1	5	2.1	
Control	278	—	25	9.0	7	28.0	1	1	—	7	2.5	

TABLE II—*Ear Complications*

Series	Cases	Measles					Measles (with intercurrent disease)		Deaths (directly due to ear complications)
		SOM (right)	SOM (left)	SOM (bilateral)	SOM Total	Mastoidectomy	SOM (measles and pertussis)	SOM (scarlet fever)	
Vaccine	236	10	9	16	35 = 14.8	1	1	1	—
Control	278	10	15	14	39 = 14	1	1	1	—

S O M = Suppurative otitis media.

TABLE III—*Complications in Age Groups*

Age Group	Vaccine Series (236 Cases)						Control Series (278 Cases)					
	No in Group	Bronchopneumonia	Suppurative Otitis Media		Deaths		No in Group	Bronchopneumonia	Suppurative Otitis Media		Deaths	
0-2	95	15	15.8	29	21.0	4	4.2	106	16	15.1	7	16.0
2-3	53	3	5.6	9	16.9	1	1.9	67	5	7.4	7	10.4
3-4	32	1	3.1	5	15.6	—	—	43	1	2.3	2	10.0
4-5	23	3	13.0	1	4.3	—	—	31	2	6.4	3	9.7
5+	31	2	6.0	—	—	—	—	34	1	2.9	5	14.7

Discussion

In this investigation 236 patients with measles were treated with a vaccine prepared according to Wynn's formula, and a corresponding control series of 278 cases was treated on similar general routine lines without vaccine. The majority of the patients were under 5 years of age the youngest being about 9 months old. The injections were without exception innocuous, and we did not observe any general febrile reaction which could reasonably be attributed to the vaccine. Slight local reactions were seen from time to time, but were rare.

An analysis of results shows that there has been no demonstrable diminution in the incidence of the two most common complications of measles—namely, broncho pneumonia and otitis media—nor has the mortality rate been affected to any appreciable extent. Mr B E Spear of the statistical department of the London County Council, to whom I am indebted for the following report, states 'that from the statistical point of view the results justify the negative conclusion reached as to the treatment. The claims made by Wynn as to the value of the vaccine in aborting pneumonic infections and in reducing the mortality rate have not been confirmed by this investigation in young children with measles as the primary infection. It is true that the total number of patients treated was relatively small, but one feels that no useful purpose would be served by the continuance of vaccine treatment in measles with the vaccine as at present constituted.'

I wish to express my gratitude to Dr H Stanley Banks, medical superintendent of the Park Hospital (L.C.C.) for his advice and criticism and for permission to publish this paper.

REFERENCE

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Clinical Memoranda

Slimming Drugs and Cataract With Notes of a Case

During the past few years compounds of dinitrophenol have been used as metabolic stimulants in the treatment of obesity, especially in America. In 1935 Tainter, Stockton, and Cutting published results of treatment with 2,4-dinitrophenol in doses of 100 mg daily for one week, then 200 mg for several weeks with gradual increase to 300 mg., followed by reduced doses if toxic symptoms occurred, such as dyspnoea, oedema, urticarial rashes and prostration. They reported that no pathological changes were produced in the blood cholesterol, liver, or blood count in four years of treatment and weight was reduced. Koch Lee, and Tainter (1935) reported no changes in the liver or any other tissue in dogs killed by lethal doses.

In 1935 Horner, Jones, Boardman, and other authors published cases of cataract in human beings following this treatment. They found that after the first signs appeared the development was rapid. The cornea was normal, the aqueous showed a slight slit lamp flare, the anterior capsule was spotty dry and lustreless and fine grey subcapsular cloudy opacities were present. Later irregular pearl grey opacities appeared deeper in the cortex with polychromatic specular reflection from the posterior cortex. Marked swelling of the lens followed. The cause was thought to be increased permeability of the lens capsule. Secondary glaucoma sometimes occurred.

In October, 1936, Whalman, in Los Angeles, published notes of forty cases with details of twenty seven cases of cataract in obese females (average weight 200 lb) from 25 to 50 years of age. All lost considerable weight. Maturation occurred in from seven days to six months, the average being six weeks. Needling followed by linear extraction gave good results. The daily dose was from 100 mg to 500 mg., and the period of treatment varied from one to eighteen months. The cataract is always bilateral, though usually more advanced in one eye than in the other.

CASE HISTORY

On January 27, 1937 I saw a young woman aged 28, weighing 144 lb. She complained of failing sight in the left eye for a fortnight. The vision was right eye 6/12 left eye less than 6/60 not improved by glasses. The left eye showed a pearly swollen cataract with silvery sectors, and the right a fine punctate central lenticular opacity. None of the usual causes of cataract were present, and only close questioning elicited that she had been taking Messrs. Crookes' preparation "dekrasil"—that is 4,6-dinitro *o*-cresol—for three years for slimming purposes, and that it was successful in keeping the weight down. Dr. Havard told me that her original weight was 178 lb., and at one period it was reduced to 134 lb. For the first six months one capsule a day was taken and then two, with occasional intermissions of one month if tachycardia developed, or a slight yellow pigmentation of the conjunctivae. Calcium sodium iodide ointment was prescribed, and abundant fruit and vegetables rich in vitamin C, and then on Professor Dodds's kind suggestion, ascorbic acid. No improvement took place and by February 22 the right eye was blind as well. On March 3 the left eye was needled, and on March 17 a linear extraction was done. Convalescence was uneventful, and on April 2 with + 11 D sph. + 1 D cyl./45° the vision was 6/9 partly. A capsular needling may be needed later.

It is difficult to prove that these cataracts are directly due to dinitrophenol products, but though the number of women taking them is very large it seems that the proportion developing cataract is too great for mere coincidence. The absence of lenticular changes in dogs given lethal doses may indicate that the time factor is important. To prove the connexion statistically one would have to show that in females of these age classes the proportion developing cataract was greater in those taking these drugs than in the general population of obese females of these age classes. Perhaps one should limit the classes to obese females, and I do not know that such statistics are available. On the other hand one knows that, apart from congenital, diabetic, or other severe general disease and traumatic cases, cataract in young women is very rare, and I think that most ophthalmologists would agree that when it occurs it is in poorly nourished feeble individuals, resembling those suffering from prolonged lactation, and not in a stout buxom type like the present case.

It is likely that more of these cases will occur in Britain and it seems doubtful whether the use of preparations of the dinitrophenol type should be continued. Even though the results of extraction are good it is a great drawback for a young woman to be dependent on cataract glasses for life.

I have to thank Messrs. Crookes for permission to name the preparation that was employed in this case.

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General and Eye Hospital, Swansea

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Recovery from Pneumococcal Meningitis

The following report of a case of recovery from pneumococcal meningitis may be of interest.

CASE RECORD

A girl aged 16 suffered a year ago from gonococcal infection. We were asked to see her on the evening of May 16 and on our arrival at 7.30 she was deeply unconscious. Her pupils were widely dilated, there was oedema of both optic disks, she had a temperature of 97° F., a pulse rate of 60 and her respirations were 20 a minute, superficial reflexes were absent, Kernig's sign was negative and her limbs were flaccid. Her mother informed us that on the previous evening she had complained of sore throat and severe frontal and bitemporal headache. She had also had several rigors. On the morning of May 16 the headache was still very bad but the patient did not appear to be very ill. About 6.30 p.m. she brought up a green vomit, and by 7 o'clock she was unconscious.

In view of the clinical findings and of the previous history a gonococcal meningitis was considered not unlikely. Lumbar puncture revealed fluid under so great a pressure that much was lost, but probably between 20 and 30 c.c.m. were removed before the normal rate of flow was established. Prontosil soluble was injected intramuscularly with a quarter of a grain of morphine. The cerebrospinal fluid showed a cell count of approximately 7,000 and the cells were entirely polymorphonuclear leucocytes. Extracellular lanceolate diplococci were present in great numbers, and were provisionally diagnosed as pneumococci.

On the morning of May 17 the patient was conscious but quite blind and she complained of intense headache and frequent vomiting. Prontosil was again administered intramuscularly and by the mouth. On the evening of the same day she was still very restless. Lumbar puncture was again performed and the pressure, whilst still great, was obviously less than on the previous evening and the cerebrospinal fluid was much less turbid. Prontosil was again administered.

On May 18 her condition was improved although she was still restless, blind and incontinent of urine. Prontosil was continued in doses of four tablets a day by the mouth and the pressure was again restored to normal by lumbar puncture.

Dr. Howel Evans of Liverpool reported on the cerebrospinal fluid as follows: "Protein + + +, cells approximately 7,500 per cmm. All polynuclears. Films show a few badly degenerated cocci morphologically resembling pneumococci. Your own stained films are the best, and I agree that the organism appears to be a pneumococcus. The precipitin test is positive against the pneumococcus Type 1 negative against the meningococcus. Cultures remained sterile for twenty-four hours. This may be due to autolysis owing to delay (Bank Holiday week-end). I think the presumptive evidence is in favour of a pneumococcal infection, and I regard the prognosis as very bad."

On May 19 the patient's condition was definitely very much improved. There was no vomiting the pulse and temperature were normal the headache less frequent vision fully returned and she asked for bacon and eggs. Prontosil was still given. Her progress from that time was uneventful and by May 25 she had completely recovered.

The suddenness of the onset and the presence of green pus at the bottom of our centrifuge tubes appeared to point to a rapidly fatal issue. Prontosil was given because the pneumococcus is not far removed biologically from a streptococcus but principally for the sake of doing something. Whether the successful issue was due to this agent or to the repeated cerebrospinal drainage it is impossible to say.

J. R. CALDWELL
P. S. BIRCH

Minsterbury, Westmorland

Reviews

BRITISH ENCYCLOPAEDIA OF MEDICINE

The British Encyclopaedia of Medical Practice including Medicine, Surgery, Obstetrics, Gynaecology and other Subjects Under the General Editorship of Sir Humphry Rolleston, Bt., G.C.V.O. Vol. 3. Cataract to Diaphragm Diseases (Pp 681 illustrated 35s per vol.) London Butterworth and Co 1937

The third volume of this encyclopaedia includes the subject headings from cataract to diaphragm diseases. The list of authors contributing is a representative one and the present volume keeps up the high standard set in the two that have appeared already. The problems of early life, child welfare and health, dentition and child guidance from the psychological point of view, coeliac disease and convulsions in infancy and childhood, receive attention from experts in the subject, while the phenomena and management of the climacteric in women and in men are dealt with by two of the senior editors, Professor James Young and Sir Humphry Rolleston respectively. Among the neurological subjects cerebellar diseases and cerebral plegia are in the capable hands of another editor, Dr F. M. R. Walshe, who is also responsible for the article on affections of the cranial nerves. The sections on sudden and unexpected death, and the relation and responsibilities of the profession to coroners and inquests are informative and valuable, presenting in a useful summary the legal aspects of these matters. The question whether or not to report a death to the coroner often puzzles medical men even of long experience, the indications given by Dr Temple Gray will be of great help in answering this question, and his remarks on the need for clarity in filling up death certificates should be noted, since the registrar may be unable to accept as a cause of death some of a string of diseases unless their sequence, their interrelation, and the actual cause of death is clearly stated.

Of the general medical diseases cholera, chicken pox and cerebro spinal fever are fully dealt with, and Dr J. G. Greenfield has made a valuable addendum to the last in discussing the chemistry and bacteriology of the cerebro-spinal fluid. Sir Arthur Hurst's articles on constipation, colitis and carcinoma of the colon give a clear and succinct picture of the subjects. In the treatment of ulcerative colitis there is considerable discrepancy between the results obtained in general hospitals and in private clinics. Care and nursing affect the result, but antecedent conditions of the patient must bear largely also. There is not yet any consensus of opinion as to specific therapy. A general article on coma, its causes and the methods to be adopted in dealing with cases is noteworthy. The companion article on concussion and compression by Mr L. R. Broster amplifies certain points. Surgeon Commander MacLeod has brought into small space all the essential facts about colour vision, its abnormalities and the means of detecting the colour-blind. The article ends with a summary of present-day theories of colour vision. There are a number of specialist subjects included in this volume, some on eye diseases and some on tropical diseases. The informative articles on cyanosis and infections with coliform bacilli are of more general interest. It is important in the latter to take a wide view of the patient and his complaint, the routine administration of urinary antiseptics without full investigation of the state of the urinary

tract and without excluding any local focus of infection and reinfection cannot be successful. Mr Clifford Morson insists on these points but is rather pessimistic about means of cure.

This volume is, like the preceding ones, well produced and carefully edited. The marginal subheadings give easy guidance for rapid consultation without breaking the continuity of the article to be read as a whole. Printer's errors are rare, in this volume we have noted them only on pages 153, 511, and 585.

NEUROLOGY IN ANCIENT GREECE

Etapes de la Neurologie dans l'Antiquité Grecque (D'Homère à Galien) By A. Souques (Pp 248 45 fr) Paris Masson et Cie 1936

Dr Souques's scholarly work is divided into seven chapters corresponding to the stages through which neurology has passed—namely, the period from Homer to Hippocrates, the Hippocratic period, the age of Aristotle, Herophilus and Erasistratus, Greek medicine in Rome, the age of Galen, and the post Galenic period down to the Middle Ages.

In the Homeric Age nothing was known as to the anatomy of the nervous system apart from the fact that the brain was in the skull and the spinal cord in the vertebral column. The physiology of the brain was also unknown at that time, sensation being located in the organs of the thorax and abdomen, and especially in the heart. As regards Hippocrates, although he had no knowledge of anatomy or physiology, his clinical knowledge was little short of miraculous for the time in which he lived, as is shown by his discovery of paralysis on the opposite side to the lesion in the brain, his account of traumatic and otogenic meningitis, his cure of amaurosis by trephining and his description of apoplexy, generalized and partial epilepsy, ophthalmic migraine, tetanus, cerebral symptoms in alcoholism, hereditary disposition to nervous diseases, periodicity of certain psychoses, Pott's disease, diphtheritic paralysis, sciatica, etc.

In the period between Hippocrates and the Alexandrian anatomists Aristotle was the leading figure. Though an eminent zoologist and the founder of comparative anatomy, his dissections were confined to animals. He had no knowledge of the peripheral nerves, and regarded the brain and spinal cord as different in nature. It was left for Herophilus and Erasistratus of Alexandria by their dissections of human subjects, to give the first description of the anatomy and physiology of the nervous system in man. The cardiac theory of sensation which had been held since the Homeric Age was overthrown, and until the seventeenth century none of their successors made any important contributions to the anatomy of the nervous system.

In the chapter on Greek medicine in Rome Dr Souques states that knowledge of the anatomy and physiology of the nervous system remained stationary, whereas considerable progress was made in the study of nervous and mental disease, in which Aesclepiades, Themison, Archigenes, Rufus of Ephesus and most of all Celsus, Aretaeus and Soranus made important contributions. There is no mention however in any of their writings of tabes, disseminated sclerosis, amyotrophic lateral sclerosis, and many other diseases of the central or peripheral nervous system. Galen is described by Dr Souques as a clinician of value, a valuable anatomist, and an experimenter of genius who does not deserve the oblivion into which his work has fallen. He was guilty.

however, of several great errors, which were chiefly due to the fact that he dissected animals only and did not always carry out their dissection with sufficient care. On the other hand he discovered the recurrent laryngeal nerves and the motor and sensory roots of the nerves, and was the founder of experimental physiology and psychology.

In the period following Galen, which extends down to the Middle Ages, no important discovery in neurology was made and no pre-eminent medical figures stand out. The age was merely one of compilers, of whom the best known were Oribasius and Paulus Aegineta.

DIET AND DIETETICS

Modern Dietary Treatment By Margery Abrahams, M.A. M.Sc., and Elsie M. Widdowson B.Sc., Ph.D. (Pp 328 8s 6d) London: Bailière Tindall and Cox. 1937.

Dietetics Simplified: The Use of Foods in Health and Disease By L. Jean Bogert, Ph.D. With Laboratory Section by Mame T. Porter M.A. (Pp 637 12s 6d net.) London: Macmillan and Co. 1937.

Books on diet follow each other thick as leaves in Vallombrosa. Many are tendentious and incomplete, and few do more than provide work for the printer and relief for the inner tensions of the authors. It is a pleasure therefore to review two books on diet which are sober and up to date and which should be able to look forward to a long life of usefulness. *Modern Dietary Treatment* by Miss M. Abrahams and Dr. Elsie M. Widdowson, is a short handbook on diet as used in medical treatment. It is essentially practical, and of its 300 pages some 200 are given over to diet lists and tables. After a brief description of the constituents of a normal diet and the principles of nutrition the authors proceed to give lists and examples of the great majority of the diets used in medical treatment. Then follow recipes, tables of the chemical composition of foods, biological and metabolic data, and a bibliography. This book can be strongly recommended to medical practitioners and students, nurses and hospital dietitians. There is no other small handbook in the English language with so much accurate information about diets and so little verbiage, and it will be greeted with joy by all those who have struggled to translate menus consisting of crackers, egg plant, and squash into English practice. Infant feeding is rightly omitted. Short as the introduction is, some reference should be made to the important conception of conditioned deficiencies. The section on low salt diets might be expanded to include the dehydrating diets which have been used for tuberculosis, rheumatism, migraine, and vertigo. There is no mention of allergy or elimination diets, and the section on acid and basic ash diets is too brief.

Dietetics Simplified must have been a labour of love, otherwise we cannot see how Dr. L. Jean Bogert, Miss M. T. Porter and the publishers could have produced this detailed well illustrated and well indexed book at so low a price. It is a complete description of the use of foods in health and sickness and is divided into four parts. The first part deals with the principles of metabolism and nutrition; the second part with diet in normal conditions, paying special attention to pregnancy and lactation, infancy and childhood, old age, racial differences in habits of feeding and the construction of family dietaries. The third part gives a complete range of diets for use in disease and the fourth part is composed of laboratory lessons in cooking recipes and tables. The book is therefore a textbook of dietetics but though it is espe-

cially addressed to dietitians it is also considered suitable for the student of home economics and the intelligent housewife. A good deal of information that is scattered through textbooks of physiology, pathology, and medicine is here presented with order and balance, and though some of us may not have quite as much faith as the authors in the effects of satisfactory alimentation, it is a fine and inspiring book. The conception of the doctor as a cross between a Red Indian and Sherlock Holmes, and the associated over-emphasis on clinical diagnosis, die hard in English medical schools. The Germans in their efforts to swallow naturopathy intact have perhaps gone to the other extreme, but it is well to remember that lay people are more interested in prophylaxis and symptomatic treatment than in diagnosis. We hope we shall not be considered neo-Germanic if we suggest that some of the time spent in watching operations or in discussing the differential diagnosis of incurable disease might be better spent in a course of dietetics, and students could hardly begin better than with Bogert and Porter.

PHYSICAL TRAINING

Anatomy and Physiology of Physical Training By Major R. W. Galloway, D.S.O. M.B. Ch.B. R.A.M.C. (Pp 182 42 figures 6s net) London: E. Arnold and Co. 1937.

Experiments in Homework and Physical Education By A. Sutcliffe, M.A., B.Sc., and J. W. Canham M.A. (Pp 194, illustrated 4s 6d.) London: John Murray. 1937.

Health and Muscular Habits By Lieut.-Colonel J. K. McConnell, D.S.O. M.C. and F. W. W. Griffin M.A., M.D. Foreword by Lord Horder, K.C.V.O., M.D., F.R.C.P. (Pp 159, 27 figures 5s) London: J. and A. Churchill. 1937.

In his small book Major Galloway seeks to instruct teachers of physical training in the elements of anatomy and physiology and their application to a scientific system of training. An introduction is contributed by Professor Cathcart. The chapters on muscular action are clear and well illustrated if somewhat anatomical in detail, and the book as a whole succeeds in its object. Short descriptions of the principles of anatomy and physiology must necessarily be inadequate, and open to the criticisms which apply to the handbooks of the Red Cross and St. John Ambulance type. The chapter on corrective exercises, in which the treatment of spinal curvature and the like is described, brings to mind the proverb that a little learning may be dangerous. There is too great a tendency in these days of physical training enthusiasm to assume that the correction of physical defects is the province of the physical trainer rather than that of the doctor. This point might well be more emphasized in future editions. Of the many problems of education there is probably none engaging more attention at the present time than the relative importance of the physical to the mental side and the proper adjustment of the time factor between them.

Readers of *Experiments in Homework and Physical Education* by Messrs. Sutcliffe and Canham will find an interesting account of a series of tests for mental and physical efficiency and their application, designed to throw light on this problem. The results arrived at make no claim to be decisive but indicate good reason for a preference in favour of reading as opposed to writing as homework and for something more than two periods a week in school hours for physical training. The careful and scientific approach to the subject and the restrained restraint of the conclusions arrived at deserve the highest praise.

There could be no better review of the little book *Health and Muscular Habits* by Lieut-Colonel J K McConnell and Dr F W W Griffin than that contained in the short preface by Lord Horder. The book aims at interesting the individual and the value of increasing health by cultivating balance of body and correcting bad habits of posture. It is written in an attractive style with simple diagrams easily understood and is free from the customary set exercises which so often call to mind the gymnasium and drill instructor. Body balance and grace of movement are not only a pleasure to possess and a delight to behold, but also exert a mental stimulus which is not easily overestimated. There are few who could not read this book with advantage, and we commend it most heartily to all.

EXCHANGE OF BODY FLUIDS

Body Water. The Exchange of Fluids in Man. By John P Peters M D (Pp 405 18s.) London: Baillière Tindall and Cox.

This monograph by Professor J P Peters of Yale, deals with some of the most obscure problems in human physiology. The first half is concerned with the exchange of water between the blood, the tissues and the interstitial fluids, the second half chiefly with renal activity. The author has devoted many years to experimental work on the distribution of solutes and water in the human body, and the present volume is an attempt to assemble his ideas in the form of a coherent story. The

result is a masterly review of an extremely difficult subject. The fact that there is no really adequate explanation of the causes of oedema is fairly well known but Professor Peters makes it clear that the manner in which the occurrence of oedema in the normal body is prevented is equally mysterious. Many ideas have been advanced to explain the production of lymph and its final return to the circulation; they all account for a considerable proportion of the facts, but usually finish by evoking some process outside the known laws of physical chemistry and not infrequently one finds explanations couched in the more rigorous terms of physico-chemistry, which contain, buried discreetly in the midst of formulae, some physico-chemical equivalent of the assumption of perpetual motion. The author has successfully avoided such pseudo-explanations for he realizes that until the qualitative nature of a process is roughly understood there is little advantage in attempting to express it in mathematical terms, and he therefore avoids the use of elaborate mathematics.

The uncertainties and apparent contradictions that characterize our present state of knowledge of lymph formation and urine excretion are frankly recognized, and the author makes an attempt to throw light upon difficult problems instead of merely evading them. Recognition of the extreme complexity of his subject naturally makes all the conclusions tentative and incomplete but raises the monograph into the select class of works which are calculated to stimulate further research.

Notes on Books

Dr T WILSON PARR, who is in active practice in North London, is well known as the authority on prehistoric trephining. For many years he has contributed poems—things grave and gay—to the *Cambridge Medical Society Magazine* and to the *St George's Hospital Gazette*. There was some danger of these little works of art becoming fugitive pieces. Fortunately he has been persuaded to collect them, and they now appear under the title of *Immortal Names and other Poems*. They are well worthy of preservation and will give pleasure to every lover of poetry. They show, incidentally, how a medical man can dissipate professional cares by cultivating the Muses. The book is published by the Mitre Press at 5s.

Another instalment of the *Collected Papers* of the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne, of which Dr C H Kellaway is the director, has now been published in a single volume, covering the years 1935 and 1936. The thirty-five papers are reprints from various medical journals in Australia, Great Britain and the United States.

Weight Reduction Diet and Dishes by Dr E E CLAXTON with recipes by LUCA BURDEKIN is published by Heinemann at 8s 6d. This joint book goes into the subject in full practical detail. It deals with the treatment of obesity by exact caloric diets enforced by a weighing scale for food and abundance of exact diet recipes. No patient who has the energy to follow the detailed instructions will fail to lose weight. The arrangement of the diets and recipes is good and the methods follow well-established lines and principles. The first chapter on famous fat men in history is interesting and amusing.

Although invented over forty years ago it is only recently that the cathode ray tube has become an indispensable piece of electrical apparatus. The advent

of television with the adoption of the cathode ray tube for its reception, has led to improvement in its design and reduction in its cost, so that it is now no longer confined to laboratory use. *The Low Voltage Cathode Ray Tube* (Chapman and Hall, 10s 6d) is written by Mr G PARR, an engineer on the staff of the Edison Swan Electric Company, and it deals thoroughly with construction, operation and applications. To all interested in the cathode ray tube as a means of recording bio-electrical phenomena this book can be recommended because it will give them a sound grounding in the physics and construction of these tubes, which obviously have a big future before them. Only pages 124 to 126 have any direct reference to medicine and here a brief description of the cathode ray oscillographic electrocardiograph is given. Mr Parr's book must therefore be considered as suitable only for those who are taking up the study of the physics of these tubes.

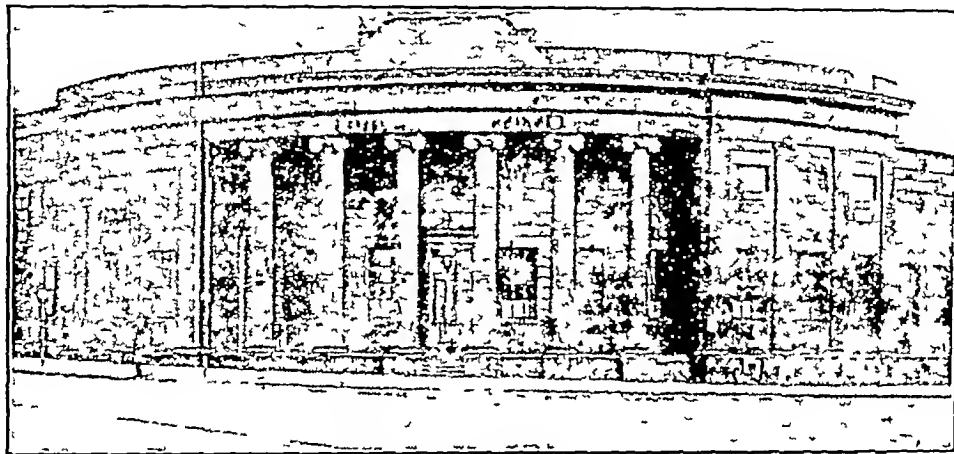
In her pamphlet on *Diphtheria and Constitution* (Leipzig: Georg Thieme, RM 1 60), based on the study of 554 cases of diphtheria which occurred in the Children's Tuberculosis Clinic at Scheidegg from 1926 to 1935, Dr FRIEDA BÖNING comes to the conclusion that children with the lymphatic and exudative constitution are more prone to attacks of diphtheria than others although the severity of the attack is not affected by the character of the constitution.

The greater portion of the *Yearbook of the American Pharmaceutical Association* is occupied by an annual report on the progress of pharmacy. This consists of a series of abstracts from pharmaceutical journals and also from chemical and medical journals. From the point of view of the medical scientist the special value of the report is that it covers many publications which are not included in indexes of medical literature and the provision of short abstracts is of particular value when the journals referred to are difficult of access.

CENTENARY OF LIVERPOOL MEDICAL INSTITUTION

Centenaries interest primarily those who celebrate them, but the historic figures brought to mind by the events of May 30 to June 1 in Liverpool are the heritage of the whole profession. One hundred years ago John Rutter founded the Liverpool Medical Institution 'to give more systematic direction to scientific inquiry, to promote calm,

references to their claims to honour by Emeritus Professor John Hay. In addition to Sir Cuthbert Wallace, Sir Norman Walker, Sir Farquhar Buzzard, and Sir Ewen Maclean, official representatives of the great corporations with which their names are so honourably linked, a very pleasing tribute was paid to the pro-



The Liverpool Medical Institution

temperate, and reiterated discussion amongst those who practise and advance the art of medicine and to remove hindrances to progress in the great cause of public health." On May 31, 1837, the classical building, in which it is still housed was opened. On May 30 1937 celebrations of

this event began in Liverpool Cathedral. The Presidents of the British Medical Association General Medical Council, and the Royal College of Surgeons were there, as well as the Lord Mayor of Liverpool and the Vice-Chancellor of the University. A sermon by the Bishop of Glasgow summed up in a word the changes in medicine and theology that the century has seen, and presented the need for a stand for freedom of thought in both religion and science in the face of the claims of the totalitarian state. The Guild of St Luke St Cosmas and St. Damien met for Benediction on the site of the new Roman Catholic Cathedral.

On Monday, the 31st, a hundred years to a day from the first meeting of the Liverpool Medical Institution there was a crowded gathering to witness the conferring of honorary membership upon distinguished guests. The latter were presented with happily appropriate

references in Manchester in the person of the President of the Manchester Medical Society Professor Fletcher Shaw. Perhaps, however, there was the greatest enthusiasm for similar honours paid to members of the Institution itself, Sir James Barr, a member since 1874, Mr

Frank T. Paul, since 1875, and Mr Thurstan Holland, since 1888. Ill health unfortunately prevented the presence of the first mentioned two. Professor Hay referred to the great services these men had rendered to the profession, both in scientific contributions to our knowledge and in the medico-political field. To many present at the ceremony a reminder of their personal gifts of charm and character was unnecessary. Dr Hugh Clarke received—again in absentia unfortunately—the congratulations of the Institution on completing fifty years of membership and

Hugh Owen Thomas and Robert Jones Memorial
Library of Orthopaedic Surgery

warm tributes were paid to his personal qualities and notable public services by Dr W. B. Bennett and Dr A. E. Hodgson.

Medical Journalism a Hundred Years Ago

Then followed a stimulating address by the President for the centenary year, Professor R. E. Kelly, on the sub-

ject of "Surgery 100 Years Ago" Professor Kelly sketched the social atmosphere in which the surgeon of those days lived, the interests of intelligent men of his time, and the course of his career before he reached the staff of the infirmary or dispensary. He alluded at some little length to the two great surgeons of the end of the eighteenth century, Henry Park and Edward Alanson, who were famous as pioneers in the excision of joints and in the perfection of amputation technique respectively. Alanson was also to be remembered for his advocacy of country hospitals, iron bedsteads, clean linen and open windows. To these two men, with a third surgeon called Lyon, came the idea of forming a reading club about 1770, and from this seed through many vicissitudes there came to full fruition ultimately the Liverpool Medical Institution. Most entertaining were Professor Kelly's references to the medical literature of 100 years ago. His extracts from the *Lancet* gave a telling picture of the hard hitting methods of medical controversy in those days and incidentally threw a strong light on the fearless policy of the Editor in exposing practices that brought discredit on the profession no matter what the standing of those whom it might be necessary to attack.

The warm appreciation of his audience was expressed by Dr Stallybrass and Mr G C E Simpson, ex-presidents of the Institution. Before the end of the meeting the honorary treasurer, Dr Arthur Gemmell, made an appeal for subscriptions to a Centenary Fund to provide for heavy capital expenditure which town planning might soon make necessary. A sum of £5000 was aimed at donations towards which would be very welcome from all friends of the Institution.

In the evening there was a banquet at the Adelphi Hotel attended by many distinguished guests representative of all forms of public service on Merseyside, as well as by some 200 members. More than one of the excellent speeches which followed the banquet emphasized the need for closer and more active co-operation between voluntary and municipal medical services in securing adequate and efficient treatment of the sick.

Library of Orthopaedic Literature

Tuesday, June 1, saw the conclusion of the celebrations. In the afternoon Mr Rowley Bristow, President of the British Orthopaedic Association was invited to declare open a room in the Institution which has been entirely replanned as a library of orthopaedic literature. "In memory of Hugh Owen Thomas and Robert Jones the Founders of Orthopaedic Surgery. The impetus for this was provided by a collection of books on orthopaedics which was received in response to the Sir Robert Jones' Memorial Appeal. The new library is intended to gather from all corners of the world new works on the subject as they appear. By making such works available to succeeding generations interested in this speciality it is hoped to provide a permanent memorial to these two great sons of Liverpool in real harmony with their genius. Interesting reminiscences were given by Mr T R W Armour and Mr Thurstan Holland of the days when orthopaedic surgery as we now know it was first being tried out in Owen Thomas's house, No 11, Nelson Street and Mr Thurstan Holland revealed how it was only by the generosity and constant encouragement of Sir Robert Jones that he ever began the practice of radiology.

Later in the afternoon Mr Rowley Bristow delivered the triennial Hugh Owen Thomas Memorial Lecture on "Fractures—Some Principles Restated." These principles he said might be briefly stated to be first reduction second fixation pending union and third protection during consolidation. Almost of equal importance however was attention to the injuries of soft parts which always accompanied a fracture by exercise designed to prevent muscular atrophy during the period of fixation. Lack of care in this direction led to the decubal ulcers which the fracture was sometimes due to the bony injury. In the treatment given. Examples were quoted of

fractures where this care of the soft tissues was all-important, and x-ray slides illustrated special types of difficulty in reduction, as well as the prevention and treatment of secondary displacements. Mr Bristow declared himself a whole-hearted believer in closed manipulative reduction in all but a few cases. He expressed a preference for the use of skeletal traction in all difficult cases in the lower limbs. In fractures of the neck of the femur he favoured pinning by the Sven Johansson technique. He was accorded a hearty vote of thanks.

In the evening a most enjoyable reception was given by the Lord Mayor at the Town Hall to members and their guests, a very practical expression of the sympathy and interest he had shown throughout the proceedings.

THE ARRIVAL OF THE BASQUE CHILDREN AT THE PORT OF SOUTHAMPTON

BY

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The arrival of the Spanish liner s.s. *Habana* on Saturday May 22, at Southampton, with 4056 refugee children on board from Bilbao was an event of national interest and historical importance as the first occasion that a shipload of refugees has arrived in Great Britain. During the great war the Belgians who sought refuge in this country came in small parties. It is therefore of public health interest to record the procedure adopted by the Southampton Port Medical Service in dealing with this vessel and the disembarkation of the children to the camp that had been prepared for their reception at North Stoneham, on the outskirts of Southampton.

The first official notification of the vessel's departure from Bilbao was received during the morning of Friday, May 21, when the expected time of arrival was given as late on Saturday. Conferences had therefore to be arranged on the Friday and on Saturday morning with the immigration and customs authorities, the National Committee for Spanish Relief, the Southern Railway, and the shipping agents to discuss various details connected with the vessel's arrival.

On Saturday morning a wireless message from the vessel was received giving the state of health on board and this message indicated that the children were suffering from severe sea sickness. In accordance with Section 6 of the Port Sanitary Regulations 1933, the master of a foreign-going ship is obliged to notify by wireless, either direct or through his agents to the port sanitary authority of an approved port the presence of any condition requiring their attention, and this message must be received not more than twelve and not less than four hours before the ship arrives in the port sanitary district. Instructions were given to the pilot to anchor off Fawley in Southampton Water, and there await the arrival of the port medical officer.

At 5 p.m. on the Saturday the *Habana* escorted by a British destroyer, was signalled off the Needles and on receipt of this information the port sanitary staff, accompanied by customs and immigration officials left the docks in the port sanitary launch to board her as arranged. Another launch followed with supplies of milk, glucose, meat extracts and medical requisites.

Conditions on Board s.s. "Habana"

It was an extraordinary spectacle to see a vessel normally capable of carrying between 400 and 500 passengers steaming up Southampton Water with every inch of her deck covered with human beings. Even more extraordinary were the conditions found on board.

Children all herded together in the public rooms, in the alleyways, and on all the decks. Some were lying rolled in blankets, others running about the ship screaming, and a few, cool and complacent, appeared to accept the circumstances of their arrival in a strange land, having been parted from their parents, without any emotion. It was with some difficulty that we were able to reach the ship's hospital to see a boy of 12 who, later the same evening, was removed by launch and ambulance to the borough hospital for an operation on a strangulated testicle.

After consultation with the two English doctors who had made the selection and carried out a detailed examination of the children before embarkation and who had travelled in the ship from Bilbao, we were satisfied that no infection of a major character existed on board, and therefore modified practice was granted to the ship, permitting her to proceed to an inner mooring station next morning for a detailed medical inspection.

Suitable accommodation had to be found for the purpose of carrying this out, and this was no easy matter with so many persons on board. It was, however, decided to use the two main saloons, which were roped off to provide two entrances, and one exit on to the main gangway. Details as to the situation of the medical officers' examining cubicles and the provision of screens and other equipment were matters that had also to be considered on this occasion.

After lying off Fawley for the night the *Habana* steamed up Southampton Water to Berth 106 in the New Docks at 8 a.m. on the Sunday. Hundreds of the public, with Press representatives and photographers, had collected along the quay, but no person without an official pass issued by the port sanitary department was permitted to approach Berth 106 or go on board. The names and addresses of all who were given these official passes were recorded, in order that the health authorities throughout the country might keep them under a surveillance in the event of any major infection being discovered among the persons on the ship.

Medical Inspection

The gangway was fixed and the medical, nursing, and sanitary personnel of the department proceeded on board. Accompanying the children there was one female adult to approximately every twenty children. It was therefore thought expedient to arrange for these adults to be examined before we commenced on the inspection of the children, in order that they might be instructed to marshal the children in groups of twenty, so far as possible according to age and sex.

The saloons were then cleared of all except those taking part in the medical and immigration inspection, and within half an hour the children were lined up in queues and the inspection commenced. Nine medical officers of the department each in a separate screened cubicle took up their positions in the line of the queue. A health visitor assisted each doctor by stripping the children to the waist. In examining each child special attention was paid to the eyes for trachoma, the head for ringworm, lice or nits, and the skin for rashes and lice. The heart and lungs were also tested in detail to decide on those fit to live under canvas.

On completion of the examination each child was dressed by a health visitor and passed on in the queue to a sanitary inspector who stamped the identification card attached to each child, indicating that he or she had been medically examined. In addition he also tied a coloured tape on the child's left wrist, which served as a code as to destination. White tape indicated clean, and allowed the child to proceed direct to camp; red tape indicated "verminous," and the wearer was sent to the Corporation baths for de-lousing; blue was for "infectious or contagious" conditions and for entry to the isolation hospital or other institution. Blue and white tapes were

used for any other condition requiring general hospital treatment.

After the medical inspection was completed each child was passed on to the immigration officer, who stamped the disk officially; the children then proceeded down the main gangway, at the foot of which sanitary inspectors and health visitors collected them into groups according to the colour of the tapes and arranged for their immediate disposal in the following ways: clean children went direct by motor omnibuses to the camp, verminous children were taken in lorries to the Corporation baths for de-lousing, and the hospital cases were transported by the Corporation ambulances to the appropriate institutions.

General Physique of Children

The medical officers were surprised to find that a large majority of children showed no marked sign of malnutrition, although most of them had for months lived in Bilbao on fish and black bread and had spent the days and many nights herded together in bomb proof shelters. The Public Medical Service in this particular province of Spain, according to the information obtained from the two English medical officers, is of a very high standard. Many of the children were thin, but the general impression gained, especially before they stripped, was that they were, generally speaking, an alert, intelligent group of children, who compared favourably in physique with our own children. The clothing as a rule was very good, and when that of the verminous ones was taken away from them for disinfection many of them wept. At the Corporation baths we were allowed to use forty of the slipper baths, and with the assistance of many voluntary and willing helpers, together with twelve barbers, 712 of the children were de-loused and fitted with complete sets of clothing, the latter being supplied by the Spanish Relief Committee.

At 7 p.m. on the Sunday medical inspection ceased for the day, the medical staff having worked continuously for ten hours and having dealt with 3,278 children. On the following morning the remainder were examined, the task being completed by 11 a.m.

My department received very great assistance from many voluntary workers and from the National Committee for Spanish Relief in providing transport, etc. It was only by the co-operation and hard work of all concerned that we were able to accomplish what, I believe, is a record in the annals of the Port Medical Service—the detailed examination of 4,056 children in twelve hours. Public opinion appears to be somewhat divided about the acceptance of these children, but I think the only answer is, 'What would we think if our own children were subjected to similar privation and danger?'

The Save the Children Fund which as originator of the Declaration of Geneva (Child Welfare Charter of the League of Nations) has a special concern for the welfare of children and young people, passed a resolution at its Council meeting on April 22 welcoming the Factories Bill 1937, in so far as it represents an advance on existing conditions affecting children and young persons. The Council desires however, to place on record the conviction that the Bill will fail to reflect the humane and enlightened public opinion of the day unless it is so amended as to ensure that no child shall be employed in a factory before the age of 15, that no child or young person shall in any circumstances be permitted to work more than forty hours a week, that no overtime be permitted in the case of any young person under 18 years of age, that holidays with pay be assured to all children and young persons, that the hour of leaving work may be sufficiently early to enable children and young persons to take advantage of available opportunities for education and recreation, and that the clause providing that the Home Secretary may suspend Part II of the Bill (dealing with safety) until 1940 be eliminated."

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THE INSURANCE CAPITATION FEE

The Court of Inquiry into the amount of the capitation fee to be paid to insurance practitioners appointed by the Minister of Health and the Secretary of State for Scotland has now made its report. From January 1 next the pool out of which insurance practitioners are remunerated will be calculated at 9s per insured person as at present. This rate, however, is to apply alike to all insured persons, whatever their age of entry into insurance, and is apart from the special arrangements as to the supply of drugs and appliances and from any payments to meet the special conditions of practice in rural or semi-rural areas. This result will be received with some disappointment by the medical profession in general, although they will appreciate the vindication of the contention that the new class of juvenile entrants to insurance should be at the uniform and undiminished rate.

The personnel of the Court and the full and exact terms of reference thereto were given in the *Supplement* to our issue of May 8 last (p. 272) the memorandum and correspondence in which the case of the Insurance Acts Committee and that of the Ministers were placed before the Court were set out in the *Supplement* of May 29 (p. 313) and the proceedings before the tribunal during the four days of its sitting were reported in that of June 5 (p. 341). The decision of the Court will of course be loyally accepted by all the parties to the inquiry, and a perusal of our columns as just indicated will enable readers both to appreciate the restricted nature of this inquiry as compared with the wider reference to a former Court some thirteen years ago, and to judge the cogency and relevance of the arguments and facts brought to the notice of the Court by either side. These are all of much importance to the public and to the profession as a whole, as well as to insurance practitioners.

At the Court of Inquiry in 1924 the appropriate amount of the capitation fee was being inquired into *de novo* and the Court was necessarily occupied with such general questions as the nature and quality of the services rendered, the number and variety of the items of service which this necessarily entailed, the remuneration as compared with that of other forms of contract practice and with

that accepted in other branches of the medical profession, the proportion of expenses in relation to the gross receipts of practice, and the cost of living in professional households compared with that of other classes of society. The present inquiry, though not less important, was simpler in so far as it was confined to the consideration of any changes which may have since taken place in some of these factors, together with any adjustments which should be made by reason of the proposed legislation to admit to insurance employed persons under the age of sixteen years. On the previous occasion some of the factors particularly the proportionate amount of professional expenses, had, in the absence of sufficient information, been accepted as an agreed guess, whereas it has since been found possible to ascertain them more accurately while other factors, especially the number of items of service per insured person had been calculated as the result of inquiries by methods admittedly imperfect, but which have been greatly improved and extended. It is clear, therefore that some of the standards accepted as entering into the award of 1924 themselves required some modification before they could be surely taken for the purpose of comparison with present-day conditions, and it is really this which seems to have led to the more pronounced differences between the statistical contentions of the two parties in the recent inquiry.

Whatever may have been the weight attached to these statistical differences for the purpose of balancing the award, it is the wider and more general considerations as to the quality and nature of the service which are of more concern to the public and to the profession at large. There is now, happily, in spite of minor criticisms, complete agreement as to the generous interpretation which many insurance practitioners give to the limiting words that define the scope of their contract and as to the high standard of work within that scope which is maintained by the great majority of them, so that the then Chief Medical Officer to the Minister of Health lately described the insurance service as "one of the most effective branches of the public health service", and this high standard has been stated, on the same authority to be "yearly rising". The Insurance Acts Committee was wise in emphasizing this, and in placing in the forefront of its case that in regard to national health value, to medical responsibility and to the time factor in respect of individual attention alike the worth of the service had been materially enhanced during even the last dozen years. It is impossible to approach any mathematical assessment of the first two of these matters and with regard to the third there can be no exact calculations.

significant, however, that in the one instance of a large practice about which evidence was given before the Court, whereas the clientele had increased by 70 per cent the number of consultation hours devoted to them had had to be multiplied fourfold. Every practising doctor knows that these things are true, and the amazing paragraphs under the heading "Nature of Services Rendered" in the memorandum of the Ministers (*Supplement*, May 29, p. 320) demonstrate nothing except the remoteness of the Health Ministry and Department, and even of some of their medical officers, from the realities of present everyday medical practice.

It is necessary to speak plainly on this point, for it is profoundly disquieting, and it seems to have been imperfectly appreciated by the Court. Does it represent the real attitude of our health officialdom to the body of practical workers in the health field? While officialdom is willing to admit a high standard of work within a certain scope, has it no more understanding than this of what that scope actually is? There is evidently a misconception of the relationship of hospital practice to private (including insurance) domestic practice and of the degree of responsibility which the general practitioner constantly undertakes, and an imperfect realization of the volume of preventive work he is constantly doing in the ordinary course of his daily activities. It is grotesque to suppose that there is only a definite amount of medical work to be done and that if there is an increase in that carried out at hospitals there is so much the less for the general practitioner to do. On the contrary, though the adjustments between the two kinds of work are not yet all that they should be, it is true to say broadly that an increase of work in the one field carries with it the almost necessary implication that the work in the other fields must have increased also. Further, there are not a small number of cases in which the responsibility of deciding that hospital or operative work must be undertaken may be even greater than that involved in the carrying out of that work itself, and health guidance may be as important and anxious as manipulative treatment though it exercises an altogether different kind of skill.

Even more disquieting than the paragraphs in the memorandum referred to was the evidence given by two of the deputy regional medical officers of the Ministry of Health. These officers hold positions of importance and influence, and are supposed by reason of their standing and of their own experience of practice in a not too remote past to be available to help and advise less experienced practitioners in several aspects of their insurance service. Yet as soon as the evidence of

one of these officers had been given Dr. Dain was obliged to draw attention to "such an extraordinary account of conditions in general practice," and to ask leave to call an additional witness typical of the general high average of practitioner, who gave an account of those conditions which was completely different but which will at once be recognized by his fellow practitioners as a picture and not as a caricature.

It remains to express appreciation of the general fairness and moderation with which Mr. Harrison presented the case for the Ministers, and to acknowledge the skill which was manifested both in the memorandums and in the actual conduct of the proceedings before the Court on behalf of the Insurance Acts Committee.

HEPATONEPHRITIS

Though the conception of hepatonephritis had been put forward by various French authors, it was not till the discovery of the icterohaemorrhagic spirochaete of epidemic jaundice by Inada and Ido that much attention was paid to it elsewhere. During the war of 1914-18 crowded conditions brought epidemics intensively before the profession, and epidemic jaundice, or Weil's disease, was described among the combatants of both sides. Stokes and Ryle particularly contributed to the better understanding of the symptoms and course of the disease on the British front in Flanders. In this complaint the features are an acute febrile illness with jaundice and renal involvement, and in severe cases much toxæmia. The progress of knowledge and research has led to development on two lines. The carrier of the infecting spirochaete is the rat, and the infection was spread to epidemic proportions in the rat-infested trenches and dug-outs of the war. The spirochaete is excreted in the urine, so that workers in contaminated mud and sewer slime may become infected through abrasions of the skin of legs and hands. Minor epidemics have occurred in sewer workers and in miners. There has thus been a tendency to refer all hepato-renal manifestations to a spirochaetosis, where spirochaetes can not be demonstrated in blood, urine, or tissues; some authors go so far as to suggest a cryptogenic spirochaetial infection.

The reaction against this one-sided pathology has been increased by the discovery that many toxic substances—phenylquinoline, tetrachlorethane, lead (acute poisoning), apioi, and salts of uranium—cause the typical syndrome of hepatonephritis similar to those cases of poisoning after phosphorus chloro-

form, or mushrooms observed from time to time. Among infections with *B. perfringens* and in rare cases of pneumococci, staphylococci, and *B. paratyphosus* a form of hepatonephritis may occur, while yellow fever affords an example where the aetiological factor is a virus. There is thus a fairly widespread group of diseases which fall under the heading of hepatonephritis, but not every affection simultaneously of liver and kidneys should be included. Maurice Derot and Renée Derot-Picquet, who have worked a great deal on the subject and have brought together their clinical observations in a useful brochure,¹ would define hepatonephritis as a disease characterized by simultaneous evolution of manifestations in the liver and kidneys, the alterations in these organs being determined by one and the same cause, whether infectious or toxic. Among the infectious causes undoubtedly the most important is the *Spirochaeta icterohaemorrhagiae*, but others occur in the virus of yellow fever, the treponema of syphilis, various tropical diseases, malaria, dengue, and recurrent fever, and, among the bacteria, various anaerobes as well as the cocci and typho-paratyphoid group. The toxic causes are the heavy metals arsenic, lead, and gold, phosphorus, chloroform, carbon tetrachloride, mercurochrome, and especially apiol, which has been responsible for many grave haemorrhagic cases with symptoms of polyneuritis or tetany. In a certain number of cases no assignable aetiological factor has been found. In severe cases the liver becomes enlarged and swollen, then degenerates and necroses to a state of yellow atrophy; the kidneys are congested, with glomerulitis and diffuse interstitial infiltration. Not all cases come to necropsy, however; many are curable, leaving varying amounts of liver and renal damage as sequelae.

The symptoms are jaundice and alteration in size of the liver with albuminuria and diminished urinary excretion. These signs are often accompanied by haemorrhages and ecchymoses and by severe disturbance of the nervous system from meningeal involvement. In most cases there is fever and loss of weight though the muscle-wasting may be obscured by oedema in many patients. Even in severe cases recovery may take place with more or less impairment of function of liver and kidneys subsequently. Treatment is difficult, and consists in supporting the patient's strength, except in the rare cases where there is a specific antidote for the cause, such as an anti-spirochaetal serum or a serum protective against the gas-oedema bacilli.

¹ *Les Hépatonéphrites*. By Maurice Derot and Renée Derot-Picquet. Paris: J. B. Baillière (25 fr.)

THE CHEMISTRY OF ATHLETIC RECORDS

The attempt to isolate the feature or features which explain athletic efficiency is of interest alike to physiologists and to students of athletics. To a considerable degree such attempts are disappointing since superiority depends upon co-ordination of the many factors comprising a complex machinery or upon a still more elusive biochemical factor. American physiologists are fortunate in their access to a large amount of first-class athletic material for experimental purposes and in their opportunities for investigation. Some recent results¹ from the Rockefeller Institute for Medical Research, New York, applying to five middle-distance runners of international renown, will appeal to all athletically minded in this country, for of the five Lash, Cunningham, San Román, and Venzke appeared at the White City Stadium on August 15 of last year when the British Empire met the United States in a post-Olympic contest. In general it is agreed that the occurrence of fatigue after muscular exertion is bound up with the accumulation of lactic acid and it may be a matter for speculation whether the trained athlete differs from the untrained through reducing this accumulation by better motor efficiency, or by his superior circulation ensuring a better oxygen supply to his muscles or by his ability to tolerate a higher lactic-acid concentration, or possibly on account of all of these. During the most severe exertion of which a man is capable lactic acid is produced at the rate of 3 to 4 grammes per second and as the maximum concentration that can be tolerated is of the order of 90 grammes the duration of a maximal effort would be limited to 30 seconds since in that time oxidation of at least 15 grammes would be possible. It is of considerable interest to reflect that this estimate of the limit of extreme effort based upon chemical investigation is supported by the practical experience of athletes that thirty seconds represents the limit of supreme exertion granted sufficient determination and fortitude to "go all out." As might have been expected the oxygen intake of the trained and untrained man was found to be the same when comparatively low grades of exertion—for example a walk at the rate of 5.6 kilometres an hour—were undertaken. At higher grades the oxygen intake of the trained man was much greater, the lactic acid was kept at a lower level. The efficiency for example of Lash when running at the rate of 18.7 kilometres an hour for five minutes enabled him to consume 4.96, 5.08, and 5.1 litres of oxygen successively in the last three minutes of the run and to finish with a blood lactic-acid concentration of only 47.5 mg. per cent. In a final experiment Lash ran (for a distance not stated) at the rate of 21.6 kilometres per hour, which is approximately his speed when he created a world's record for two miles. In this experiment he reached an oxygen intake of 5.35 litres a minute. Related to basal metabolism this means that he elevated his metabolic rate to 21.4 times its basal level as compared with 14.5 the maximum of the best untrained man. This far exceeds all previous estimations of a similar character. It is of course unwise to apply uncompromisingly the cold-

¹ *Science* 1937, 85, 409.

blooded results of the laboratory to those produced under the stimulus of emotion—intense excitement, the influence of competition, the desire to win, and so on. In some cases the unsuspected sources of human endurance may be well beyond those which the laboratory would indicate. Alternatively, some temperaments may lead to better performances in the laboratory. Lash, one recalls was a failure at the White City contest. Although subsidized research in this subject on the elaborate lines of our transatlantic colleagues is not practicable in this country, the importance of British activities must not be belittled. The pioneer contribution on lactic-acid metabolism, the seed of all research is credited to Fletcher and Hopkins. The classical work of Starling on the heart and of Haldane, Barcroft, and Douglas upon respiration is accepted as of supreme authority. Bainbridge's *Physiology of Muscular Exercise* published in 1918, has been an inspiration to all subsequent workers. A. V. Hill, uniting physiological and mathematical experience to athletic interest and ability, in his fascinating experiments upon human machinery originated the present trend of investigation, and Adolphe Abrahams has applied himself to what might be termed the clinical side of the subject. The liberality with which the British workers are quoted is testimony to the value attaching to their results.

THE LIVERPOOL MEDICAL INSTITUTION

The Liverpool Medical Institution was formally opened on May 31, 1837, and on another page we give an account of the celebrations which have marked the centenary of its foundation. From time to time the institution has moved its local habitation but it has always gone from strength to strength, availing itself of the local *esprit de corps* which is so pronounced a characteristic of the North Country. The present issue of the *Liverpool Medico-Chirurgical Journal* (vol. 45, No. 1, 1937) is remarkable, and reflects the greatest credit on Dr. J. Murray Bligh, the editor who introduces it with a short preface. There are two inaugural addresses: the one by Professor R. E. Kelly, president of the institution during the present centennial year, the other by Mr. G. C. E. Simpson who was president in 1936. Professor Kelly treats of "Surgery One Hundred Years Ago" and reprints the address given by Dr. John Rutter on May 31, 1837. Mr. Simpson writes about "The Liverpool of our Founders" and gives an appalling account of the social and sanitary condition of the town as it was until comparatively recently. Both addresses are of great general interest even to the ordinary reader and still more so to the many distinguished alumni of the University of Liverpool. Both too are lavishly illustrated. Next to the addresses comes an article by Mr. C. Thurstan Holland entitled "On X-Rays in 1896" and finally a very valuable Note on Early Liverpool Doctors and Ship Surgeons by Dr. Bosdin Leech. He gives a list of names of medical men whose wills were proved in the Probate Court of Chester from 1692 to March 1, 1820—a most laborious task but with commensurate results for those who are doing the spade work of medical history.

NERVOUS LESIONS IN EXPERIMENTAL VITAMIN B DEFICIENCY

Since the discovery that vitamin B consists of at least two components—the one heat-labile, the "anti-neuritic" factor, B₁, the other thermostable, the so-called "pellagra-preventing" factor, B₂ (known in America as vitamin G)—much experimental work has been done to study the lesions produced in animals by the absence from the diet of both or one or the other, of these two components. At a meeting of the American Neurological Association Zimmerman, Cowgill and Fox¹ gave the results of their experiments in which they attempted to produce a chronic neurological disease in dogs by feeding them with a minimal quantity of vitamin B₁, the diet being adequate in all other respects. The animals were divided into groups according to the amount of vitamin B₁ they received, this being supplied in varying doses in the different groups in the form of a powdered liver extract. Those animals whose diet contained some but an inadequate amount of this vitamin developed muscular weakness and ataxia. Before the experiment each dog had been trained to do such simple tricks as standing on its hind legs and maintaining its balance on a turn table. Subsequent inability to perform these tricks whilst on the vitamin free diet was used as a clinical test of incoordination. Twelve animals out of fifteen on this diet grew progressively weaker, gave evidence of incoordination, and developed vomiting and diarrhoea. Death occurred at periods varying from 102 to 599 days. In twelve control animals on the same basic diet plus an adequate supply of vitamin B₂ no disease arose. Pathologically, the affected animals showed the changes of a peripheral neuritis with involvement of the posterior nerve roots and degeneration of the posterior columns of the spinal cord. No changes were found in the nerve cells of the brain or cord. In the discussion which followed the reading of the paper a suggestion was made that caution should be exercised in accepting the lesions in the spinal cord as the direct result of lack of a specific vitamin and the work of Edinger was quoted in support of the suggestion. He assumed that in any debilitating condition neural paths which are made to function excessively may become exhausted and finally, degeneration may occur in them. In these experimental dogs the movements which they had been trained to perform and by which they were constantly tested involved the continued functioning of the nerve fibres in the posterior columns conveying the sense of position. It was not surprising therefore that these fibres should be the first to degenerate whatever the cause of the disease. This observation is supported by the experimental work of Davison and Stone² who investigated the lesions produced in rats by deprivation of both B₁ and B₂ factors and also the effect of total starvation and starvation in spite of adequate vitamin B rations. In animals totally starved and in those starved but supplied with enough vitamin B they found even more intense changes in the nervous system than in the rats deprived of vitamin B₁ or of both B₁ and B₂. The lesions of a peripheral neuritis occurred in all the

¹ Arch. Neurol. Psychiat. Chicago 1937, 27, 286.
² Arch. Pathol., 1937, 23, 207.

animals and occasionally at the periphery of the spinal cord there was degeneration of the myelin sheaths. Severe cell changes consisting of vacuolation and necrosis, with small areas of haemorrhage were also observed in the spinal cord and the mesencephalon. The fact that all these pathological lesions can appear in animals simply deprived of food is strong evidence that, however well dietetic experiments may be controlled, conclusions based upon them must be accepted with reserve.

SELECTIVE COLLAPSE

The treatment of pulmonary tuberculosis by artificial pneumothorax aims at putting the affected part of the lung at rest. If this can be attained without collapse of the healthy parts it will be all to the good of the patient. Since Parry Morgan first drew attention to selective collapse in 1912 radiology has brought this phenomenon more and more to the notice of clinicians when only one lobe or part of a lobe is diseased and there are no interfering pleural adhesions that lobe collapses at a pleural pressure which alters but little the size of the other lobe or lobes. The theories of the mechanism underlying selective collapse are fully discussed in two papers recently published by F. Cardis¹ and by H. Warembourg and R. Swynghedauw.² The tendency of tuberculous tissue to heal by fibrosis gives the increased retractility that would account for more rapid collapse of the diseased area, but not for the fact that the whole lobe collapses including the healthy portions. Parodi believes that the weight of the lung is an important factor: the introduction of air into the pleural cavity eliminates this factor and the greatest benefit is obtained by the part of the lung most affected by the weight of that organ—the diseased portion. Cardis points out, however, that this argument could have force only in regard to the upper lobe: yet selective collapse is seen in the others as well. Warembourg and Swynghedauw also reject Parodi's theory but believe that the weight of the lobes helps to determine the relative position of the lobes in the treated lung. Cardis concludes that only one mechanism will account for collapse of the whole of the affected lobe—immobilization by reflex nervous action, a phenomenon comparable with muscular contraction round a diseased joint or in the abdominal wall in peritonitis. The other two authors carried out experiments in healthy dogs. Each lobe of the lung was removed and its elasticity studied by a method they describe. The upper lobes were found to be slightly more elastic than the lower: they believe these findings apply to man. They also obtained support for the theory of a nervous factor in experiments on patients with an artificial pneumothorax. The pleural pressures were read before and after an injection of atropine. In two thirds of the patients the pressure was increased by one to four centimetres of water in both inspiration and expiration. Atropine did not alter the pleural pressure where the collapse was strictly selective and the other lobes were still expanding. On the other hand it had a definite effect in "contraselective" cases

when in spite of a negative pleural pressure the healthy lobes were well collapsed, and in those in which the whole lung was collapsed with a definitely negative pleural pressure. Atropine thus in some way allows the "expansion" of the healthy parenchyma. The authors tentatively suggest its use in those patients in whom the healthy lobes of the treated lung are unnecessarily collapsed.

MATERNAL MORTALITY

In recent years a number of investigations into the causes of maternal mortality have been conducted both in this country and in the USA and have resulted in remarkably similar conclusions. In 1933 the Obstetrical Society of Boston appointed a committee of nine physicians to make a study of the maternal deaths in Boston for the years 1933–5 inclusive and this report has just been published.¹ During this period there were 47,892 live births and 1,336 stillbirths—in all, 49,228 deliveries resulting in 318 deaths, a mortality rate of 6.4 per 1,000. Deaths due to abortion, ectopic gestation and diseases associated with pregnancy are included in this review and the committee having studied the death certificates filed at the State House added forty to the official number of deaths issued by the Department of Health. Perhaps the most surprising feature of the report is the statement that phlegmasia alba dolens, embolus and sudden death accounted for forty-four deaths, some operation having been performed in thirty of the cases. Anaesthesia was responsible for thirteen deaths and the toxæmias of pregnancy for a further fifty-one. Seventy-four deaths were attributed to puerperal septicæmia which in fifty-three cases supervened after operative procedures. More than one-quarter of the fatalities, seventy-eight, to be precise, followed Caesarean section, thirty-one being ascribed to sepsis. There was a further death due to rupture of the uterine scar of a previous Caesarean section. If it be assumed that the mortality rate associated with Caesarean section was 10 per cent. then it follows that 1.6 per cent. of all pregnant women in Boston were subjected to this operation. It is significant that Montgomery² found that the death rate over a ten-year period from Caesarean section in a charity service at Philadelphia was 6.1 per cent. and that the high mortality was by no means the only objection to the operation. He concluded that it is "an unsatisfactory recourse in the impossible obstetric situation." Paradoxical as it may sound it would nevertheless appear to be true that the excellent results from this operation which are obtained by a few select surgeons have encouraged its abuse by those unqualified to perform it, and have led to the partial substitution of obstetric surgery for normal midwifery. The committee did not hesitate to report that in its view many of the deaths were due to bad obstetrics. It found that of the fifty-one women who died from the pregnancy toxæmias only seven received adequate ante-natal care. Of the seventy-four deaths from sepsis twenty followed normal confinements and the committee states that "lack of proper technique must

¹ *Arch. méd.-chir. Appar. resp.* 1936 11 341

² *Ibid.*, 1936 11 354

¹ *New Engl. J. Med.* 1937 218 43

² *Amer. Journ. Obstet. Gynec.* 1936 31 968

be assumed that twenty operative delivery cases should have died allows of but one conclusion—the operators' technic was poor." Referring to cases of Caesarean section performed for disproportion, the committee remarks that "when it is known that a certain number of these cases were done by men who have had absolutely no training in obstetrics the indication is open to question." The Boston report is fearless and gives the results of midwifery in a city well supplied with efficient maternity services, results which are presumably better than obtain in the country as a whole. Although it is a pity that a statistician was not co-opted to the committee, it is to be hoped that this report will obtain the publicity it deserves. Every inquiry into the causes of maternal mortality has shown that much of it is preventable.

THE HEART IN EMPHYSEMA

The opinion, based on pathological studies, that the right heart enlarges in chronic lung disease with emphysema has only tardily been shared by those who study the living subject. The reasons for this are, first, the difficulties of recognizing cardiac failure in the presence of emphysema, and, secondly, the particular type of cardiac change which may result, which does not appear radiographically as a general or transverse enlargement of the heart. Moreover, the issue has been confused by the fact that primary cardiovascular disease, with its own particular effects on the heart and great vessels, is frequent in the subjects of emphysema. A study of the radiological appearances in eighty patients by J. Parkinson and C. Hoyle¹ shows that definite changes in the heart and in the pulmonary vessels appear in a large proportion of cases. In the anterior view the heart may look small the transverse diameter being either normal or less than this by reason of the low position of the diaphragm, which tends to elongate and at the same time to narrow the cardiac shadow. The conus of the right ventricle and the pulmonary artery may, however, be more prominent than usual, the former giving evidence of the early stage of enlargement of the right ventricle. In the antero-posterior and left oblique positions respectively the right and left main pulmonary arteries may be seen to be enlarged. Enlargement of the right auricle is uncommon and is a late development usually associated with congestive failure. The left side of the heart both auricle and ventricle, was found to remain unaffected in uncomplicated emphysema and where the left ventricle was increased in size this was attributed to an accompanying hypertension. Auricular fibrillation was observed in one case only and the preservation of normal rhythm and the infrequency of failure account for the rarity of auricular enlargement. Congestive heart failure was found in only a small number of the cases and in half of these there was hypertension. The failure associated with uncomplicated emphysema is thus rare but the prognosis is bad the condition is in fact, usually a terminal one. Electrocardiography was of little help in diagnosis as signs of right heart involvement, such as right ventricular predominance (old terminology) were un-

common and close correlation with the radiological picture was impossible. The observations of Drs Parkinson and Hoyle, which are clearly illustrated by radiographs, indicate that cardiac changes elusive clinically, are to be recognized in emphysema only with the help of x-rays and provided they are sought in the right situations. Though these changes may not be of great significance from the functional point of view it is possible that when combined with those of hypertension, an association which is common, they may play an appreciable part in determining cardiac failure.

BOVINE TUBERCULOSIS IN THE NETHERLANDS

A Charlotte Ruys¹ has attempted to ascertain the frequency of tuberculosis of bovine origin in the province of North Holland. She used the cultural method and confirmed the identity of all bovine and some of the human strains by rabbit inoculation. From 204 sputa she isolated thirteen bovine strains. Inquiry showed that of the patients infected with the bovine type three out of 115 lived in Amsterdam and ten out of 89 in the country. Gastric contents from children were examined and strains isolated from 188 subjects. Among these, sixteen were of the bovine type. Sixty-six strains of tubercle bacilli were isolated from patients of all ages suffering from non-pulmonary tuberculosis. The samples examined included pus from cervical glands and joints, urine, ascitic fluid, cerebro-spinal fluid, and material from skin lesions. Of these strains eleven had the typical bovine characteristics. It will thus be seen that tuberculosis of bovine origin occurred with considerable frequency in the population examined. This is not surprising in view of the fact that 34 per cent of cattle slaughtered in Amsterdam in 1934 had tuberculosis lesions and 40.8 per cent of 11,000 cattle in North Holland reacted to the tuberculin test. Infection of human beings appears to occur chiefly by milk, and it is recommended that an active anti-tuberculosis campaign should be prosecuted in cattle and that all milk should be subjected to compulsory pasteurization.

The Council of the Royal Society of Arts has awarded the Albert Medal for 1937 to Lord Nuffield "for services to industry transport and medical science."

The Morison Lectures will be delivered before the Royal College of Physicians of Edinburgh by Dr R. G. Gordon on June 17 and 18 at 5 p.m. His subject is "The Neuro-Psychological Basis of Conduct Disorder."

The third annual conference convened by the Ex-Services Welfare Society will be held at 10 a.m. at the Grosvenor Hotel Victoria Station, S.W., on Friday, June 25 with Dr Edward Mapother in the chair. The subject for discussion will be "Control of the Incidence of War Neurosis" under the following heads: (1) The malingering before and after enlistment. (2) Elimination of the potential neurasthenic during training. (3) Treatment in the field.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 12 1937

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CAPITATION FEE

REPORT OF COURT OF INQUIRY

Further to the proceedings of the Court of Inquiry into the remuneration of insurance practitioners, which were fully reported in the *Supplement* of June 5, the following communications have been received from the Ministry of Health

MINISTRY OF HEALTH
WHITEHALL S W 1
June 7 1937

Dear Sir

I am desired by Lord Amulree the Chairman of the Court of Inquiry into the remuneration of insurance practitioners appointed by the Minister of Health and Secretary of State for Scotland on May 5 1937 to forward to you for the information of the British Medical Association the enclosed copy of the Report of the Court submitted to the Minister of Health and Secretary of State for Scotland

Yours faithfully
E H PHILLIPS

The Secretary
British Medical Association
British Medical Association House
Tavistock Square
W C 1

National Health Insurance—Court of Inquiry into Remuneration of Insurance Practitioners

To the Rt. Hon Sir Kingsley Wood M.P. Minister of Health
and the Rt. Hon Walter E. Elliot, M.C. M.P., Secretary of State
for Scotland

WE, the under-signed, being the Court of Inquiry appointed by you in your minute dated May 5, 1937, have inquired into the matter mentioned in such minute and HEREBY REPORT that the amount of the capitation fee (per insured person per annum) on the basis of which the Central Practitioners Fund under Article 19 of the National Health Insurance (Medical Benefit) Regulations, 1936, and the corresponding Scottish Fund under Article 19 of the National Health Insurance (Medical Benefit) Consolidated Regulation (Scotland), 1929 should be calculated as from January 1, 1938, having regard to such changes as have taken place since 1924 in the cost of living, the working expenses of practice the number and nature of the services rendered by insurance practitioners to their insured patients and other relevant factors, and on the assumption that as from January 1 1938, employed persons under the age of 16 will have become entitled to medical benefit by virtue of amending legislation, but that the conditions would not impose any obligation upon the practitioner to issue medical certificates to these persons (such capitation fee not to include any payment in respect of the supply of drugs and appliances or any payment to meet the special conditions of practice in rural and semi-rural areas) should be nine shillings

E H PHILLIPS
Secretary to the Court.

AMULREE
T HOWORTH
D H ROBERTSON

June 5 1937
[1698]

British Medical Association

PROCEEDINGS OF COUNCIL

WEDNESDAY, JUNE 2, 1937

A meeting of the Council of the Association was held on Wednesday, June 2, at the Association Headquarters in London. Sir KAYE LE FLEMING, Chairman of Council, presided, and the other members present were

Mr H. S. Souttar (Chairman of Representative Body) Mr N. Bishop Harman (Treasurer), Sir E. Farquhar Buzzard Bt (President), Dr H. G. Dain (Deputy Chairman Representative Body), Mr J. Armstrong, Dr J. W. Bone, Sir Henry Brackenbury, Prof. A. H. Burgess, Dr J. D. Commie, Mr W. McAdam Eccles, Dr C. E. S. Flemming, Dr T. Fraser, Mr J. L. Gilks, Dr L. G. Glover, Dr F. W. Goodbody, Dr R. G. Gordon, Dr C. O. Hawthorne, Dr J. Henderson, Dr J. Hudson, Dr J. Hunter, Dr I. Jones, Dr R. Langdon Down, Mr E. Lewis Lilley, Dr J. C. Loughridge, Dr P. Macdonald, Sir Ewen Maclean, Dr J. S. Manson, Dr O. Marriott, Dr J. C. Matthews, Dr J. B. Miller, Dr H. J. Miligan, Sir Richard Needham, Mr R. L. Newell, Dr L. A. Parry, Dr W. Paterson, Prof. R. M. F. Picken, Dr H. W. Pooler, Colonel A. H. Proctor, Dr H. Robinson, Dr E. H. Snell, Dr P. B. Spurgin, Surgeon Rear Admiral A. R. Thomas, Dr W. E. Thomas, Dr G. Clark Trotter, Dr S. Wand, Mr N. E. Waterfield, Dr W. Watkins-Pitchford, Dr W. N. West Watson, Dr W. G. Willoughby, Dr F. T. H. Wood.

Apologies for absence were intimated from the following

The President Elect, the Past President, Prof. R. J. A. Berry, Sir Crisp English, Dr E. R. Fothergill, Dr P. L. Giuseppe, Lieut.-Col. C. H. H. Harold, Dr H. C. Jonas, Dr J. R. Prytherch, Dr J. P. Shanley, Dr D. Lyon Stevenson, and Wing Commander H. M. Stanley Turner.

Preliminary Business

It was announced that the deaths had taken place of Dr Joseph Giusani of Cork and Dr George Parker of Bristol, former members of Council and the Chairman was authorized to forward letters of condolence. Later in presenting the report of the Journal Committee Dr Gordon referred with special regret to the death of Dr S. A. Kinnier Wilson, editor of the *Journal of Neurology and Psychopathology*, and the Chairman said that the Council would wish to express to Mrs Wilson its deep sympathy.

The Chairman was authorized to convey the congratulations of the Council to the members of the Association who have recently had honours conferred upon them by the King. He referred with particular pleasure to the conferment of the C.B.E. upon Dr James Perrins Major who was secretary of the Annual Meeting in Melbourne in 1935.

The Council unanimously agreed to recommend to the Representative Body that Dr S. Watson Smith of Bourne mouth, Past President, be elected a Vice-President of the Association in recognition of his exceptional services in connexion with the World Tour.

Dr Langdon Down was appointed representative on the Child Guidance Council and Sir Richard Needham was asked to attend as representative of the Association at the Imperial Social Hygiene Congress to be held at Westminster in July. An invitation was received from the Society for Cultural Relations between the Peoples of the British Commonwealth and the U.S.S.R. for a representative to take part in a tour of the medical institutions of Soviet Russia which the society is arranging. Dr Waterfield agreed to go as representing the Association.

A letter was read from the Indian Science Congress Association an organization of scientists in India run on lines similar to those of the British Association but in

cluding medical research among its sections. The letter stated that it was desired that about five delegates from the British Medical Association should attend the silver jubilee of the Indian body in January next. A few names were suggested, and it was left to the Office Committee to approach certain individuals in order to ascertain whether they would be willing to make the journey.

Sir Edmund Spriggs sent a report on the biennial conference of the New Zealand Branch of the Association at Wellington which he attended in February. He had delivered a message of good will to the conference from the Association in Great Britain, which was warmly received. Sir Edmund Spriggs added that the New Zealand Branch was in an active and flourishing state, the communications to the conference were of a high standard, and members of the profession from Great Britain were received and entertained most warmly.

On a proposal from the Northern Ireland Branch the Council agreed to vary the membership of the Emergency Committee for Northern Ireland, constituting it as follows: Dr James Boyd and Dr R. M. Beath, both of Belfast, with the president and honorary secretary of the Branch *ex officio*.

Annual Meeting, 1940

An invitation was forwarded from the Birmingham Branch to hold the Annual Meeting of the Association in Birmingham in the year 1940. Dr T. L. Hardy (immediate past president of the Branch) and Mr Fauset Welsh (honorary secretary) attended in support of the invitation.

Dr Hardy said that the invitation was a unanimous and a hearty one. In 1940 it would be twenty nine years since the Association last visited Birmingham, so that a visit was overdue. During the past five years a large hospital centre had been built in Birmingham in which it was hoped the voluntary hospital services of the city would ultimately be collected. Patients would be admitted for the first time next spring and by 1940 the hospital centre would be in full working order. There was every reason to believe that the civic authorities would welcome the Association in that year, and the University of Birmingham, through its Medical Faculty and its dean would do its best to co-operate in making the meeting a success. A further point to bear in mind, which had weighed with Dr Dain's colleagues and admirers in Birmingham was that in 1940 in all probability Dr Dain would be Chairman of the Representative Body and therefore there would be a special appropriateness in a meeting in Birmingham.

The Chairman thanked the representatives from Birmingham for their cordial invitation and after they had withdrawn Mr Bishop Harman moved that the invitation be accepted, and this was seconded by Dr Robinson and agreed to. The Liverpool Division was thanked for an invitation to hold the Annual Meeting in Liverpool in 1940 and was asked whether it would be possible to renew the invitation for a later year.

The Medical Secretary's Visit to India

The Council considered at some length a report by the Medical Secretary on his visit to India (December 1936 to March 1937) to investigate the conditions of medical practice and organization in that country. The report was a long document of more than one hundred numbered paragraphs and included a survey of existing medical and public health services with observations on their future development as well as an account of medical organizations in India. Dr Anderson on the presentation of the

report, referred briefly to the difficulties which he had experienced in putting on paper the views and impressions he had gathered during an extensive tour. He had done his best to bring forward some suggestions which would remedy a state of affairs that in his judgement ought to be remedied.

The report was discussed by Colonel Proctor, Sir Richard Needham, and others, and eventually it was agreed to refer it to an appropriate committee for consideration and for report to the Council with recommendations as to future action. The committee selected for this purpose was a joint one consisting of the Dominions Committee (the full title of which is the Dominions India Colonies and Dependencies Committee) and the Special Committee on the Reorganization of the Medical Profession in India. Power was given to the committee to co-opt, and the Chairman mentioned one or two names which might be usefully considered. On the motion of the Chairman the Council expressed its great appreciation to Dr Anderson for the labour which he had undertaken on the Association's behalf.

Scottish Health Services

Dr Miller brought forward a report from the Health Services Committee, which has considered the report of the Scottish Departmental Committee on Health Services. He said that neither the Departmental Committee's report nor the policy of the Association had a place for a full scheme of consultants and that question would have to be considered. As this was under review by another committee there was no need for him to say anything more about it at the moment, but the most gratifying feature of the Departmental Committee's report was that it was a most thorough and authoritative endorsement of the Association's health policy. In Scotland they would rather have a general medical service scheme applied to the whole kingdom than one limited to Scotland alone. When it came to sinews of war they had always found it an advantage to be associated with their affluent colleagues south of the Tweed.

Dr Hawthorne asked whether there was not included in the Departmental Committee's report a recommendation that an experiment should be made in compulsory notification of venereal diseases. It was certain that this matter would be raised in the British Social Hygiene Council on which the Association was represented and perhaps would be raised in a controversial form by the lay representatives a number of whom came from Scottish authorities. Had the Health Services Committee noted that particular proposal?

Dr Miller said that the majority of the Departmental Committee because of the seriousness of the effects of syphilis upon the race, were in favour of compulsory notification in much the same way as other infectious diseases were notified. They recommended however, that if it was deemed inexpedient to apply the system over the whole country powers should be given to the larger local authorities to adopt compulsory measures on an experimental basis. The Health Services Committee had considered the question but it was one which brought in very big issues and no observations were made upon it in the present report.

The Committee's report which will be included in the Supplementary Report of Council to be published in the next issue was approved.

Dr Miller added that the section of the report on Scottish Health Services dealing with the provision of consultant services had been referred to the Consultants and Specialists Group Committee which had already, he understood given it some preliminary consideration.

Payment of Medical Staffs

Professor Burgess for the Consultants and Specialists Group Committee, brought forward a recommendation

on the payment of medical staffs of voluntary hospitals. He pointed out that in its Hospital Policy the Association had urged that in respect of treatment given to 'contributing patients,' staffs should receive remuneration for such service either by salary payment for definite services and responsibility, honorarium or agreed contributions to a staff fund. Several resolutions had been passed urging medical boards to approach lay boards to press this matter and it was now felt that this section of the Hospital Policy should be urged directly upon boards of management of voluntary hospitals, and he moved a recommendation accordingly.

In reply to Dr Macdonald, who suggested that the matter might first be considered by the Hospitals Committee Sir Henry Brackenbury said that in the ordinary course such a recommendation would have been referred to the Hospitals Committee and presented to the Council in that way, but the Consultants Group Committee met at a later date than the Hospitals Committee, and inasmuch as this was a somewhat urgent matter it was thought desirable to bring it before the Council direct at the present meeting. It was merely a question of time and convenience.

Mr Souttar pointed out that this policy had again been endorsed in the recently published report of the Voluntary Hospitals Commission, and, emanating from such a source, it had made a great impression on the lay side of hospitals. He was aware of one important hospital where this matter was now being directly considered by the lay committee.

The recommendation was agreed to.

Voluntary Hospitals Commission

Dr Macdonald, chairman of the Hospitals Committee said that it was a matter of satisfaction to the Council to find that the report of the Voluntary Hospitals Commission so largely endorsed the policy of the Association, and that, with one exception, the points on which the Association had laid stress had been accepted. The report dealt with the co-ordination and co-operation of hospitals on which the Association evidence was very ably presented to the Commission by the Deputy Medical Secretary and the proposals had in general been accepted though it was true that the report did not go into great detail as to how co-operation was to be achieved. He regretted that the Commission was entirely silent on the question of beds being provided at hospitals where practitioners in general and general practitioners in particular could treat their own patients and he could not but feel that in this respect the Commission had missed an opportunity. Finally, it was a matter for regret that the Commission did not say explicitly that it was to the interest as well as the duty of local authorities to deal generously with the voluntary hospitals instead of in the grudging manner often obtaining at present. But he did not wish to end his report on this subject on any note of disapproval. It was a matter for congratulation that the Hospital Policy received such a large degree of confirmation. He added that Sir Henry Brackenbury who was acting chairman of the Commission at most of its sessions, had put an enormous amount of work into this investigation, and the Association and the medical profession were also specially indebted to Professor Sheen of Cardiff for his work as a member of the Commission.

Sir Henry Brackenbury took up a remark by Dr Macdonald on the Commission's suggestion with regard to the regional nature of the benefits of contributory schemes. It was well to make it clear that the word 'regional' in this connexion was contrasted not with national but with the individual hospital. The Commission thought there ought not to be a contributory scheme which admitted a patient to one single hospital but that a contributory patient should be able to receive benefit from any hospital in a region and it went on to say that so far as possible all the contributory schemes should be on those lines.

Public Health

In the absence of Professor Picken, Sir Henry Brackenbury introduced the report of the Public Health Committee. He stated that an inquiry had been received from a medical officer of health as to whether the Association was in general agreement with the recommendation of the Ministry in Circular 1550 that children between 2 and 5 years of age should be admissible to minor ailment clinics provided by local education authorities. The Committee had seen no objection to this proposal provided that the Association's existing policy in regard to the conduct and scope of such clinics was observed. But he thought they could now go further than this because, since that policy had been laid down, a large number of Public Medical Services had been set up, with the encouragement of the Association, and in areas where there was a public medical service there did not seem to be any real necessity for local government activity in this direction. He proposed, therefore, to add to this report the words, 'But the provision for minor ailments should be unnecessary in areas where there is a public medical service.'

The addition of these words was agreed to.

Sir Henry Brackenbury further drew attention on the report of this Committee, to the special investigation recently carried out by members of the medical staff of the Ministry of Health into maternal mortality in selected areas in England, the results of which were published in a White Paper (*Journal* May 8). A memorandum by the Council, published in the *Supplement* on the same date had been transmitted to the Ministry, and it was the policy therein contained which the Representative Body would be asked to endorse. He believed that the General Medical Council was making certain more or less informal representations to the Ministry which might result in the Ministry's proposals not being pursued further. Obviously it was out of the question to have one prescribed course for qualification, together with one *Register* kept by the General Medical Council, every registered medical practitioner having the right to practise medicine, surgery, and midwifery under the Medical Acts and at the same time to have another *Register* with other prescribed conditions and other criteria to be satisfied, set up by the Ministry of Health or, what would be even less satisfactory, by every local authority. It was therefore most desirable that at the Annual Representative Meeting some pronouncement should be made as to the conditions of a service of that kind which the profession would consider reasonable or unreasonable and in the last paragraph of the memorandum referred to a proposition was made to the Ministry of Health with regard to the compilation by local authorities of panels of practitioners to answer midwives calls and the conditions to which the profession would be prepared to accede were carefully set out.

The report of the Committee was approved.

Medico Political Activities

Dr Bone for the Medico-Political Committee brought forward a number of recommendations all of which were agreed to. The first related to approval of the draft scheme for the provision of medical attendance and treatment upon persons of moderate incomes above the national health insurance limits. This scheme will be found included in the Supplementary Report of Council to be published next week. The Council also approved the case which has been prepared for an increase of fees for medical witnesses in the courts and resolved that it be submitted to the Home Secretary who is to be asked to receive a deputation on the subject. It was further agreed that a parliamentary agent be employed to examine all Bills public and private provisional orders and the like introduced into Parliament and to bring to the Association's notice any proposals affecting or likely to affect the interests of the medical profession.

A suggestion made to the Committee by Dr H E Collier for the establishment of a diagnostic consultation clinic for diseases of occupation and industrial disability was reported to the Council. Dr Bone said that the Committee had come to the conclusion that a case had not been made out for the separation of occupational from other diseases for the purpose of clinical observation, and Dr Collier had been informed that the Committee did not favour the establishment of a consultation clinic on the lines suggested.

Dr Manson asked the Committee to reconsider its decision on this matter. While it might be true that a case had not been made out for the separation of occupational diseases so far as diagnosis was concerned, the clinic suggested by Dr Collier was designed to serve other purposes also—namely, the discovery of industrial factors in the causation of ordinary disease and ill health, and to recommend to the profession and to the workers and to industry in general any known preventive measures or safeguards against occupational disease. It seemed a pity that the Association should apparently stand in the way of prevention of occupational disease, and accordingly he moved that this part of the report be referred back to the Committee for further consideration.

Dr Hawthorne seconded the reference back.

Dr Bone said that this matter had been carefully considered by the Committee on two occasions on one of which Dr Collier was present, and the decision was taken after full regard had been paid to the details of his scheme which the Committee had before it.

The motion to refer back was lost.

Organization, Finance, and Office Arrangements -

On the motion of Dr Matthews, chairman of the Organization Committee, the new Bihar Central Provinces Delhi North West Frontier, and Sind Branches were included in the Indian group of Branches for the election of a member of Council. Dr Matthews said that the formation of these Branches had arisen as a consequence of the visit of the Medical Secretary to India.

The Chairman of Council was authorized to forward suitable letters to the following honorary secretaries who had relinquished office, and whose services were considered to be deserving of special recognition: Dr N R Dharmavir (Punjab Branch), Dr Pierce Grace (South Eastern of Ireland Branch), Dr G M Fitzgibbon (Bristol Division), Dr H C C Taylor (Derby Division).

Dr Dain presented a report from the Building Committee, which dealt with proposals for the building to be erected on the site of the northern extension in Upper Woburn Place, and with other matters. The report was approved.

Mr Bishop Harman reported that a cheque for over £300 had been received, representing the Association's proportion of the net profits arising on the general account of the National Ophthalmic Treatment Board. The loan made by the Association to the Board had now been fully repaid.

The Council again devoted considerable time to the discussion of a report from the Committee of Inquiry into Association office arrangements presented by Sir Kaye Le Fleming. It was agreed on the recommendation of the Committee that a layman of high educational standing be appointed to the staff of the Medical Department in order that he might assist with the preparation of memoranda and other documents. It was stated that the volume of work in that department was increasing rapidly, and still further expansion was in prospect.

Approval was also given to the appointments made by the Board of Directors of the *Journal* of Mr C W Francis as advertisement manager and Mr W H Moss as secretary to the Board. Consequent upon the reorganization of the Finance Department it had become necessary to create a new post in that department the duties of which would be mainly confined to the management of the

finances of the Association and the supervision of matters concerning the Association's properties. The Committee had appointed Mr W S Giles, who had already been for over twenty years in the Association's service, to the new post. It was also reported that Mr A Twelftree had been appointed head clerk in the Medical Department in place of Mr S Coulson, who, on a breakdown in health had been granted a retiring pension. Certain other matters affecting reorganization were decided.

Association Charities

In presenting the report of the Charities Committee Dr Robinson mentioned that a bequest of £50 had been received from the executors of the late Dr Isabella Aitken, who died in Nyasaland in January last. This was the first occasion on which the Charities Committee had received a bequest, and in recommending that it be assigned to the Sir Charles Hastings Fund for the augmentation of the capital of that fund his Committee thought it was desirable for intending testators to be assured that any bequests they made would be treated as capital and invested on behalf of one or more of the medical charities, they would not be spent as income. The recommendation was approved.

The Committee submitted a table of earmarked subscriptions to medical charities received through the Association over the twelve years 1925-36. The total amount was just over £60 000, the largest amount received in any one year being just over £7,000 in 1934.

Other Committee Business

A meeting of the Welsh Committee was reported. The Committee had discussed at length the advisability of continuing the Welsh Contract Practice Subcommittee particularly in view of the fact that recently an important contract practice dispute was dealt with centrally and not by the subcommittee. The Committee had agreed however that it was essential that the Welsh Subcommittee should continue to watch developments in relation to contract practice work in the Principality and to be consulted by the Divisions concerned, and it was reappointed for this purpose.

Dr Comrie, chairman of the Consultants and Specialists Group for Scotland, reported that the three medical corporations in Scotland had each been invited to nominate a direct representative on the Consultants Board. There was general approval of the scheme by the corporations, but some objection had been taken to the number of direct representatives proposed. He thought that if the number of direct representatives of each of the corporations were increased to two, the principal objection would be overcome. The Council agreed to allow the constitution of the Board to be amended so as to permit of this being done.

Sir Kaye Le Fleming reported that another meeting had been held of the Joint Committee of the Association and the Trades Union Council at which the Factories Bill and the rehabilitation of injured workmen among other matters had been discussed. The joint secretaries had visited Llanelli and had collected evidence for submission to the central committee whose findings the committee of management of the medical service at Llanelli had agreed to accept.

A report was made from the conference which had been called to consider the ethical machinery of the Association. A statement on the position will be included in the Supplementary Annual Report. The conference consisted of three of the standing committees to consider certain questions which had been raised concerning action to be taken centrally or by the Division in cases where members had applied for or accepted appointments the terms and conditions of which were contrary to the Memorandum of Recommendations. The report of the conference was approved.

Dr Paterson brought forward a report from the Dominions Committee which was approved. The matters with which it dealt will appear in the proceedings of that Committee in next week's *Supplement*.

A report was presented from the Journal Committee in which reference was made to the successful transfer of the composition of the *Journal* to the printing works of Messrs Eyre and Spottiswoode. Things had now settled down into a reorganized routine, and communication and other arrangements were running smoothly.

The Protection of Practices Committee submitted an interim report, in which it was stated that the Committee had defined the principles which should form the basis of any model scheme for the protection of the general practices of members of the profession joining H M Forces in a national emergency. The principles would be elaborated at a further meeting after which the Committee hoped to submit to the Council the draft model scheme which it had been instructed to prepare for issue to the Divisions.

The final act of the Council was to consider the draft Supplementary Annual Report to the Representative Body. Although at the outset of the meeting the Chairman, having in view the length and importance of the agenda, had warned the members that it might be necessary to sit late the business which included some rather lengthy discussions, was concluded at 6.30 p.m.

TESTING OF THE EYES

RECOGNITION OF UNQUALIFIED PRACTITIONERS

It is profoundly disturbing to express it very mildly, that the revised regulations dealing with the principal additional benefits under the national health insurance scheme continue to offend the medical profession. First the Dental Benefit Regulations, upon which we had occasion to comment adversely in September last (*Supplement* September 26 p 170) and now the regulations dealing with ophthalmic benefit. In the Dental Benefit Regulations we were dealing with an indirect method of attempting to regulate the fees of the medical profession (for the administration of anaesthetics), now a more serious position arises. The Minister proposes in the draft regulations laid before Parliament this week to give official recognition to the practice of sight testing by persons who are not registered medical practitioners. This would be virtually a considerable advance in the direction of statutory registration of sight-testing opticians, which has not only been vigorously opposed by the Association during the past thirty years but has also been reported upon unfavourably by successive Government Departmental Committees. We say with regret that these draft regulations are being published notwithstanding the concern that was shown by a weighty deputation from the British Medical Association received by the Minister personally as long ago as last November.

The position would have been bad enough if the considered and cogent arguments put forward by the members of that deputation had merely been ignored. It is aggravated by the fact that the regulations do not cede one single point which from the Minister's own statement the deputation was led to believe would be met. It is significant that, immediately following the deputation the Medical Secretary of the B.M.A. had occasion on receipt of a revised draft to express the Association's appreciation of the extent to which the draft regulations had been modified to give effect to the views expressed at the meeting with the Minister. This appreciation has proved to have been somewhat premature.

The new regulations propose to amend Article 25 of the Additional Benefit Regulations of 1930. Among the principal amendments are the setting up of a committee of representatives of approved societies and opticians and a power given to this committee to approve a scale of

charges for the provision of optical appliances 'which scale may include as a separate item any charge for a service rendered by an optician whether an optical appliance is supplied or not'. This committee will have the control of the arrangements which approved societies may make for the testing of the eyes and the supply of spectacles. It will issue the list of approved opticians, in which will be distinguished those who undertake sight-testing and those who do not, and it will also approve the form of "ophthalmic letter" informing the members of a society of the arrangements made by the society for the provision of the benefit and of their right to obtain the benefit otherwise than under those arrangements, and in particular, of their right to an ophthalmic examination. It will be observed that in the regulations there is a clear distinction drawn between a service and an ophthalmic examination. The regulations already define ophthalmic examination as meaning 'an examination of the eyes by a medical practitioner having special experience of ophthalmic work, and as including 'any advice or service in connexion with such examination and the issue of any necessary prescription'. "Service" quite clearly means sight-testing. In the existing regulations the expression which was used was 'a service rendered by an optician incidental to the provision of an appliance'. The new regulation, it will be observed, says that the scale may include a charge for a service rendered by an optician whether an optical appliance is supplied or not.

The reasons which have led the Association to offer the most uncompromising opposition to the recognition in a statutory document of the testing of the eyes by unqualified practitioners are well known to the profession, just as they are well known to the Minister and his advisers. There is here no narrow question of professional interests. We may remind our readers of some of the statements in a paper by the chairman of the Ophthalmic Committee of the British Medical Association in the *Supplement* of October 24, 1936.

For three successive years analyses have been prepared of the findings of a series of examinations of the eyes of patients who had obtained treatment through the medium of the National Eye Service organized by the National Ophthalmic Treatment Board. It has been alleged by some that the cases were for the most part, if not altogether simple refractions (whatever that may mean), and that they were scarcely related to serious disabilities or diseases of the eyes or of the body of the patient. The two previous analyses made it plain that these allegations had no basis in fact. Patients who came for treatment to the National Eye Service were found to present a large variety of eye conditions many of which were of such serious import as to constitute a threat to the sight of the affected patient if they were not correctly diagnosed and efficiently treated.

Against the findings of the ophthalmic medical practitioners—namely that of their patients no fewer than 34.6 per cent. had defects or diseases other than errors of refraction—there is this other fact that only 3 per cent. of such cases were notified by the opticians. The divergence of the figures is startling. There is ample evidence that the doctors' returns are correct. It must follow that the figures of the sight-testing opticians are wrong. The eye defects in the patients seen by them were either unrecognized or if they were recognized were not reported for medical examination.

And here is an extract from the Report of the Departmental Committee on the Causes and Prevention of Blindness, 1922.

"We are of opinion that it would be undesirable and a positive danger to the public for Parliament to pass any measure which might convey the idea that an optician who is a person qualified to provide glasses prescribed by medical men is further himself competent to examine the eyes of patients and to prescribe glasses for the correction of errors of refraction."

In conclusion, we may say at once that the members of the medical profession are well aware of the fact that a large proportion of the members of the community, having trouble with their eyes, go direct to the optician, who has had no medical training, to have their eyes tested. The figures quoted in Mr. Bishop Harman's paper show how much this is to be deplored, but the fact remains. There is no suggestion at all that there should be any attempt to coerce the public in their own interests to submit to a proper ophthalmic examination. What is in question is the action of the Minister (by a simple and apparently innocent device in a Departmental regulation) in giving statutory recognition to the examination of the eyes by men who have not had a medical training. It is more than the thin end of the wedge, and the medical profession, having failed to get satisfaction from the Minister, must see to it that the wrong which it is proposed to do by these regulations shall not be accomplished. The authorities are doing this presumably under sustained pressure from interested quarters and the damage to the eyes of insured persons may well be irrevocable.

GENERAL MEDICAL COUNCIL

Registration of Students

POSTPONED DATE OF OPERATION OF NEW RESOLUTIONS

The Council, with Sir NORMAN WALKER presiding, had before it on May 27 the report of the Education Committee on registration of students and the bringing into force of the resolutions regarding the curriculum passed by the Council a year ago.

Mr J B LEATHES, in introducing the report, said that the committee had now completed a full examination of the regulations of the Council with regard to the registration of medical and dental students with a view to removing discrepancies in practice. The conclusion at which it had arrived as a result of careful study of the practical operation of the existing procedure was that the Council might properly be advised to rescind the present regulations and substitute for them a series of recommendations. Hitherto the *Students Register* had been compiled from the forms of request for registration filled in by the students at the various schools, and in consequence had never been complete. What was now proposed by the committee was that the deans should send to the Council returns of all persons registered as medical or dental students in order that the Council might be in a position to compile an annual register of such students who had begun their professional status in each academic year. The Council would be content to rely upon these returns for such information as it might require as to the ages on which students started medical or dental study and the preliminary examinations in general education and additional examinations passed by students before admission to the schools. The Council would relinquish the policy by which the authorities of the schools and the licensing bodies had been encouraged to make the registration of students by the Council a condition precedent to their admission.

He accordingly moved the committee's recommendation that the present regulations so far as they related to the method of registration should be rescinded as from September 1 1938 and so far as they related to the conditions under which students were registered as from November 1 1938. He said that these two dates had been chosen on the one hand in order that deans entering students in October 1938 should send in their list beginning with the academic year 1938-9 and on the other hand that the new conditions of admission relating to age, general education, preliminary examinations and the like which would be affected by the Council's new resolutions in regard to professional education should not come into operation until those resolutions became effective.

He explained that originally the Council decided that the new resolutions should come into operation on January 1 next, but last session the Council adopted a recommendation of the committee that the date should be postponed to October 1, 1938, and the committee now recommended postponing for a further month, in order to give the schools a little more time to get into line with these changes. It would then be clear that the schools would be at liberty to deal with applications for admission in the first term of the academic year 1938-9, under the 1923 resolutions, and that applications for admission in any later term should be dealt with under the new resolutions adopted a year ago.

STANDARD OF GENERAL EDUCATION

The principal changes made in the recommendations to accord with the 1936 resolutions were that before registration as a medical student the applicant must be within three months of the attainment of eighteen years, and must have passed a recognized preliminary examination in general education and an additional examination conducted or recognized by one of the licensing bodies. The standard of general education remained that of university matriculation. The Council would also recognize as complying with these recommendations such examinations of universities in British India, the British Dominions and Colonies, and foreign countries as were accepted by any university of Great Britain Northern Ireland, or the Irish Free State as qualifying for entrance or matriculation. The standard of the additional examination in a subject or subjects of general education should be approximately that required in a subsidiary subject offered for the Higher School Certificate at the specified examinations. The school certificate in England, which could be taken at 16 or under might in certain conditions exempt from university matriculation, but provision was made at the schools for an examination at a higher standard—a Higher School Certificate for boys in later years. The certificate could be obtained either by taking three full subjects or two full subjects and two others at a somewhat less exacting standard. This latter standard might well have been in the minds of the Council as a standard for the additional examinations though the illustration might not be very helpful in Scotland where there was nothing to correspond with the Higher School Certificate system.

This change perhaps the most difficult of all the changes was not being brought forward without due cause. During the last fourteen years English schools had been teaching chemistry and physics to boys who intended to take up medicine, and a pernicious tendency had developed of allowing boys to pass their test in general education at 16—sometimes even earlier—and then setting them to study nothing but the principal medical subjects for the rest of their time at school. What was now suggested was an effort to combat that tendency and to draw the attention of masters and parents to the necessity of continuing the general education of students after they had passed the comparatively low standard of the school certificate. The committee had met in conference the deans of all save three of the London medical schools and they had unanimously agreed that this method could be worked so far as they were concerned.

With regard to dental students the committee advised the Council to recommend that these should be registered in the same manner and under the same conditions as medical students, but that applicants for registration might start their professional study as pupils of a registered dental practitioner instead of at a recognized dental hospital or school.

SUGGESTED POSTPONEMENT OF EFFECTIVE DATE

SIR HENRY BRACKENBURY declared himself unconvinced that the postponement of the operation of the new conditions from October 1 to November 1 1938 was either necessary or desirable. A year ago the Council had prescribed the new curriculum both preliminary and clinical

and had regarded it as a considerable improvement. It should not, therefore, be postponed longer than was fair and necessary to those who had already embarked upon some portion of their medical education. The effective date had already been once postponed in order to give the public and the secondary schools, from which most medical students were recruited, notice during two full school years of the alterations that might be necessary for the guidance of their senior boys and girls in the kind of curriculum they should take while at school or immediately afterwards. That notice had been ample. The only effect of postponing the change for one month would be to enable the authorities of medical schools to train the whole body of medical students who joined in 1938—for nearly all students entered in October—under the old instead of the new curriculum. In fact the recruitment of medical students under the improved conditions would be postponed for a year. The postponement would embarrass the schools themselves, for they might be conducting two different kinds of curriculum simultaneously, according to whether a student registered in October or in November.

MR R J JOHNSTONE also asked the reason for the change. His own faculty, he said, had spent a very strenuous winter session preparing for these alterations, which would not now come about for another year. He suggested that the same effect would be produced by a postponement to January 1 or even October 1, 1939.

MR LEATHES replied that when the new resolutions came into operation they would so far as they dealt with clinical years, affect not only students who entered for November 1, but all students only the conditions of entry after November 1 being affected. The committee had been advised that two years was not enough notice, and had thought it preferable to give what amounted practically to an additional year.

SIR HENRY BRACKENBURY asked whether a student who entered in October, 1938, and therefore under the old conditions, had not a right to claim registration afterwards because he had satisfied the old conditions, though not the new.

SIR ROBERT BOLAM suggested that such a question should be put to the licensing bodies. Sir Henry Brackenbury was not fully aware of the difficulties that beset the officers of medical schools when a new set of regulations was announced. The faculty at his own school had been bombarded by head masters and parents to know whether the pupils who had been under preparation for two or three years could sit in October 1938, under the old regulations or must prepare for the new regulations. To upset the medical curriculum entailed years of work for a licensing body in readjusting its arrangements. The postponement would mean that medical schools could, if they wanted, insist on pupils coming in under the new recommendations but gave them an option to do either. He hoped the Council would not embarrass the public and the medical schools by bringing the new conditions into force in October 1938, and forcing them to deal with many applications for exemption.

MR L P GANGEY said that the difficulties which Sir Robert Bolam had described were not experienced in all schools. His own school was quite ready to adopt the new regulations from the October date. If the change were postponed for a month it would probably cause trouble in the shape of applications from students who had entered under the old regulations to undergo the whole of the old curriculum. If the extra month were granted the Council should recommend that all students who entered during October 1938 should for the remainder of their course come under the new regulations.

DR D J COFFEY spoke in favour of the extra month. The raising of the age to 18 had been unexpected and the granting of this extra month would clear up some ambiguities and embarrassments. Dr J W BIGGER was of opinion that great confusion would be caused and students would go to the schools which offered the most

generous exemptions. If the notice given to the schools was not sufficient the correct procedure would be to hold back the new conditions for a further eleven months, until October, 1939.

After some further discussion a motion by Sir Henry Brackenbury to put the date forward until October, 1938, was lost by 20 votes to 6.

The British Pharmacopoeia

Dr DAVID CAMPBELL, in presenting the report of the Pharmacopoeia Committee, said that the report embodied a statement by the British Pharmacopoeia Commission concerning the scope of the next *Pharmacopoeia*. The Commission had reviewed the monographs of the present work and had made a survey of drugs which had been recently introduced or which were attaining increased use in therapeutics. It had also compiled a list of drugs which, through decreased use or doubtful therapeutic value, were no longer worth inclusion. The lists of proposed omissions and additions had been sent to the appropriate Government Departments and medical bodies, to the Governments of India and of the Dominions, and to officers of the Colonial Medical Service, with requests for criticisms and suggestions. Information had also been exchanged with the United States Pharmacopoeia Committee of Revision. It was proposed to revise the *U.S. Pharmacopoeia* by means of annual supplements, a plan which the Commission would watch with interest.

Public Health Diplomas

Sir GEORGE NEWMAN, chairman of the Public Health Committee, in introducing this report, referred to the new resolutions and rules submitted by the committee for diplomas and degrees in public health. Formerly the rules provided that candidates should produce evidence of having devoted a certain number of hours to the study of specified subjects, but the new rules laid down that a candidate should produce evidence that he had regularly attended a course lasting not less than a stated period. This change would be more convenient to the licensing bodies. The earlier provision that candidates must make twenty-four daily attendances of not less than two hours each at a fever hospital had been deleted as being too difficult to work. Candidates would now be required to show that they had attended for three months on the clinical practice of an approved hospital for infectious diseases. Of the twenty licensing bodies which had studied the draft rules only three had made substantial criticisms. The Royal Army Medical Corps and the Royal Institute of Public Health found difficulty in Rule 2, which provided that the curriculum must extend over a period of not less than twelve calendar months. The committee had felt that the old rules needed to be strengthened to exclude the part-time or somewhat transitory kind of training sometimes known as "night school" education.

Dr H. L. TIDY suggested that in the case of R.A.M.C. candidates this rule might be relaxed.

The revised rules were adopted without dissent. The date on which they are to come into operation is October 1, 1938.

Indian Medical Diplomas

It was reported that the Executive Committee had passed a resolution that holders of diplomas granted by the University of Calcutta on or after October 16, 1936, should be entitled to registration on the Colonial List. This followed a similar resolution passed by the Committee three months previously that holders of diplomas granted by the Punjab University on or after February 25, 1930, should be similarly entitled.

Sir NORMAN WALKER made a reference to the work of the recently established Medical Council of India in maintaining the standard of Indian University examinations.

Restoration After Removal at Own Request

The Council in November 1935, acceded to an application by Jean Braun, L.M.S.S.A. Lond., 1915, to have his name removed from the Register. It was now reported that on April 25, 1937, Mr Braun had applied that his name should be restored, and forwarded a statutory declaration and remittance in accordance with the Standing Orders relating to applications for restoration after non-penal erasure. The Executive Committee now reported to the Council that the Standing Orders did not expressly provide for the restoration to the Register of a name which had been removed at the practitioner's own request although in 1921 the Council was advised that it had an implied discretion to restore such a name and in fact it did actually make such a restoration. The committee recommended that the name of Mr Braun should be restored, and the Council acceded to the request, and afterwards considered *in camera* a report from the Executive Committee stating that counsel had advised that the Standing Orders dealing with the removal of names at the request of the practitioners themselves were *ultra vires* the Medical Acts giving the Council no such power. The committee was satisfied that the Council should recognize that its power to remove names of medical practitioners from the Register was limited to penal erasure under S. 29 and non-penal removal under S. 14 of the Medical Act, 1858.

The Council agreed with the recommendations of the Executive Committee that the Standing Orders relating to erasure at the practitioner's request should be deleted.

Election of Committees

The nominations of the Branch Councils for the following committees were approved:

Education: Sir R. Bolam, Sir F. Buzzard, Dr. Dain, Mr. Edington, Mr. Hey Groves, Dr. Kidd, Mr. Leathers, Dr. Moorhead, Mr. Sinclair, Dr. S. Smith, Dr. Tidy, Dr. Waterston.

Examination: Dr. Brocklehurst, Dr. Campbell, Dr. Coffey, Mr. Eason, Mr. Gamgee, Mr. Johnstone, Sir W. Langdon Brown, Dr. Mathew, Mr. Miles, Sir T. Myles, Dr. Stopford, Dr. Wall.

Public Health: Dr. Bigger, Dr. Bone, Sir H. Brackenbury, Dr. Cathcart, Sir Kaye Le Fleming, Mr. Bishop Harmon, Dr. Kidd, Dr. Magennis, Sir G. Newman, Mr. Ritchie, Mr. Sheen, Dr. S. Smith.

The following were elected to Penal Cases Committee: Sir R. Bolam, Dr. Coffey, Mr. Eason, Mr. Miles.

SIR THOMAS NEILL

It is difficult to think of national health insurance without Sir Thomas Neill, whose death on May 31 at the age of 81 we have to record. When the question of administering this new vast scheme arose in the autumn of 1911, and it was found that it would be quite impossible to launch the scheme without the aid of the great industrial societies, Sir Thomas Neill was called in by Mr. Lloyd George to help Sir Robert Morant in his task. Sir Thomas only held the post of Commissioner for a few short years but in common with others who went through the hurly burly of it all he must have looked back on those years as being the most strenuous and exciting in his career. He was indeed a tower of strength and after leaving the Insurance Commission to become Chairman of the National Amalgamated Approved Societies he continued to work in close and friendly collaboration with all parties concerned with the administration. He was a very friendly and indeed a lovable man whether he was on the same side of the table or not. No conference or important gathering where in particular approved societies and the medical profession have met together has been complete without him. Indeed it is not too much to say that the way in which the societies and the doctors have come more and more together and learned to see each other's point of view is attributable in large measure to Sir Thomas Neill.

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Irish Free State Medical Union (I.M.A. and B.M.A.) 18 Kildare Street Dublin (Telegrams Bacillus Dublin Tel 62550 Dublin)

Diary of Central Meetings

JUNE

- 11 Fri Journal Committee Foods and Drugs (Advertisements) Subcommittee 11.30 a.m.
Journal Board 2 p.m.
Science Committee, Scholarships and Grants Subcommittee, 2.30 p.m.
- 16 Wed Joint Committee of B.M.A. and T.U.C., 11.15 a.m.
Health Services Committee, 2 p.m.
- 18 Fri Science Committee 2 p.m.
- 24 Thurs Insurance Acts Committee 2 p.m.

Annual Meeting, Belfast Over-seas Representatives

Dominions and Colonial representatives, delegates, and members will be warmly welcomed at the Annual Meeting to be held in Belfast in July. All those from over seas who contemplate attending are asked to notify the Secretary B.M.A., Whitla Medical Institute College Square North, Belfast, as soon as possible, saying whether they will be accompanied, and, if they require accommodation, whether they desire private hospitality if such should be available. It would also facilitate matters if they would state the dates of arrival at and departure from Belfast.

Annual Dinner and Dance

The demand for seats at the Annual Dinner this year has been such that the Dinner Committee was faced with all the seats being booked on June 1. This function has proved to be so attractive in this year's programme that for several weeks past every post has brought applications from all over England, Scotland, Wales, and Ireland. Additional tables have however been added this week, bringing the total number of seats available to 1300. By the time this notice appears most of those additional seats will probably have been booked and the committee therefore proposes to make a waiting list from which vacancies, due to cancellations or other causes will be filled in order.

It has been officially announced that the Governor of Northern Ireland (the Duke of Abercorn) will be present at the dinner.

Mr S Coulson

It will be noted from the Proceedings of Council that Mr S Coulson chief clerk of the medical department a much valued member of the staff of the Association has been retired for reasons of ill health. Mr Coulson has been in the service of the Association for thirty years and is well known to many members of the Representative Body and of the Panel Conference of Local Medical and Panel Committees. He acted as clerk to the Council from 1919 and to the Insurance Acts Committee from its inception in 1912. Of Mr Coulson's many first rate qualities perhaps the most notable are a remarkable memory and an extraordinarily quick grasp of essentials. His knowledge of the Association's activities was equalled by that

of few others, and his assistance in the work of the Insurance Acts Committee was invaluable because of his unrivalled knowledge of the intricacies of the Medical Benefit Regulations under the National Health Insurance Acts. In Mr Coulson's enforced retirement the Association loses a most loyal servant, and he carries with him the best wishes of all who knew him.

Branch and Division Meetings to be Held

ABERDEEN BRANCH—At Glen O Dee Hotel Banchory Wednesday June 16 3.45 p.m. Annual meeting. Consideration of Annual Report of Council election of officers, etc.

HERTFORDSHIRE BRANCH EAST HERTFORDSHIRE DIVISION—At Canons Hotel Ware, Thursday, June 17, 8 p.m. Chairman's inaugural address.

KENT BRANCH—At City of London Mental Hospital Stone House, Dartford Wednesday June 16 2.45 p.m. Annual meeting. Election of officers. Presidential Address by Dr C M Ockwell. Pedestals. Preceded by a luncheon at 1 p.m. and followed by a garden party at 3.30 p.m.

LANCASHIRE AND CHESHIRE BRANCH—At Newton le Willows Thursday, June 24 Annual meeting.

LANCASHIRE AND CHESHIRE BRANCH BLACKBURN DIVISION—At Blackburn Town Hall Wednesday and Thursday, June 16 and 17, 8.45 p.m. Lectures on air raid precautions by Dr L T Challenger. Home Office Lecturer for the Liverpool Centre.

METROPOLITAN COUNTIES BRANCH—At B.M.A. House Tavistock Square, W.C. Friday July 2 4 p.m. Eighty fifth annual general meeting. Agenda: Report of Branch Council and financial statement report of representatives of Branch on Central Council report as to election of officers for 1937-8 presidential address by Dr William Paterson.

METROPOLITAN COUNTIES BRANCH CHELSEA DIVISION—Thursday, June 17 Excursion to Messrs Cadbury Bros.

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital Kingsland Road E. Friday June 11 4.30 p.m. Clinical Meeting.

METROPOLITAN COUNTIES BRANCH HAMPSTEAD DIVISION—At Hampstead General Hospital Wednesday June 16 8 p.m. Annual meeting. Election of officers etc.

METROPOLITAN COUNTIES BRANCH KENSINGTON DIVISION—At British Post Graduate Medical School, Ducane Road W. Monday June 14 8.30 p.m. Lecture on air raid precautions by Colonel J. Mackenzie, Home Office Lecturer for the London Centre. At Kensington Town Hall, Friday June 25 8.45 p.m. Dr Henry Wilson. The Approach to the Neurotic.

METROPOLITAN COUNTIES BRANCH SOUTH WEST ESSEX DIVISION—At Frascati's Restaurant Oxford Street W. Thursday, June 24, 6.45 p.m. Annual general meeting to be followed by dinner.

METROPOLITAN COUNTIES BRANCH WEST MIDDLESEX DIVISION—Tuesday June 29 9 p.m. Meeting to instruct representative at the Annual Representative Meeting.

METROPOLITAN COUNTIES BRANCH WILLESDEN DIVISION—Thursday June 17 Afternoon visit to a factory of medical interest.

SOUTHERN BRANCH WINCHESTER DIVISION—At Alton Battery Works Alton Thursday June 17 3 p.m. Dr R E Lane. Plumbism and its Prevention in Industry. To be followed by the annual meeting election of officers etc.

SOUTH WALES AND MONMOUTHSHIRE BRANCH SWANSEA DIVISION—At Swansea General Hospital Thursday June 17, 8.15 p.m. Annual meeting. Election of officers etc.

STIRLING BRANCH—At Dunblane Hotel Hydro Wednesday, June 16 4 p.m. Annual meeting and tea.

SUSSEX BRANCH—At Grand Hotel, Brighton Wednesday June 23 2.15 p.m. Consideration of Annual Report of Council election of officers etc.

SUSSEX BRANCH BRIGHTON DIVISION—At the Lido Hove Friday June 18 8.30 p.m. Resolutions for the Annual Representative Meeting.

WORCESTERSHIRE AND HEREFORDSHIRE BRANCH—At Hereford Town Hall Thursday June 17 4.15 p.m. Civic Reception by the Mayor of Hereford. 5 p.m. Annual meeting. Election of officers etc. Preceded by tour round the Cathedral from 3 p.m.

In the report of the proceedings at the Court of Inquiry into the insurance capitation fee which appeared in the Supplement of June 5 Drs J A Brown and C F T Scott were mentioned as among those who represented the Insurance Acts Committee in the presentation of its case. Although Drs Brown and Scott were present as interested observers during the proceedings they took no part in the actual presentation of the Insurance Acts Committee's case.

ANNUAL REPRESENTATIVE MEETING, BELFAST, 1937

The Annual Representative Meeting of the British Medical Association will be held in the Assembly Hall, Assembly Buildings, Fisherwick Place, Belfast, on Friday, Saturday, Monday, and Tuesday, July 16, 17, 19, and 20, 1937

RESOLUTIONS BY DIVISIONS AND BRANCHES FOR THE REPRESENTATIVE BODY

DENTAL BENEFIT REGULATIONS

Motion BY SOUTHPORT LANARSHIRE, AND NEWCASTLE-UPON-TYNE That (with reference to para 83 of Annual Report of Council) the Representative Body disapproves of the adoption of a sliding scale for the administration of general anaesthetics for the removal of teeth and that the policy of the Association as previously expressed be adhered to

MEDICAL REGISTRATION

Motion BY NEWCASTLE-UPON-TYNE That the Representative Body urges the Council of the British Medical Association to suggest to the General Medical Council that all persons after passing the qualifying examination should complete six months in an approved practice or dispensary before being registered to practise medicine or surgery, or medicine and surgery

FINANCE

Motion BY NEWCASTLE-UPON-TYNE That (with reference to para 23 of Annual Report of Council) the Representative Body views with some misgiving the steadily increasing expenditure of the British Medical Association and trusts that every endeavour will be made to limit this expenditure so that, at some future date the subscription could be lowered from three guineas to its original amount of two guineas, thereby ensuring an increase in membership and a consequent strengthening of the Association's influence on behalf of the profession

THE GENERAL PRACTITIONER AND MIDWIFERY

Motion BY NEWCASTLE-UPON-TYNE That (with reference to the Addendum to the Annual Report of Council relating to maternal mortality Supplement May 8 1937, pp 269-71) the Representative Body views with growing anxiety the tendency to deprive the general practitioner of the practice of midwifery and its associated ante natal work

GENERAL PRACTITIONERS COMMITTEE

Motion BY MANCHESTER That a Standing Committee to be known as the 'General Practitioners Committee' be formed the members of the Committee to be confined to those members of the Association who are predominantly engaged in general practice and whose duties and powers would be to consider matters specially affecting general practitioners

HEARING AIDS

Motion BY EAST KENT That the Council be instructed to inquire into the question of hearing aids with particular reference to the manner in which suitable types should be supplied to deaf persons

DISPENSARY MEDICAL OFFICERS IN NORTHERN IRELAND

Motion BY BELFAST That the Representative Body is of the opinion that the present regulations in Northern Ireland regarding the services of dispensary medical officers especially in the certification of mental patients and remuneration for assistance in difficult maternity cases require (drastic) alteration

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses gynaeology at Chelsea Hospital for Women June 14 to 26 neurology for M R C P candidates at West End Hospital for Nervous Diseases June 21 to July 3 tuberculosis for M R C P candidates at Preston Hall Maidstone July 3 proctology at St Mark's Hospital July 5 to 10 dermatology at Hospital for Diseases of the Skin Blackfriars S.E., July 13 to 24 urology at All Saints Hospital July 12 to 31 Week end courses will be given as follows: general surgery at Prince of Wales's General Hospital June 19 and 20 heart and lungs at Victoria Park Hospital July 3 and 4 medicine and surgery at Miller General Hospital July 10 and 11 Full particulars of courses can be obtained from the Fellowship of Medicine 1 Wimpole Street W Courses are open only to members of the Fellowship

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

General Meeting of Fellows Tues 5.30 p.m. Removal from Roll Ballot for Election to the Fellowship
Section of Dermatology—Thurs, 5 p.m. Cases at 4 p.m. Cases by Dr Elizabeth Hunt Rodent Ulcer Dr H Semon Polikiodermis Case for Diagnosis—? Sarcoid simulating Rhinophyma Other cases will be shown
Section of Obstetrics and Gynaecology—Fri 8 p.m. Annual General Meeting. Election of Officers and Council for 1937-8 Short Paper by Dame Louise McIlroy Results of Radium Treatment on Carcinoma of the Uterus and Uterine Haemorrhage Cinematograph Film by Mr A. C. Palmer Treatment of the Prolapse Syndrome and Reconstruction of the Pelvic Diaphragm and Vaginal Hysterectomy in One Operation
Sections of Laryngology and Otolaryngology—Combined Summer Meeting at Norfolk and Norwich Hospital Fri 9.30 a.m. Discussion Orbital Cellulitis due to Sinus Infection and its Treatment Papers will be read by Mr E. D. Davis Dr S. H. Mygind (Copenhagen) Mr G. H. Howells and Mr F. C. W. Capps Papers by Dr J. H. Ebbs Early Bronchiectasis in Children and its Relation to Ear, Nose and Throat Diseases of Children Dr Branford Morgan Relation of the Ear Nose and Throat to the Diseases of Children Mr F. C. Ormerod Tuberculous Ulcerations of the Mouth and Pharynx. 2.30 p.m. Demonstration and Discussion of Cases 7.30 p.m. Annual Dinner at Royal Hotel Norwich Sat. 9.30 a.m. Papers by Dr S. H. Mygind Problems of Aural Medicine, Dr Phyllis M. T. Kerridge, Hearing and Speech in Deaf Children Mr Hamblen Thomas Physical Aspects of Tinnitus Dr H. Sourdis (Nantes) Present State of the Surgical Treatment of Otosclerosis
Section of Disease in Children—Provincial Meeting at Manchester Sat 1.30 p.m. Visit to Royal Manchester Children's Hospital Pendlebury Tour of new Zachary Merton Convalescent Home and Isolation Block 2.15 p.m. Demonstration of Cases in the wards 3.45 p.m. Tea at Duchess of York Hospital for Babies 4.15 p.m. Demonstration of Cases

ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE—At 26 Portland Place W Thurs 8.15 p.m. Annual General Meeting. Induction of new President Colonel S. P. James F.R.S. and presentation of Chalmers Gold Medal to Prof. R. M. Gordon of Sierra Leone 8.30 p.m. Papers by Mr Henry Loy Blackwater Fever in Macedonia and Dr N. Hamilton Fairley and Mr R. J. Bromfield Pseudo-methaemoglobin in Blackwater Fever and its Clinical Significance Preceded by demonstration at 7.45 p.m.

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road, W.—Daily 10 a.m. to 4 p.m. Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations Tues 4.30 p.m. Dr D. Hunter Occupational Diseases Wed 12 noon Clinical and Pathological Conference (Medical) 2 p.m. Dr J. Gray Cerebral Haemorrhage and Softening 3 p.m. Clinical and Pathological Conference (Surgical) 4.15 p.m. Prof. Major Greenwood Experimental Epidemiology Thurs 2.15 p.m. Dr Duncan White Radiological Demonstration 3 p.m. Operative Obstetrics 3.30 p.m. Mr A. K. Henry Demonstrations on the Cadaver of Surgical Exposures Fri 1 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology)

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION 1 Wimpole Street W.—Chelsea Hospital for Women Arthur Street S.W. All-day Course in Gynaecology Bromley Hospital S.W. Two weekly 5 p.m. M.R.C.P. Course in C.P. Diseases City of London Hospital Victoria Park E. Wed 5 p.m. 6 p.m. M.R.C.P. Course in Heart and Lung Diseases National Temperance Hospital Hamstead Road N.W. Tues

MANCHESTER ROYAL MANCHESTER CHILDREN'S HOSPITAL—Full time Senior M.O. (non resident) Salary £300 p.a.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES—H.S. Salary £150 p.a.

MANSFIELD AND DISTRICT GENERAL HOSPITAL—H.S. (male) Salary £150 p.a.

MARIE CURIE HOSPITAL Fitzjohns Avenue, N.W.—(1) Assistant Director (2) R.M.O. Salary £100 p.a. Females

MENBOROUGH MONTAGU HOSPITAL—R.H.S. (female) Salary £120 p.a.

MIDDLESBROUGH NORTH ORMESBY HOSPITAL—H.S. (male unmarried) Salary £135 p.a.

MIDDLESBROUGH NORTH RIDING INFIRMARY—(1) Senior H.S. (2) Third H.S. Males unmarried Salaries £175 p.a. and £140 p.a.

MIDDLESEX COUNTY COUNCIL—(1) A.M.O. and (2) J.R.A.M.O. for North Middlesex County Hospital Edmonton. (3) District M.O. and Public Vaccinator for Hampton Wick Salaries £350 p.a., £250 p.a. and £50 p.a. respectively

NEWCASTLE UPON TYNE CITY AND COUNTY—(1) Two H.S.s (2) H.P. Salaries £150 p.a. each

NEWCASTLE UPON TYNE ROYAL VICTORIA INFIRMARY—Registrar to the Throat and Ear Department Salary £100 p.a.

NORTHAMPTON GENERAL HOSPITAL—H.S. (male) Salary £150 p.a.

NORTHAMPTONSHIRE COUNTY COUNCIL—A.R.M.O. for Rushden House Sanatorium Salary £300 p.a.

NOTTINGHAM GENERAL HOSPITAL—R.C.O. (male) Salary £150 p.a.

OLDHAM COUNTY BOROUGH—R.A.M.O. (unmarried) for the Municipal Hospital Salary £200 p.a.

PADDINGTON GREEN CHILDREN'S HOSPITAL W—H.S. (male unmarried) Salary £150 p.a.

PLYMOUTH CITY—Deputy Medical Superintendent (male) for the City Hospital Salary £450 p.a.

PLYMOUTH PRINCE OF WALES'S HOSPITAL Greenbank Road—H.S. Salary £120 p.a.

PONTEFRAC T GENERAL INFIRMARY—J.R.M.O. (male, unmarried) Salary £150 p.a.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—H.S. Salary £150 p.a.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St. Quinins Avenue W—H.S. (male) Salary £120 £150 p.a.

PUTNEY HOSPITAL Lower Common, S.W.—J.M.O. (male) Salary £100 p.a.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL Marylebone Road N.W.—R.M.O. for the Isolation Hospital Ravenscourt Square W Salary £200 p.a.

RAINFHILL COUNTY MENTAL HOSPITAL—(1) Second A.M.O. (2) A.M.O. (female) Salaries £650 p.a. and £7 7s per week respectively

READING ROYAL BERKSHIRE HOSPITAL—C.O. (male) Salary £150 p.a.

RICHMOND ROYAL HOSPITAL—J.H.S. (male) Salary £100 p.a.

ROTHERHAM HOSPITAL—H.S. to the Ophthalmic and Ear Nose and Throat Departments and to administer anaesthetics Salary £120 p.a.

ROYAL DENTAL HOSPITAL OF LONDON Leicester Square W.C.—(1) Two Hon. Anaesthetists (2) Six Anaesthetists (3) Two Part time House Anaesthetists (non resident) Honorariums 10s. 6d per session

ST. HELENS COUNTY BOROUGH—Assistant M.O.H. (female) Salaries £500-£25-£700 p.a.

ST. PANCRA'S METROPOLITAN BOROUGH—A.M.O. for the Ante natal Clinic Fee £1 11s 6d per session

ST. PAUL'S HOSPITAL FOR UROLOGICAL AND SKIN DISEASES Endell Street W.C.—H.S. (male) Salary £100 p.a.

SALFORD CITY—(1) A.R.M.O. for the Hosp. Hospital (2) J.A.R.M.O. for the Infectious Disease Hospital Males Salaries £200 p.a. each

SALISBURY GENERAL INFIRMARY—(1) R.M.O. (male) Salaries £250 p.a. (2) H.P. (male unmarried) Salary £125 p.a.

SHIFFIELD CHILDREN'S HOSPITAL—H.S. (male unmarried) Salary £100 p.a.

SOUTH EASTERN HOSPITAL FOR CHILDREN Sidenham S.E.—(1) Hon. Assistant P. (2) Two R.M.O.s Honorariums £100 p.a. each

SOUTHAMPTON COUNTY BOROUGH—(1) Assistant School Dentist (2) Resident Obstetric M.O. (male unmarried) for the Borough General Hospital Salaries £450 p.a. and £350-£25-£450 p.a. respectively

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL—(1) C.O. (2) Resident Anaesthetist and H.S. to Ear Nose and Throat Department Males unmarried Salaries £150 p.a.

SOUTHEND-ON-SEA GENERAL HOSPITAL—Resident Obstetric Officer (male) Salary £100 p.a.

SOUTHERN RHODESIA MEDICAL SERVICE—Government M.O. (male) Salary £600-£25-£750 p.a.

STAMFORD RUTLAND AND GENERAL INFIRMARY—H.S. Salary £250 p.a.

STEPNEY METROPOLITAN BOROUGH—Assistant Tuberculosis Officer Salary £600-£25-£700 p.a.

STOKE-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.

STOKE-ON-TRENT LONGTON HOSPITAL—H.S. Salary £160

STOKE-ON-TRENT NORTH STAFFORDSHIRE ROYAL INFIRMARY—H.S. for the Aural and Ophthalmic Department Salary £150 p.a.

STONE CITY OF LONDON MENTAL HOSPITAL—A.M.O. (male unmarried) Salary £400-£25-£500 p.a.

SUNDERLAND CHILDREN'S HOSPITAL—(1) H.P. (2) H.S. Females Salaries £120 p.a. each

SUNDERLAND ROYAL INFIRMARY—H.S. (male) Salary £120 p.a.

SURREY COUNTY COUNCIL—J.A.M.O.s (males, unmarried) for the Surrey County Mental Hospital Service Salaries £350-£25-£450 p.a. each

SWINDON AND NORTH WILTS VICTORIA HOSPITAL—H.S. (male unmarried) Salary £125 p.a.

TILBURY HOSPITAL—H.S. (male) Salary £140 p.a.

TUNBRIDGE WELLS KENT AND SUSSEX HOSPITAL—H.S. and C.O. Salary £150 p.a.

WAKEFIELD CLAYTON HOSPITAL—(1) Senior H.S. (2) Fourth H.S. Males Salaries £250 p.a. and £150 p.a. respectively

WATFORD AND DISTRICT PEACE MEMORIAL HOSPITAL—H.S. (female) Salary £150 p.a.

WARWICK WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS—J.A.M.O. for King Edward VII Memorial Sanatorium Herford Hill Salary £250 p.a.

WEIR HOSPITAL Grove Road, Balham, S.W.—J.R.M.O. (male unmarried) Salary £150 p.a.

WEST RIDING OF YORKSHIRE MENTAL HOSPITALS BOARD—A.M.O. for Merton Mental Hospital Salary £350-£25-£450 p.a.

WESTMINSTER HOSPITAL Broad Sanctuary S.W.—Dental S.

WESTMINSTER HOSPITAL ANNEXE Fitzjohns Avenue N.W.—Locumtenent

WILLESSEN GENERAL HOSPITAL Harlesden Road N.W.—C.O. (unmarried) Salary £100 p.a.

WOLVERHAMPTON ROYAL HOSPITAL—Hon. Assistant S. and Hon. Assistant Gynaecologist

WORCESTER ROYAL INFIRMARY—H.S. to the Gynaecological Department Salary £140 p.a.

YORK COUNTY HOSPITAL—H.P. Salary £150 p.a.

CERTIFYING FACTORY SURGEONS—The following vacant appointments are announced Hanley (Staffordshire) Tunbridge Wells (Kent) Wool (Dorsetshire) Applications to the Chief Inspector of Factories Home Office Whitehall S.W.1 by June 22

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 48 49 50 51 52 53 54 55 58 59 and 60 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 56 and 57

APPOINTMENTS

Craig Jenny D., M.B. Ch.B. Assistant School Medical Officer Public Health Department Huddersfield

NEWCASTLE UPON TYNE ROYAL VICTORIA INFIRMARY—Honorary Assistant Surgeon J. H. Saint M.D., M.S. F.R.C.S. F.A.C.S. Honorary Assistant to the Throat and Ear Department F. McGuckin M.D. B.S., F.R.C.S.

CERTIFYING FACTORY SURGEONS—J. B. Donald M.B. Ch.B., for the Strangeton District (Wigtownshire) W. E. Ivers L.M.S.A., for the Youlgreave District (Derbyshire) Andrew Law M.B., Ch.B. for the Kilbride District (Dumfries) H. M. Mour M.D. for the Currie District (Midlothian) Edith E. Stephens M.D. for the Edgware District (Middlesex) A. E. Struthers M.B. Ch.B., for the Paisley District (Renfrewshire) G. O. Taylor M.B. Ch.B. for the Dorchester District (Dorsetshire)

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s. which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

BIRTH

Forsyth—At Hong Kong on May 15 to Dorothy wife of Surgeon Lieutenant Commander A. N. Forsyth Royal Navy 3 daughter

DEATH

SHIRLEY WEBB—C. H. Shirley Webb M.S. F.R.C.S. died at 11 Addeney Hospital on June 1 1937

CONFERENCE ON MATERNITY AND CHILD WELFARE

The seventh English speaking Conference on Maternity and Child Welfare was held at the British Medical Association House, London, from June 1 to 3. Over 600 delegates were appointed, many of them from distant parts of the Empire and from the American continent and among those who presided or took part were Dr R E Wodehouse, Deputy Minister of the Department of Pensions and National Health, Canada, the Hon G F Gaha, Minister of Health of Tasmania, and Dame Enid Lyons, wife of the Prime Minister of Australia.

Review of Progress by Minister of Health

The conference was opened by Sir KINGSLEY WOOD the Minister of Health, who gave a review of recent progress in the field of maternal and infant care. The rate of maternal mortality in this country had not been specially high, fluctuating around four deaths per 1,000 births, and the number of deaths due to child bearing was less than 8 per cent of all deaths of women of child bearing age. The disappointing feature was, however, that notwithstanding much intensive effort, the death rate had not been substantially lowered, and a proportion of the maternal deaths were undoubtedly preventable. The Ministry was watching with close attention the provisions for the fuller clinical training of medical students in obstetrics and the new provisions for the training of midwives also the improvements in the science and technique of midwifery. The number of ante natal clinics had increased from 1,253 in 1931 to 1,672 in 1936 and the number of expectant mothers attending these clinics last year was 298,000 representing just over 48 per cent of the total of notified births. With a further number of women examined by local practitioners elsewhere than at the clinics but under arrangements made by local authorities the proportion was brought up to over 50 per cent. The number of beds subsidized in 1936 by local authorities was 8,626, comparing with 7,123 in 1931, and the number of women admitted to this accommodation had increased from 97,860 to 149,547. Many inpatient maternity units, particularly in hospitals taken over by county and county borough councils had been modernized and extended. The Minister then went on to make the gratifying announcement that the number of maternal deaths per 1,000 live births in 1936 was 3.81 comparing with 4.11 in 1935, the lowest rate recorded since 1922.

The Midwives Act

All these measures said Sir Kingsley Wood, had received a powerful reinforcement from the new Midwives Act. That Act enabled the midwifery service to be provided in one or both of two ways by the direct employment of salaried midwives by the local supervising authority or by arrangement with voluntary associations. The greater number of county councils were making arrangements with the county and district nursing associations while the authorities in urban areas were more commonly providing for the direct employment of midwives or adopting a combination of the two methods.

Finally Sir Kingsley Wood referred to the special investigations into maternal mortality carried out by a number of the Ministry's medical officers together with Sir Conway Berkeley during the last two years. The inquiry had been made in six administrative areas in 1935 and 1936 while maternal mortality had been above the average. The report had disclosed many interesting facts.

All this was to be that no elaborate statistics were available on the incidence of abortion the investigators had been able to get on to the practice of artificial abortion which was increasing and was on a scale which was a serious maternal danger.

Infant mortality continued at a low level. During the last three years—1934-6—the rate for the first time had been under sixty per thousand births. This compared with rates of seventy and upwards ten years ago.

Parents and Psychology

Only the most cursory review of outstanding discussions in a three-day conference can be given. Dr ERIC PRITCHARD spoke on the education of parents, and urged that the teaching of mothercraft should have in view the protection of infants from the risk of infection. Dr URSULA COX stressed the value of group teaching of parents, pointing out that a given subject could be discussed in much more detail and with much more emphasis and assertion in a group than with a single individual. Dr STELLA CHURCHILL protested against the clock as too rigid a dictator in infant welfare. Mothers were taught to say, 'It is not yet feeding time, the baby must be kept screaming for another half-hour,' or they must lie awake in the early morning and listen to its crying until the clock struck six. The pendulum had swung too far from the time when infants were fed every two hours whether they wanted it or not.

Dr J A HADFIELD gave what amounted to a lecture on preventive psychology. He described the psychological development of the young child at different ages, and insisted that every age should have respect paid to it. The self-assertiveness of age 2 would develop into the will power of age 4. The parent who forced the child of 5 to be sociable might be attempting something unnatural in view of the fact that the child was then developing its ego. He spoke of the importance of investigating the terrors of young children, the fundamental cause was the deprivation of love and affection. He did not agree with Freud as to the sexual basis, but it was not to be doubted that protective affection was the primary need of every child, and if deprived it developed fears and anxieties. Neurotic disorders might be traced back to the first three or four years of life.

Dr MARGARET LOWENFELD suggested that there be included in the ordinary training of all nurses midwives and children's doctors lectures devoted to the explanation of the psychological aspects of maternal and infant care and that all ante natal and post natal nurses and midwives should have lectures on the emotional aspect of pregnancy, labour, and lactation.

Nutritional Problems

A discussion on nutritional problems in relation to mother and child in which the economic question would obtrude itself in spite of the earnest efforts of the chairman Dr Wodehouse the Canadian Minister to keep it out) was opened by Dr ROBERT McCANCE who confessed that despite the work done on the subject during the last twenty years there was still much obscurity. But the civilized world now had at its disposal a good deal of knowledge about nutrition sufficient to enable it to be said that millions of human beings certainly at some periods of their lives, were not adequately nourished and enough theoretical knowledge was also available to formulate a proper diet. Dr R C JEWESBURY dealt with nutrition during pregnancy and lactation and pleaded for a wider understanding of dietetics and food values in order to minimize the nutritional problems in relation to parent and infant.

The subject of preventive work for cripples and invalid children was developed by Dr BERNARD SCHLESINGER who gave an account of experiences gained during the last ten years at the Children's Heart Hospital, West Wickham, also a cheerful outline of the results of a follow up system among rheumatic children. Mr E S EVANS discussed problems requiring further attention in the prevention of crippling. These included the provision of clean safe milk, the exhibition of modern nursery schools and play centres and the general improvement of

social and hygienic conditions. A session was devoted to maternity and child welfare in backward regions, and gave an opportunity for an exchange of experiences by visitors from different parts of the Colonial Empire. Dr MARY BLACKLOCK described the conditions of maternity and child welfare work in Sierra Leone, and Dr MABEL BRODIE in Malaya.

This was the seventh English-speaking conference, and Dr G F MCCLEARY, chairman of the Association of Maternity and Child Welfare Centres, who presided over the first session, recalled the origin of the movement. It sprang from the Congrès Internationale des Gouttes de Lait held in Paris in 1905 the first international gathering devoted to maternity and child welfare, and attended by representatives of three British local authorities—Battersea, Glasgow, and Huddersfield. These representatives were so much impressed with the enthusiasm with which problems of infant welfare were being tackled in France that they determined to initiate a conference in London, and under the presidency of Mr John Burns, then President of the Local Government Board, it was held in the following year. At the third national conference in 1912 the National Association for the Prevention of Infant Mortality was formed, and this has since organized twenty national conferences and six conferences of English-speaking peoples.

REHABILITATION AFTER ACCIDENTS

REPORT OF COMMITTEE

In April, 1936, an inter-departmental committee was set up by the Home Secretary, the Minister of Health, and the Secretary of State for Scotland to inquire into the arrangements made in this country for the restoration of the working capacity of persons injured by accidents. The decision to appoint this committee was taken after consideration of the report issued by the British Medical Association early in 1935,¹ which made suggestions for improving the organization of present arrangements for the treatment of fractures and drew attention to the importance of the industrial aspects of this question. The committee's terms of reference are

To inquire into the arrangements at present in operation with a view to the restoration of the working capacity of persons injured by accidents and to report as to what improvements or developments are desirable and what steps are expedient to give effect thereto regard being had to the recommendations made in the report issued by the British Medical Association in February 1935 on fractures.

The medical members of the committee of which Sir Malcolm Delevingne is chairman, are Dr Muriel Bywaters, Mr W A Cochrane, Dr T Ferguson, Mr E W Hey Groves, Dr J F E Prideaux, Mr H S Souttar and Mr A C T Woodward.

Treatment of Fractures

It was apparent from the B.M.A. report and from information available from other sources that the question of the treatment of fractures was of special urgency, and for this reason with the approval of the Ministry of Health the committee decided to deal first with this part of the subject.

The committee issued an interim report at the end of last week. Introducing a survey of the present position it says

The recommendations in the report issued by the British Medical Association laid down certain principles both of

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Interim Report of the Inter-Departmental Committee on the Rehabilitation of Persons Injured by Accidents 1937 H.M. Stationery Office (4d.)

organization and of treatment. The principles of organization may be summarized as concentration of cases in one department under a single control, continuity of treatment and supervision by that department until rehabilitation—that is restoration to working capacity—has been effected to the fullest possible extent and a system of records of cases which will permit the history of each case to be followed from start to finish and the final results ascertained. The principles of treatment aim at securing exact reduction of the fracture, fixation in correct position and immobilization of the broken part, and active movement from the earliest possible moment of the uninjured parts of the limb to prevent wastage of muscles and stiffness of joints. We were given to understand that these general principles were accepted by the Government Departments concerned, and that the object in view was the provision throughout the country of fracture services which would place within the reach of every injured person the benefits of the improved methods of treatment, with the threefold result of mitigating suffering, reducing the period of disablement and the loss of working and earning power and securing wherever possible complete restoration of working capacity.

Organization of Fracture Clinics

The report outlines a scheme for a "model clinic" for the assistance of those engaged in the consideration of such proposals. The importance of unified control and the constant supervision and direction of all cases by a visiting surgeon specially appointed is emphasized. In view of the onerous nature of his duties it is recommended that the surgeon in-charge should have an honorarium.

The committee concludes that the provision of a net work of fracture services covering the whole country will call for careful planning to meet local needs and conditions. The co-operation of local authorities, hospitals, the medical profession, and of employers and workers organizations will be necessary, and in some areas is already being secured.

The report records that the number of fracture cases treated annually in the hospitals of England, Wales, and Scotland is well over 200,000. The committee received information from 825 hospitals in the three countries of which 724 were voluntary and 101 municipal. In fifty-nine of these there are special fracture departments under a single control, ensuring continuity of treatment until the patient is restored to work. These fifty-nine hospitals treat about 50,000 cases annually. The establishment of new fracture services and clinics, the committee understands, is also being considered in many quarters.

Circular to Local Authorities

Copies of the committee's interim report have been forwarded to county councils and county borough councils in England from the Ministry of Health with a letter (Circular 1632). This points out that the main purpose of the report is to make known the lines on which fracture clinics should be organized, equipped and staffed, and the relations between these clinics and the cottage hospitals etc. which serve outlying areas. The Minister trusts that if any council proposes to establish a clinic for the treatment of fractures under either the Public Health or the Poor Law Acts reference will be made to the detailed scheme advised by the committee, which is ready to assist in the consideration of any difficulties that may be presented in the application of the scheme by local circumstances.

D. Sibila (*Polichinico Sez. prat.* April 19, 1937 p. 772) from observations on forty cases of relapsing fever among the coloured troops in Addis Ababa came to the conclusion that the only type of spirochaete found among them was identical with Obermeier's spirillum in its morphological features, mode of transmission by lice and pathogenicity for animals.

Reports of Societies

BEJEL—THE SYPHILIS OF BEDOUIN CHILDREN

At a meeting of the Royal Society of Tropical Medicine and Hygiene on May 20, with the president, Sir ARTHUR BAGSHAWE in the chair, a paper on bejel—the syphilis of Bedouin children—was read by Dr ELLIS H HUDSON

Dr Hudson said that bejel was the Arab name of a spirochaetal disease found among the semi nomad villagers of the Middle Euphrates, it had also been recognized on the Lower Euphrates and along the Tigris and among the nomad Bedouins of the Syrian Desert. The bejel type of syphilis—operating under the epidemiological triad of widespread community infection, childhood acquisition, and general lack of treatment—was present in many other regions of the world. A thorough study of this clinical entity, however, had hitherto been handicapped by inevitable confusion with either venereally acquired syphilis or yaws, or with both.

The location of the Middle Euphrates on the thirty-fifth degree of latitude north—far from the accepted endemic regions of yaws—the remarkable isolation of this region and the absence of sexual promiscuity and venereal disease among the Bedouin villagers, had presented an opportunity for the study of bejel. The essential feature which distinguished it from venereally acquired syphilis was that bejel was usually contracted in childhood. Children of the village communities constituted the reservoir and the source of contagion of the disease. 60 per cent of the adults had acquired it in childhood and a majority of the remainder contracted it from children, often their own later in life. In a dirty, careless, poorly clad, closely huddled and untreated population the facilities for transfer of the spirochaete by non sexual contacts were innumerable, especially among the children. Less than 1 per cent of the adults acquired the disease through sexual intercourse, 75 per cent of the general adult population stated they had had bejel, and about 75 per cent had positive serological reactions. Surveys showed that 90 per cent of the adults were affected. That bejel was a treponematoses was established by the character of the early and late lesions, the phenomenon of relapse, the quality of latency, the uniform presence of a spirochaete indistinguishable from *Treponema pallidum* the positive precipitation and complement fixation reactions, and the favourable response to antispirechaetal drugs.

Cure of the individual patient was not a practical objective in bejel. The aim should rather be to eliminate the disease from the community by preventing the development of new cases and this could be accomplished by sealing up the infection already present. This objective could be secured by the use of bismuth without risk to the patient and in a time schedule adapted to the temperament of the primitive patient. Bismuth was less toxic and more effective than mercury. It was more suitable to the conditions of bejel than the arsenicals and easier of administration, less hazardous to the patient, and much cheaper. Bejel resembled yaws in non venereal childhood acquisition, community wide dissemination, lack of diagnostic value of the patient's own statement regarding infection, absence of chancre immunity, multiplicity of the skin lesions, predilection for the skin and the bones, relative escape of the eyes, the cardiovascular system, the central nervous system and the viscera, absence of constitutional disturbances congenital transmission, and the failure of prophylactic failure to produce immunity and sterilization and in many families and villages and the presence of congenital yaws, articular rheumatism and other degenerative changes, both bejel and yaws being a part of the same disease entity. The only difference between bejel and yaws was the age of acquisition and the fact that bejel was the

drug of choice. On the other hand, bejel resembled syphilis in its constant involvement of the mucous membrane, in the complication of alopecia in many of its general pathological aspects, and in its extra-tropical geographical location. In general, bejel seemed to occupy an intermediate position between yaws and syphilis and a clear-cut differential point was lacking. The view was defensible that the three forms of treponematoses had an identical aetiological basis and that their differences might be explained on epidemiological grounds if the influence of all environmental factors were known. To assume that bejel was yaws would obviously be of no help in this general problem, and it might be noted that physicians in the bejel region had generally assumed that it was the acquired syphilis of childhood.

Bejel had the character of an ancient disease, and probably presented a contemporary picture of syphilis as it existed in ancient times. The search in ancient medical literature for references to syphilis as a venereally acquired disease might therefore be aside from the point. Though 90 per cent of the adults of the Bedouin village were syphilitic, they did not have venereal histories or lesions, nor the visceral pathology associated with venereally acquired syphilis. Possibly references to a childhood disease resembling bejel might be found in ancient medical writings. In bejel the treponema was allowed to go its own way, unrestrained by human intervention. From the biological standpoint bejel was syphilis in its 'lowest terms,' the archetype of this treponematoses. That syphilis had ceased to be a childhood disease and assumed a venereal character was not due to any tropism of the spirochaete towards the genitalia but to the delimitation of its activities to a narrow field of bodily contact by the environmental conditions of civilized life. The clinical picture and the pathology of venereally acquired syphilis were related to the epidemiological fact that it was linked with sexual intercourse. The contribution of bejel to the knowledge of syphilis was twofold. It gave a clear picture of syphilis biologically unrestrained and free from human interference. It showed also that syphilis when propagated under the epidemiological conditions of yaws approached closely to yaws in clinical character, immunology, and pathology. This was strong evidence in favour of the essential identity of syphilis and yaws. A definite conclusion on this point waited upon further investigation of syphilis, bejel, and yaws in the fields of epidemiology, pathology, and animal experimentation.

Discussion

Professor BLACK LOCK pointed out that some years ago he began to doubt the validity of the criteria by which yaws was differentiated from syphilis. These views when published were much criticized. Dr Hudson's work showed clearly that this syphilis in children—bejel—was not transmitted congenitally to the next generation and also that syphilis could not be distinguished from yaws simply on account of the genital site of the primary lesion in syphilis. Two questions arose in regard to modern treatment. First would patients with yaws treated sufficiently to render the condition subclinical develop nervous sequelae later on? Secondly would children cured of their yaws be susceptible to adult syphilis as they got older?

Colonel L. W. HARRISON was impressed by the similarity between Dr Hudson's experience and that of others like Dr MacQueen who in Palestine had described very similar facts some three years ago. MacQueen mentioned in his bibliography that the earlier workers in Dalmatia, Croatia, Bosnia, Herzegovina and Asia Minor had described much the same state of affairs in their countries. Colonel Harrison emphasized the importance of clearing up the difference between venereal syphilis and yaws, and the place of bejel in the general picture of the central nervous system and the place of bejel in the pathology of the

and spinal cord Kemp in Chicago concluded that inadequate treatment did not promote the incidence of neuro-syphilis. On the other hand, he knew that the development of meningo-vascular syphilis was promoted by inadequate treatment with arseno benzol. The absence of miscarriage was interesting he suggested that this was due to the mothers having acquired bejel in childhood. He also suggested that in bejel there might be a chancre on the tonsil or in the mouth, and asked whether unilateral enlargement of the submaxillary glands or of the submental glands was present.

Dr H. S. STANNUS said that, although Dr Hudson's observations formed a most valuable addition to the clinical knowledge of syphilis, he doubted if bejel was a link in the syphilis-yaws chain. Syphilis was not a purely venereal disease, Stokes had found, in some 20 per cent. of males and in 36 per cent. of females, that the primary chancre was extra-genital. One should speak of venereally acquired syphilis and non-venereally acquired syphilis, not of venereal syphilis and non-venereal syphilis, as was common custom. He was satisfied that the skin lesions of bejel were quite distinct from those of yaws. The fact that the mucous membranes of the mouth and nasopharynx were always affected in bejel was most significant in regard to its relation to syphilis, since true lesions of the mucous membranes never occurred in yaws apart from "spreads" across muco-cutaneous junctions and some few instances due to direct inoculation. Adenopathy in bejel was generally not localized, as in yaws. Alopecia did not occur in yaws, while the positive Wassermann reaction in the cerebro-spinal fluid of bejel patients was very significant. In his opinion syphilis, including bejel, always presented characteristics distinguishing it from yaws.

Dr H. M. HANSCHALL was convinced that yaws was not syphilis. In the case of bejel, infection might be transmitted by "droplet spray". The spirochaete in this disease did not produce a primary chancre and did not get through the choroid plexus into the central nervous system or traverse the placenta. One was therefore forced to conclude that it was a different spirochaete.

Dr P. H. MANSON-BAHR expressed the opinion that, though syphilis diverged from yaws, they were originally the same disease. Dr WILLIAM CORNER referred to his experience of bejel among the semi-nomadic Arab cultivators in Iraq, pointing out that practically 100 per cent. had mucous patches in the mouth at one time or another. Another common condition was leucoplakia of the cheeks and mouth. In his opinion venereal syphilis in the towns in Iraq was milder than European syphilis. Dr C. C. CHESTERMAN differed from Dr Stannus in considering that the lesions of bejel reminded him of yaws rather than of syphilis. He had observed 30,000 cases of yaws in fifteen years and had seen in that series practically every lesion described by Dr Hudson in his paper. He has never seen a case of nervous system involvement in inadequately treated yaws patients.

In his reply Dr HUDSON dealt specially with the question of treating the individual or of dealing with the disease as a community problem. Only a certain proportion of the community had open lesions at any one time and if these were healed the number of new cases would rapidly decrease. Provided the disease manifestations were made subclinical and the individual rendered non-infectious he would take the risk of inadequately treated individuals developing neuro-syphilis. In yaws one started with the assumption that the disease could be cured by means of two or three injections of arsenical preparations and a few injections of bismuth whereas they were taught that syphilis could not be cured in less than eighteen months continuous treatment. This was not practical in village or desert nomads. He had observed no evidence of primary chancres in the mouth or throat though he agreed there must be a primary lesion somewhere.

THE PSYCHOTHERAPY OF DELINQUENTS

A SURVEY OF THE YEAR'S WORK

The Institute for the Scientific Treatment of Delinquency held its annual general meeting at the house of the Pharmaceutical Society, with EARL DE LA WARR in the chair, who reported that the Institute had been making steady progress during the past year. Its importance was not to be measured solely by the number of cases it had treated, but also by the tremendous influence which it could exert on general thought in regard to delinquency. Any alteration in the present prison system with its tyranny and hopelessness, must provide a practicable and properly thought-out alternative. The Institute was helping to mould the emotional revolt of the community into a constructive form. He pleaded, however, for a psychological approach not only to criminal but to social problems in general. Possibly the politicians of the future might have to undergo an examination to determine their psychological fitness to administer the nation's affairs!

Dr DENIS CARROLL outlined the work which had been done especially at the Institute's clinic, during the year under review. The staff had recorded several cases as 'cured,' meaning that treatment had been stopped and the patients would in all probability commit no further offences. Other cases had been discharged improved—"improved," not as criminals but as citizens. A frequent criticism of the work was that it merely taught criminals to avoid detection. This was not true. On the contrary, once treatment had progressed a certain distance the psychologist could be fairly certain whether the patient was intending to commit further offences or not. The staff were therefore confident that they were adequately safeguarding the public even when the patient was at large. There was need for an in-patient centre, or for a greater automaticity in facilities for treating patients in or from prisons. A minority of improved cases were discharged because, while no more could be done for the patient, he was not likely to commit any more offences. Others discharged themselves because their probationary period was over or they had to leave the district. When a patient was discharged not improved he would not necessarily return to crime but there was no scientific reason for supposing that he was cured.

Avoidable Difficulties in Treatment

Illustrating his argument by actual case histories Dr Carroll pointed out some of the directions in which the courts could help the medical psychologist if they wished. A girl was treated during a period of probation; she was not particularly neurotic and her mental disease, which was curable, was not the cause of her delinquency. Her cure would have required about two years, her probation period was six months. She was not a very willing patient, and at the end of the six months she broke off treatment. Some time later she was convicted of a repetition of the offence. The medical psychologist told the court that although the clinic could not promise a cure they were hopeful of one if a sufficient degree of compulsion could be applied to bring the girl under continuous treatment for two years. They tentatively suggested three years probation, or, if the court saw fit to imprison her, a sentence long enough to enable her to be adequately treated. The court unfortunately gave her six months. It was fairly certain that she would not return for treatment unless she were quite unable to obtain work. The opportunity had therefore been wasted for she would almost certainly repeat her offences. Dr Carroll said that he did not blame the court, for the Institute had not yet made its aims and principles clear to all magistrates. This magistrate had declared that the girl had been given a chance and had not taken it. This was an unfortunate remark to make to a person who needed treatment, without which she could not be expected to make use of opportunities.

In earlier years psychotherapists had supposed that compulsion was incompatible with successful treatment. This view had now been modified, for so far from being a hindrance compulsion had been found in some cases to be indispensable. The court could help the clinic by making treatment a condition of probation and by imposing so long a period of probation that the patient could not see the end of it as sufficiently near to encourage him to mark time until it came. On the whole the courts had been highly co-operative, they were the biggest source of the clinic's cases and its most enthusiastic supporters. Continuity of treatment was everything and one solution was to treat the patient in gaol. This was impracticable with an unpaid medical staff who could not find time to visit a prison regularly. It would, however, enable the clinic to treat hopefully a number of cases of serious crime.

A Statistical Approach

Published statements declaring that juvenile delinquency had increased were amateur in authority, Dr Carroll said, and were not supported by scientific evidence. The only correct approach to the problem would be an examination of all the available data by a committee of competent scientists including psychiatrists, statisticians, and sociologists who should be given every facility by the Government Departments concerned and have access to all the available data of the type of offences, the type of punishments and probation awarded, and the results obtained, correlated where possible with the social history and with the findings of a psychological examination. If several thousand cases were followed over a long enough period the conclusions would be reliable and the committee could state with confidence what social factors operated in producing juvenile delinquency and in increasing it, and what effect the modern methods had. They could also answer such questions as whether birching was good or bad and if good for what kind of cases. He hoped that the Home Office Committee on Corporal Punishment would recognize the need for this kind of data. If it were a committee of the usual kind its findings would probably not have much value. Such an investigation could not cost more than £20,000 and would probably not cost more than £3,000 or £4,000.

The causes of delinquency included precipitating or trigger causes predisposing causes and specific causes, in the absence of which no circumstances could produce delinquency. It was therefore futile to speak of delinquency as due to such causes as boredom and excitement over films for these were purely secondary. In ten or fifteen years psychologists might discover the predisposing factors in school children. Alfred Adler had for some years been given access to all the school children in Vienna and had picked out those who were predisposed to delinquency. Under a new political regime these facilities had been withdrawn. Scientifically the connexion was not proved but in fact juvenile crime had much decreased during this experiment and had risen again after it was discontinued. A similar experiment should be carried out in this country. A trained psychiatrist would have to be employed in each group of schools at about £1,000 a year but the result would be worth millions to the nation. It was highly probable that delinquency and neurosis had a common cause connected with the diffi-

in an approved school could not cure by itself. The medical psychologist's contribution was essential, and his advice should be taken before a child was sent to an approved school for a long term.

In conclusion, the CHAIRMAN expressed his gratification that the scientific treatment of delinquency had penetrated even into the darkest recesses depicted by Mr Albert Crew, the Recorder of Sandwich and Sir Hubert Bond, Commissioner of the Board of Control both members of the council. He hoped that sooner or later the value of the work would penetrate to that darkest of all recesses, the British Government. A new idea had always to be developed in England by a voluntary society and the Institute was doing arduous work of the utmost value.

THE ADRENAL CORTEX*

In a discussion which followed the reading of Dr W. N. Kemp's paper on the adrenal cortex, delivered recently before the Osler Society, Dr KINSMAN commented on the "thymic syndrome," stating that in his opinion the "breath holding spells," so alarming clinically, are part of that syndrome. "A child may have as many as ten or twelve such spells each day. The child holds its breath, turns blue, and collapses. The spells are most alarming. Radiographs in every case show an enlarged thymus. Speaking from my own experience, x-ray treatment does not clear up these symptoms. It does not reduce the size of the gland. I have now seven children over 2 years of age who have had marked breath holding spells—one had ten or twelve each day. The most of them had had x-ray examination which showed marked enlargement of the thymus. A series of x-ray treatments made little or no improvement in the spells. The children were then put on adrenal cortex, and in every case showed marked improvement. The most extreme case was at once reduced to one or two mild spells each day."

Dr MATTHEWS said he had had two children both 5 years old but with no symptoms of status lymphaticus. The chest plates of each showed a very large thymus. They were given suprarenal cortex and one month later the thymus in each could hardly be found. He hoped to try adrenal cortex for breath holding spells as he had never been satisfied with x-ray treatment in that type of case.

Dr SPOLIN spoke on the possible aetiology of the thymic syndrome. While he thought that there was some relation to thyroid dysfunction he was sceptical of the possibility of adrenal cortical dysfunction being aetiological related to the thymic syndrome (status lymphaticus). Dr Spolin explained the clinical results of cortical therapy reported by Drs Kinsman and Matthews as possibly due to some pharmacodynamic action of adrenal cortical therapy.

Because quinine cures malaria we cannot argue that malaria is caused by the absence of quinine. He pointed out that some cases of the breath holding syndrome recover spontaneously. He did not think that the presence of an enlarged thymus in dogs after adrenalectomy was of any significance because from his experience in post-mortem examination of pups thymic enlargement is a normal finding. Dr Spolin did think that cortical therapy might possibly be of therapeutic value (for pharmacodynamic reasons) in cyclic vomiting of otherwise healthy children.

Dr TAIT, in contrast to the first two speakers spoke highly of the benefits of x-ray treatment in cases of the thymic syndrome. In his experience as a roentgenologist he stated: "I have never seen symptoms persist where a full course of treatment has been given nor have I known of a child's resuming from enlarged thymus after x-ray had been given. When you have something (thymic syndrome) that is specific I would suggest a cure where there is an end organ."

Dr PITTS showed two specimens from the pathological museum, one a normal pair of infantile adrenals and the other a decidedly hypoplastic pair taken from a foetus with anencephalus. He asked the speaker to make some comment on these.

Dr CLEVELAND raised several questions. Why do the experimental animals show a coincident fall in chlorides and glucose? Is the cortical hormone active when taken by mouth? How does one account for the beneficial results of adrenal therapy (whole gland) reported by Dr Pusey in a case of acne with dysmenorrhoea? Are there any preparations of cortin which can be used by mouth or injection that are not of prohibitive price for patients of small means?

Reply to the Discussion

Dr KEMP said in his reply I wish to thank Dr Kinsman for giving adrenal cortical therapy a trial in cases of the so-called thymic syndrome, and also Dr Matthews for showing the efficacy of the cortex by mouth in reducing the size of the markedly enlarged thymus glands in a small series of cases. While it is true that Dr Kinsman's series of cases is small, yet it is a beginning, and in my opinion is very suggestive that the thymic syndrome (so-called) is in reality one form of clinical cortico adrenal insufficiency. Dr Spohn is sceptical of the part that I have assigned to the adrenal gland in cases of the thymic syndrome. However, I would point out that Dr Spohn has never tried this therapy in actual practice—he dismisses its significance on theoretical grounds alone. He says the beneficial results reported by Drs Kinsman and Matthews may be explained on pharmacodynamic principles. Would he so explain the benefits of thyroid therapy in cretinism and myxoedema? How can you explain the relief of "symptoms" by the use of cortin in adrenalectomized animals on pharmacodynamic grounds? The answer is that in the cases of the thymic syndrome treated with cortex and reported by Dr Kinsman, as in clinical myxoedema and experimental cortical insufficiency as well, the results of hormone administration are probably true examples of replacement therapy. Dr Spohn states, and it is a well known fact, that some cases showing breath holding symptoms improve spontaneously. This is as one would expect from a knowledge of adrenal development in infancy if cortico adrenal dysfunction were the cause. Dr Spohn was sceptical of the significance of the enlargement of the thymus gland invariably present in the dogs adrenalectomized by Banting and Gairns as reported in this paper. Dr Spohn has frequently made post mortem examinations on puppies and they have all had enlarged thymuses. The answer to this criticism is that the dogs used in the experimental adrenalectomies under discussion were not pups, and secondly, the thymic hyperplasia following adrenalectomy is definitely emphasized by such astute observers as Dr F. Banting and his co-worker Dr Gairns. I note that Dr Spohn thinks that cortical therapy may be of value in cyclic vomiting possibly from a pharmacodynamic action. The specimens of adrenal hypoplasia in a case of anencephalus demonstrated by Dr Pitts are very interesting. In anencephalus the pituitary gland is usually absent—hence the adrenals, with out the adrenotropic hormone of the pituitary, do not develop normally. Dr Cleveland has raised a series of interesting questions which I will attempt to answer briefly. In adrenalectomized animals there is a fall in blood chlorides early, due apparently to the inability of the kidney tubules to resorb sodium chloride. The fall in blood sugar is more of a terminal phenomenon and is probably related to hepatic dysfunction incidental to the loss of cortin. The cortical hormone is active by mouth although much larger doses must be given. In regard to the use of whole adrenal gland in the case of acne and dysmenorrhoea one can simply say that there undoubtedly exists a close functional relation between the adrenal cortex on the one hand and the gonads and the

pituitary gland on the other. To me it is quite reasonable that in certain cases, such as Dr Cleveland cited, ovarian and pituitary function are improved by the administration of cortical extract. Acne is a frequent accompaniment of pituitary dysfunction—hence the improvement in pituitary function due to the administration of the cortical extract may account for the cure of the acne. Dr Cleveland mentions the high cost of cortical extract. This is unfortunately true. As someone has said, only a millionaire can afford to have Addison's disease. Dr Cleveland's question in regard to the aetiological differentiation of the types of hirsutism in the female is somewhat beyond the scope of this paper, suffice it to say that in such cases of hirsutism the differential diagnosis is between pituitary basophilism (Cushing's syndrome), adrenal tumour, arrhenoblastoma of the ovary, and tumour of the thymus gland. The thyroid is not usually "in the picture" at all.

MODERN ADVANCES IN OBSTETRICS

At the invitation of the Torquay and District Medical Society, a joint meeting with the Devon and Exeter Medico-Chirurgical Society and the Plymouth Medical Society was held at the Torbay Hospital on May 13, with Dr J. M. JARVIE, ex-president of the Torquay Society, in the chair. The first of three opening addresses in a discussion on modern advances in obstetrics was given by Dr MARSHALL SCOTT of Exeter.

Analgesia in Normal Labour

Dr Scott concerned himself mainly with the conduct of normal labour. In the first instance he touched upon the importance of the psychological preparation of the patient from the earliest ante natal visit, when anxieties as to the pains and dangers of childbirth might be allayed by a promise that there would be no suffering sufficient to constitute a painful memory afterwards. This, he said, was all that could be promised to-day if drugs were not to be pushed to a point dangerous to both mother and child. Insomnia and restlessness might be associated with anxiety in the last month of pregnancy, chloral hydrate, say 15 grains, given nightly during the last fortnight might relieve this and also have a favourable influence on cervical dilatation. The requirements suggested by Reynolds in respect of drug administration in the first stage were that there should be a prolonged anaesthesia with a minimum of repeated dosage, sleep between the pains, no prolongation of the first stage, and no ill effect on the child. In the second stage drugs should be selected with a view to a short induction period, rapid elimination, avoidance of depression or inhibition of uterine contractions, harmlessness so far as the child was concerned, and simplicity of administration.

The accoucheur should have a clear idea as to the aim of his treatment, whether amnesia, analgesia, anaesthesia, or a combination of these conditions. He described his own practice in some detail.

A mixture of potassium bromide and chloral hydrate with 10 minims of tincture of opium was given at the onset of pain. This could be repeated in two to three hours if necessary or the administration of gas and air by Minnitt's apparatus begun. If cervical dilatation should prove unexpectedly slow the inhalations could be interrupted and rest assured with an injection of omnipon and scopolamine. In starting to administer gas and air he was guided more by the extent of pain than by the degree of dilatation of the cervix, though in a primigravida the onset of acute pain was found to coincide usually with a three-quarter dilatation. Gas and air sufficed for delivery in about 75 per cent of his cases a figure according with that given by the British College of Obstetricians.

In prolonged labour due to inefficient contractions in some cases with cardiac or pulmonary complications in cases in which gas and air proved inadequate and occasionally in trial labour he gave omnipon and scopolamine followed in about

two hours by rectal paraldehyde. The dosage of paraldehyde was regulated by body weight: a minimum of 8 drachms was given admixed with olive oil in the proportion of one ounce of the latter to each drachm of paraldehyde.

Coming to the technique of delivery, Dr Scott said that he always wore a mask, and in addition to putting on clean dry gloves he swabbed them with neat dettol for three minutes when any vaginal investigation was necessary. Whenever possible he preferred a rectal examination as a method better tolerated by the patient which allowed dilatation of the cervix to be followed readily in the majority of cases permitted repeated examinations without fear of infection, and which saved time, material, and manipulation.

Some Obstetrical Difficulties

Dr Scott then discussed the advantages of a timely Caesarean section in primary uterine inertia as against allowing the case to drift into a condition of dangerous exhaustion. Judgement in such an instance was difficult to make but rapid deterioration in the general maternal condition seemed to him an indication for abdominal section. Leyland Robinson and co-workers of the Liverpool school had published a small series of cases which suggested that oestrin might be valuable in promoting more powerful and regular contractions in these cases of inertia.

He referred to the anatomy of the pelvic floor and the damage resulting from violent deliveries or from prolonged over-distension when the head remained low in the pelvis for many hours. He advised the carrying out of an episiotomy in nearly every case in which the head had been visible at the vulva for half an hour. The incision under general or local anaesthesia was made from the fourchette and extended some three-quarters of an inch posteriorly laterally. During the puerperium he concluded, an effort must be made to maintain the tone of the musculature of the pelvic floor by the blending of rest and exercise.

Toxaemias of Pregnancy

Dr CHARLES CROFT spoke as a physician who invades obstetrics rather than as an obstetrician. It had been a matter of some wonderment to him that a study of the toxæmias seemed to have been taken up more by the academic type of physician with leanings towards biochemistry or endocrine therapy, than by the practising obstetrician. He believed that there was but one toxæmia of pregnancy which showed itself in sundry forms: impaired renal function perhaps with degeneration of liver cells was the associated pathological condition. There seemed to be no reason for regarding the megalo-cytic anaemia found in certain cases of pregnancy as related to toxæmia, and when in the toxæmia of pregnancy an anaemia of the secondary type occurred he regarded it as an associated condition rather than as a direct result of the toxæmia. Accidental haemorrhage although not infrequently occurring in the toxæmias of pregnancy could be explained by the presence of the raised blood pressure accompanying the toxæmia rather than by the liver disease.

hydatidiform mole, in which there was no foetus to consider as a factor. It had been stated that the majority of fatal cases of eclampsia occurred in July, August and September, but the significance of this was not clear. Although albuminuria was held to be the common denominator of the pregnancy toxæmias, Dr Croft considered that this should be replaced by the factor of raised blood pressure, which would often be found before the onset of albuminuria, headache, and vomiting, although not always before the appearance of oedema. A rising blood pressure pointed to the onset of eclampsia with more certainty than a raised reading which was stationary, eclampsia could occur with a blood pressure of 165 mm Hg, or be absent with one as high as 200 mm Hg.

Diagnosis and Treatment

The only clinical tests of value in determining the onset of liver damage were those establishing the presence of bile pigment in the blood or urine. Treatment was urgently necessary in any case in which vomiting and anorexia were continuous and resistant to routine measures, or when there was a progressive rise in blood pressure or a diminished urinary output, or anaemia in association with any of these.

The only hope there was of securing even moderately early treatment in cases of fulminating eclampsia was by giving a discreet warning to patients in respect of symptoms which might arise and which should be reported immediately. The recent investigation by the Ministry of Health revealed that of seventy-three deaths from eclampsia, in twenty-one instances the medical attendant was not considered to have given sufficient attention to the patient either because of his neglect to examine the urine and estimate the blood pressure, or to treat the patient himself or to secure treatment for her. As to what was regarded as adequate treatment we read that

monthly visits of women to the clinic are desirable during the early months of pregnancy, twice a month from the fifth to the seventh month and later at weekly intervals until the time of confinement. Dr Croft added that this routine seemed to be rather burdensome for the vast majority of cases.

In considering preventive treatment he said that irrespective of whether a free supply of calcium protected against toxæmia or not it was logical to ensure a sufficiency of this salt and of vitamin D to aid absorption in the diet of the pregnant woman. It was calculated that the woman required 16 grammes of calcium daily and that in the last twelve weeks of gestation the foetus required 25 grammes. Thus the customary one pint of cows' milk was inadequate. Once the toxæmia was established immediate transfer from the clinic to medical supervision at home was imperative, the patient being ordered to have complete rest in bed. A milk diet should be prescribed with vegetables especially those supplying iron. Despite the strictures of Witt he recommended saline aperients and also advised calcium alkali and glucose. Calcium given either by intravenous or intramuscular injection had been proved of value in eclampsia. Caesarean section was justifiable only on very rare occasions showing as it did a substantial

luteinizing hormone and the progestin, for the production of which in the pre-gravid and early gravid periods the anterior pituitary and ovary had been responsible. Further investigations had shown that in some cases of threatened abortion with evidence of a still living foetus the Aschheim Zondek reaction was negative. From this was argued absence of the luteinizing factor, and the administration of prolactin or of progestin developed as an obvious line of treatment.

Dr McCallum then mentioned the importance of a sufficiency of vitamin E in the treatment of habitual abortion. Routine examination should exclude pelvic deformity, uterine displacements, cervical tears, tumours, chronic nephritis, and syphilis. These conditions having been excluded, he gave injections of progestin, beginning with 2 mg (2 international units) twice weekly. This was continued up to the thirty-second week. When there was any sign of abortion threatening the patient was put to bed and daily injections of 5 mg. of progestin given for one week. In addition to the injections in preventive treatment, he gave one teaspoonful of wheat-germ oil daily for six months. Thyroid extract 1/2 grain each night was helpful, and calcium in some form was necessary, with a diet rich in vitamins. Rest in bed during the dates when the menstrual period would have been expected, a quiet life, and sexual rest were important considerations.

Disproportion

In discussing disproportion Dr McCallum said that in the slight cases the diagnosis was by no means a matter of certainty. Little or no dependence could be placed upon the measurements of the internal conjugate. On the other hand, radiographic mensuration with improved technique was becoming wonderfully accurate. Nevertheless it was still impossible to forecast the degree of possible moulding on the part of the foetal head, the extent of relaxation of the pelvic joints, or the strength of the uterine contractions. Thus an opinion could not be arrived at with certainty in many of these cases until labour had actually begun, but he advised a careful examination at the thirty-sixth week. If the head was engaged or engaging a normal labour might reasonably be expected. If the head was still floating an attempt should be made to push it into the pelvic brim. Failure to engage and obvious overlapping, the head being flexed, was a clear indication for Caesarean section. If the head could be pushed in or the overlap was slight he would advise re-examination in two weeks' time, under anaesthesia if need be. If disproportion was now absent or in a slight degree he would allow a trial labour. He emphasized the importance of remembering that one of the commonest causes of an unengaged head at the end of the term was the incomplete flexion associated with an occipito-posterior position.

In the discussion which followed Drs H K GRIFFITH W A ROBB A A GAIRDNER, R S COLDREY R A LATTEY G M GREIG C MACVICKER, and HORTON DATE took part.

BIOCHEMISTRY OF MILK SECRETION

The biochemistry of milk secretion was the subject of a paper read before the Royal Society of Arts on May 26 by Professor H D KAY, director of the National Institute for Research in Dairying, University of Reading. He also touched on the control of milk composition.

Structure and Blood Supply of Udder

Professor Kay first described the structure of the udder with its four separated quarters with separate teats through the end of which passed a narrow channel to a small cistern connected with a larger storage cistern in the gland proper. This larger cistern was connected again by some eight to twelve milk ducts which after successive branchings ended in minute collecting tubules,

with an enlargement or alveolus at the extremity of each, in which the milk was actually secreted. All the constituents of milk were brought to the mammary gland by the blood, indeed it was sometimes claimed that milk had evolved from a blood transudate. Two large arteries in the cow each supplied one half of the udder, and were divided into a number of smaller arteries and these into arterioles, and finally into capillaries, penetrating into every part of the mammary tissue and providing each alveolus and secreting cell with a rich blood supply. The blood in the capillaries brought with it not only the precursors from which the cell manufactured all the specific milk constituents but also the sugar required to provide energy for the synthesis and the oxygen necessary to burn the sugar and keep the cells in good functional order. These materials diffused out of the blood stream into the small spaces between the cells, and the cells took up from this liquid the substances needed for secretion and respiration and restored to it the waste products of their activity, which were eventually returned to the venous circulation.

Milk Secretion and Composition

The milk secretion was undertaken by the cells lining the alveolus, and their changes in shape during secretion might be observed microscopically. Beginning almost as cubical cells, they increased in length, granules and small fat globules accumulated, and presently something occurred—probably a rupture of the distended cell wall—whereby the secretion was extruded into the alveolar space as milk, the cell then returning to its original size and the cycle recommencing. With several repetitions of the cycle the storage spaces in the gland became full of milk. Differences in the composition of milk, said Professor Kay, were bound up with the differences in the stage of development at which the young were born. In species such as the horse, in which the newly born were advanced in development, the protein, fat, and bone forming salts of the milk were less and the sugar content greater, in species in which the young were helpless at birth the protein and fat were high and the lactose low.

The lecturer stressed as an interesting biochemical fact the considerable degree of constancy in the composition of milk of the same species, no matter, within limits, what food was given to the lactating animal. The cow possessed a mechanism whereby she could produce milk, if need be, at the expense of her body tissues. In health the constituents of the blood were maintained at a constant level, and the secreting cells of the mammary glands were more efficient than those of the other tissues of the body in taking what they needed from the limited supply in the circulating blood. He described it as astonishing that on a diet deficient in lime or phosphorus the mammary gland continued to secrete milk quite rich in these elements at the expense of the lactating animal's bones. The rarefaction of the mother's bones might continue until spontaneous fractures ensued. It was a fundamental biochemical question, but an unsolved one how even when the skeletal and muscular framework was suffering the blood level of lime and certain other essential food materials remained almost unimpaired, also what was the nature of the process by which the mammary cells especially of early lactation exercised this preferential taking up of materials from the blood.

Biochemistry of Low Quality Milk

The fact must be accepted that in many instances cow's milk might be below the legal standards—set by the regulations of 1901 at 3 per cent fat and 8.5 per cent solids other than fat—and yet be genuine milk. From the consumer's point of view this was of real importance for he might be obtaining a lessened nutritive value by 10 or 20 per cent. The quantity of milk which the modern "good" cow was expected to secrete might be 800 to 1,000 gallons per lactation (say 300 days) in other words the total solids which the modern cow as

a result of generations of careful selection almost entirely for volume production, secreted in her milk in a year (during a large part of which time she was also in calf) was four times the weight of the solids in her own body. The strain on the physiological and biochemical equilibrium must be very great. Some 300 to 400 gallons of blood circulated through the mammary gland for every gallon of milk secreted and a cow might secrete four to six gallons a day.

The lecturer considered it possible that breeding for volume was one of the factors responsible for low quality milk. An animal freed with this unnatural physiological strain would tend to avoid it in part by secreting more water and less of the other physiologically costly materials in her milk. Another factor was the widespread incidence of udder disease. Mastitis had been shown to lead to a marked change in the composition of milk.

Hormones and Milk Secretion

The growth of the mammary gland was doubtless largely controlled by hormones oestrin and progesterin being mainly concerned. Injection of the pituitary hormone prolactin also usually brought about a copious secretion of milk. The lecturer described an experiment in which thyroxine had been given to the cow. The result of its administration in the form of dried thyroid gland and especially as the pure crystalline hormone was to increase the yield and improve the chemical composition of the milk, the percentage of fat increasing by some 16 per cent, even the amount of non fatty solids was raised. The total yield of butter fat per day was increased in one of the cows by nearly 50 per cent.

A minor constituent of milk—namely the enzyme phosphatase—had been found to be an interesting biochemical index of the efficiency of mammary secretion. There was least concentration of phosphatase in milk at the height of normal lactation. After administering thyroid gland or thyroxine there was a marked fall in milk phosphatase a fall which persisted while the quantity and quality of milk remained high. When the thyroxine was withdrawn milk secretion fell and the phosphatase concentration rose again.

Vitamin Content of Milk

Local News

ENGLAND AND WALES

Joint Tuberculosis Council

At the May meeting of the Joint Tuberculosis Council twenty-two members were present. The honorary secretary Dr Ernest Ward announced that 750 copies of the council's memorandum *Tuberculosis Among Nurses* had been printed and the Medical Research Council was considering republication of the memoranda by Drs W H Tytler and Peter Edwards on *The Microscopic and Cultural Examination of Sputum*. After a discussion on the Empire Conference on the Care and After-care of the Tuberculous it was decided to form a committee comprising Dr S Vere Pearson (convener), Professors W W Jameson and S Lyle Cummins with Drs Jane Walker, J B McDougall, F R G Heaf and F W Goodbody to consider what help this council can give the Colonies in their effort to control tuberculosis. The question of holidays with pay was raised and it was decided to place this subject on the agenda for the next meeting.

Work of a Medical Charity

The annual general meeting of the Society for Relief of Widows and Orphans of Medical Men was held at 11 Chandos Street, Cavendish Square W, on May 19 with the president Mr V Warren F.R.C.S. in the chair. The report and accounts for 1936 were presented and adopted. The total income for the year was £5,392 2s 8d. During 1936 twenty-one new members were elected, nine died and one resigned. The total membership on December 31 was 275. During the year £5,275 was distributed in relief to the fifty-nine widows and nine orphans in receipt of grants. This is an increase of £1,000 over the previous year due to the increase of the number of widows. One widow who died during the year had been on the funds for fourteen years and had received from the society a total sum of £1,390. Her husband had paid a life subscription of £76 5s. on becoming a member.

home, which is very pleasantly situated in gardens by the sea was first used for children who needed ordinary convalescent treatment. Then, seven years ago, the rheumatic clinic at the Hospital for Sick Children, Great Ormond Street, reserved twenty beds in the home for children suffering from rheumatic affection of the heart and the results were so good that it was decided to allocate all the beds to the one complaint. Great Ormond Street reserving a further number, and beds also being reserved for other hospitals. A school was started for the children and in 1931 was recognized as a special school for child sufferers from rheumatic heart disease. A large part of the annual income is, of course, derived from hospitals and public authorities on account of services rendered to patients, but there is scope for voluntary giving and last year the income from this source was increased by some £500 as the result of a broadcast appeal. The home contains seventy-three beds, and the average residence of the children is 100 days. The cost of each patient per week, including establishment and financial charges, is £1 3s 5d on the average. Although few of the patients received are Sussex children, the home appears to enlist a great deal of local sympathy and interest.

INDIA

Indian Institute for Medical Research

The first annual report of the Indian Institute for Medical Research, Calcutta, covers the period from January 1, 1935, to March 31, 1936, and includes an account of the work in the diagnostic section and the departments of bacteriology, protozoology, biochemistry and nutrition, and chemistry, immunochemistry, and chemotherapy. As the result of study of the immunity problems connected with cholera and typhoid fever a potent anti-cholera serum has been produced, and further investigations are proceeding with reference to the concentration of the toxin and antitoxin concerned. A preliminary note by Dr H. Ghosh about this work appeared in the *British Medical Journal* of January 12, 1935 and a report of the further advances, by the same author, was published in the issue of May 9, 1936. It now seems probable that there are two different kinds of toxin in cholera, an endotoxin and an exotoxin, which jointly produce the characteristic symptoms. Predominance of one or the other determines whether the clinical picture is more particularly that of an early onset of vasomotor paralysis or of excessive purging. The mortality among the cases treated with the serum was 10.65 per cent., as contrasted with 21.6 in the remainder. Preliminary researches with typhoid toxin indicate the possibility of producing an effective anti-typhoid serum. Evidence has been forthcoming that the common bowel disorders of the natives of Bengal are related to the usual high carbohydrate contents of the dietaries which give rise to fermentation and hyperacidity in the intestine, with consequent toxæmia especially in children. In the department of protozoology a systematic study is in progress with regard to the problems of cultivation and immunity which have been but little considered hitherto. The objective has been to discover whether antigens consisting of pure parasitic bodies obtained by cultivation of protozoa or extraction of their protoplasm can induce immunity in the body of the host and so be of prophylactic and therapeutic value. An oriental sore vaccine has been prepared from freshly isolated strains of *Leishmania tropica* and has been found to have a high therapeutic value. An intradermal skin test for this disease has been devised. Vaccine treatment is also proving useful in post kala-azar dermal leishmaniasis. Another investigation is proceeding into the possibility of cultivating malarial parasites on suitable media in order to produce a prophylactic malarial vaccine. An attempt is being made to desensitize cases of eczema, asthma, urticaria and pruritus with suitable antigens and a few patients have

been treated satisfactorily with urinary protease. The department of biochemistry and nutrition has been largely concerned with vitamin C, the nutritional problems of middle-class families, the nature of the oxytocic hormone of the pituitary gland, and the respiration of bacteria. A survey of the nutritive values of Indian foodstuffs and dietaries is being conducted systematically. Certain common Indian fruits have been shown to contain unexpectedly large quantities of vitamin C, and it has been demonstrated that the amount of this vitamin in human milk can be appreciably raised by appropriate dieting. The dietaries of middle class families in Bengal are markedly deficient in proteins, vitamins A and B complex, calcium, and phosphorus. The department of chemistry has been trying to elucidate the mechanism of antigen-antibody combination from considerations of their rate of diffusion, osmotic pressure, viscosity, and the Tyndall phenomenon observed in their solutions. Equations have been defined which account satisfactorily for the neutralization of streptolysin, tetanolysin, cobra haemolysin, staphylolysin, diphtheria toxin, and crotalus toxin by their corresponding antibodies, as well as to the adsorption of specific agglutinins by typhus bacilli and the vibrios of cholera and to the adsorption of specific haemolysin by the erythrocytes of the ox and sheep. The diagnostic section has shown that there was a great increase in the incidence of amoebic infection during the year under review. Improvements in certain diagnostic techniques have been suggested, and many doubtful cases of leishmaniasis were identified by special cultural methods.

Madras Ophthalmic Hospital

The annual report for 1935 of the Government Ophthalmic Hospital, Madras, shows that as usual common conjunctivitis and various forms of cataract were the most common diseases, glioma and epithelioma were the two most frequent tumours, and 8,149 operations were performed. The daily average number of patients in 1935 was higher than in the previous year, and those who could not be admitted to the wards were accommodated on the verandas. Radium treatment was used in seventy-eight cases, mostly of epithelioma and trachoma. Special training was given to 254 medical students, including 150 who were candidates for the M.B., B.S. examinations. In addition, thirty-seven post graduate students attended the practice of the hospital. No major building operations were undertaken during the year under review, but various minor repairs and improvements were effected in the hospital itself and the residential quarters.

SCOTLAND

Health of Scottish Ports

At the annual conference of the Association of Port Sanitary Authorities held recently in Glasgow, Bailie James Crawford who presided, said that the living quarters for the crews on ships now being built on Clydeside were greatly improved in situation, design, and comfort even in excess of the standard desired by the association. The latter was freely consulted by the Government, and was also in touch with the International Maritime Service which had been set up to control the spread of infectious disease from country to country and had built up an effective service for protection against the introduction of such diseases as small pox, plague, and typhus fever. The more enlightened methods now practised he continued had abolished the old system of quarantine except in unusual circumstances and the association performed a number of functions such as detecting infection among passengers and crews of incoming ships, examining aliens, inspecting imported foodstuffs and sanitary conditions of ships, and applying measures for freeing ships from rats and other vermin. In a paper on Insect Pests on Ships, Dr William C.

Gunn of the Public Health Department, Glasgow, said that infested living quarters of the crews might be regarded as slums, and should be inspected with the same care as houses on land. Fumigation by sulphur dioxide or hydrocyanic acid would kill bed-bugs and other insects, but persistent cleanliness alone would eradicate such pests.

Provision for Mental Defectives in Scotland

Arrangements for the institutional accommodation of mental defectives in Scotland were transferred to county councils and town councils of large burghs by the Mental Deficiency and Lunacy (Scotland) Act of 1914. In consequence of the war, however, the General Board of Control allowed these provisions to remain in abeyance, and decided that for a time the institutions at Larbert and Baldownie should be regarded as national institutions receiving cases without preference from all over Scotland. The Board of Control has now decided that every local authority shall be required to comply strictly with the statute, either by establishing institutions in co-operation with other local authorities or by contracting with the managers of existing certified institutions. The chief public assistance officer for Stirlingshire, at a meeting of the Public Health Committee of that county, reported that an agreement had been entered into with the National Institution at Larbert and the Stirling District Asylum for the maintenance of 150 juvenile defectives. He said that there was in practice a serious difficulty in the case of low grade defectives because under the agreement only 10 per cent of the accommodation was reserved for such patients, and serious administrative difficulties arose in regard to the hopeless and helpless low-grade defectives whose parents even if willing, were quite unable to care for them. At the present moment there were actually twenty low-grade defectives in the county waiting for admission to Larbert asylum. Dr E. N. Reid, medical officer of health, said that there was a serious lack of accommodation for defectives who required constant supervision. It was resolved to request the Board of Control that an increase of the quota for low-grade defectives in institutions should be made.

The Late Dr. Adler

As recorded in last week's *Journal* Professor Alfred Adler who had been delivering a course of lectures on psychology at Aberdeen University, died suddenly while walking in Union Street of that city on May 28. At the time of his death he had still one lecture of his course to deliver in Aberdeen after which he intended to give similar courses in various other cities of Great Britain. He was assisted in his work by his daughter Dr Alexandra Adler of Harvard University who is to deliver some of the courses which her father had arranged to give. The memorial service at the crematorium, Warriston Road, Edinburgh, was attended by various psychologists belonging to this country and the Continent.

A. Sézary and A. Horowitz (*Bull. Soc. Franç. Derm. Syph.*, December 1936, p. 1761) report on thirty-nine cases of lichen planus treated with stovarsol. The drug was administered for six consecutive weeks and two tablets of 0.25 gramme each were given every morning on the first four days of each week. Of the thirty-nine cases eleven failed to complete the treatment, twenty-five were cured, and three improved. Itching was relieved after the first week and the rash began to fade after the third week, disappearing completely between the fourth and sixth weeks. In a few cases a second course of treatment was required and was given after an interval of a month. The lesions of the mucous membranes were more stubborn than those of the skin. Sézary and Horowitz consider that this treatment is convenient, free from complications and gives results as good as those obtained with other modern methods.

Correspondence

Bronchostaxis

SIR,—Before we can accept Dr John C. Roberts's interesting case (*Journal* May 22, p. 1069) as one which may be adequately described under this title, the after-history of this patient must be followed up for a few years. Otherwise it may lead to still further errors in diagnosis. As it is the tendency is often to explain haemoptysis away rather than to explain it. If a facile diagnosis of bronchostaxis is to become popular then an even larger number of cases of tubercle and growth will be missed, and further research on bronchiectasis and cystic conditions of the lung will be hampered. I am not denying that the condition may exist, but many of us who have seen cases of haemoptysis of obscure origin have found that the obscurity has been removed by later developments—I am, etc.,

London N.W. 1, June 3 F. G. CHANDLER, M.D., F.R.C.P.

Definition of "Arrested"

SIR,—It was with great pleasure that I read your remarks on the technical use of the word "arrested" in the annotation on the Midhurst Report. How often have I seen the bitterness of the disappointment when, in answer to the question "Am I arrested?" I have been obliged to answer "No." It is true that I have always been careful to explain that the word, as used medically, bore a different meaning to the common one. Often, indeed, I have been able to say that my patient's disease was not only not progressing but was now hindered by frail walls and widely spaced bars from making further ravages likely that it was the patient's duty to make that prison daily more secure, and so on. But a final interview is not the occasion to teach new definitions, and our great ally Hope once bewildered, takes a long time to re-establish herself. And all, maybe, because a positive spirit is made once a day.

As this practice may happen to continue for half a century with no harm to the patient, our break away from the generally accepted meaning of the word has always appeared to me to be not only cruel but also a relic of ignorance—I am, etc.,

Over Wallop Hants. May 30

FRANCIS JUPE.

Technique in Knee-joint Operations

SIR,—Surely my friend Mr Eric Lloyd (*Journal* May 15, p. 1015) provides a sufficient commentary on his technique for operations on the knee-joint when he naively writes "Stitch abscess occasionally occurs two or three weeks after the operation but clears up rapidly on removal or discharge of a small piece of catgut." Does Mr Lloyd not realize that his catgut is discharged because it is septic and that it is septic because it has been contaminated by the skin around his wound—for he seems to be reasonably careful about not handling his sutures. I must add that he is indeed lucky not to have met with disaster, for it appears from his description of the operation that the only catgut he uses is so "quite superficial" but actually through the capsule of the knee joint.

There is more in the Lane technique than mere "knife-and-fore" operating, and I am astonished that Mr Graham Simpson (*Journal* May 22, p. 1033) an ex-house-surgeon of Lane's, so completely failed to grasp the significance

cance of the "ritual" which he was privileged to see at first hand (I also was privileged to serve as Lane's dresser and house-surgeon)—I am, etc.,

London, W1 June 4

A S BLUNDELL BANKART

Treatment of Hernia

SIR—Your leading article in the *Journal* of June 5 says that "efforts have also been made of late to revive the treatment of hernia by injections into the sac" (My italics). This is quite erroneous, and none of us who carry out this treatment in this or any other country claim so to do. This fundamental and widespread misconception accounts for most of the opposition in this country. The arguments against injection treatment so lavishly poured into the ears of my patients before they begin the treatment are based on false premises all starting from this erroneous assumption.

I was christened in San Francisco on the four hundredth anniversary of Christopher Columbus setting sail to discover the New World, and I derive much comfort from the knowledge that my favourite hero was called the mediaeval equivalent of a b— fool by the wisest brains in Salamanca and Europe. He knew there was land where he was pointing though he had never seen it. I know there is land where I am pointing, and I have seen it, and so have the other members of our profession who have followed the technique I have described in this *Journal* and elsewhere. The evidence on page 1159 of your issue of June 5 is all the more gratifying because it comes from someone quite unknown to me—I am, etc.,

London, W1, June 5 ST GEORGE B DELISLE GRAY

Intra-epidermic Vaccination

SIR—I have read with interest Dr E R Peirce's article on intra-epidermic vaccination (*Journal* May 22, p 1066), and the letter in your next issue by Dr J Pickford Marsden (May 29, p 1139). The method practised by Dr Peirce, however, does not materially differ from that described by Bryce in 1809, where he recommended introducing the point of a fine lancet the eighth part of an inch merely under the cuticle. Many others since then have described methods of so-called intra-epidermic vaccination by puncturing the epidermis with a lancet, chisel, or needle, but Dr Peirce is more bold when he states in his article

the technique is exactly similar to a Schick or a Dick test: a straight solid sterile needle is held almost parallel with the skin and the point is inserted gently through the drops of lymph under and along the epithelial layer for about a sixteenth of an inch and immediately withdrawn.

Now Dr Peirce must be fully aware that this is not in the least like the Schick or the Dick test. I draw attention to this fact not from a critical point of view but because I have practised intradermal vaccination for some years both in vaccinating large numbers of contacts and as a routine in hospital practice in both patients and staff and my method is similar to the Schick or the Dick test. My technique is as follows:

I break off both ends of the glass tube containing the lymph and with a 1-cm. all glass syringe fitted with an ordinary hypodermic needle insert the needle into one end of the tube and suck the lymph into the syringe. I now fill the syringe to 0.25 ccm. with sterile water. I then discard the hypodermic needle and replace it by a fine skin test needle and proceed to vaccinate the patients by injecting intradermally a small quantity of this lymph emulsion raising a wheal in exactly the same manner as in the Schick or the Dick test.

The best method, as Dr Marsden points out, is the method which admits of the least possible chance of failure. I maintain that my method, provided the lymph is active and the patient susceptible, cannot fail to give a successful vaccination.

I have not been able to get a "take" by the scarification method in any case "negative" by the intradermal injection, but I have had many cases of successful vaccination by the latter method immediately following a negative result by scarification.

This method can be applied with absolute surgical asepsis. There is little or no chance of secondary infection, which is almost always associated with the open scarification method, and which is in a large part responsible for the unsightly scar. There is a minimum of local or constitutional reactions. No dressing is necessary. The size of the pock and hence the resultant scar can be controlled by the amount injected. I find that adult patients much prefer this method of vaccination—I am, etc.,

London SE1 June 5

ROBERT G HENDERSON

SIR—The differences between Dr Marsden and me are largely due to different points of view. As a port medical officer I am concerned with small pox contacts who will disperse at the earliest opportunity, for that reason I must employ a method of vaccination which not only gives protection to those who need it, but tells me at the earliest moment whether the person vaccinated is susceptible or not. This information is not only wanted by me, but also by the medical officers of health of the districts to which the contacts are proceeding—I am, etc.,

Liverpool, June 7

EDWARD R PEIRCE

Angina Innocens

SIR—I read with much interest the article by Dr Geoffrey Bourne (*Journal* April 3, p 695) and the letter by Dr Fitzgerald Peel (May 22, p 1088) in your correspondence columns. I am inclined to disagree with Dr Peel, for I consider that the use of the term "angina innocens" in explaining the malady to the patient is a particularly happy one, as it brings out the salient features of the affliction as experienced by him together with its comparative harmlessness or innocence, a vital matter on which to reassure him.

Dr Fitzgerald Peel further says that it is rarely, if ever, necessary to give a name to the syndrome in talking to a patient. My experience has been to the contrary. I find that the intelligent patient likes to know what is the matter with him. If a doctor explains a syndrome to a patient he does so as simply as possible, and if in the end he can give it a name nothing pleases the patient better. If the doctor cannot name the disease the patient is apt to think that either the doctor has not taken him into his confidence on an all important matter in therapeutics, or that he does not fully understand his condition or that it is a very rare one and such an impression is likely to hinder recovery. This applies particularly to heart disease in which the patient's state of mind is often so important—I am, etc.,

London W2 May 28

CHANDU LAL MAHOTRA

SIR—The clinical study of cardiac pain by Dr Geoffrey Bourne (*Journal* April 3, p 695) is a welcome addition to a difficult subject. Under the term "angina innocens" he would include spasmodic hysterical vasomotor or syncopeal and toxic angina. Spasmodic angina is difficult to differentiate from angina of effort, as in both types

the attacks are sometimes due to indigestion, emotion, or cold, and all that we can say is that in the absence of cardiac and vascular disease the prognosis is good. The hysterical type or pseudo-angina is not difficult to diagnose as the mental condition dominates the picture. On one occasion I saw three women suffering from angina at the same time—the mother died in the attack and one daughter had typical spasmodic angina, while the other daughter suffered from hysterical or pseudo-angina. The syncopal type, described by Nothnagel as vasomotor angina, in my experience has been marked by coldness and numbness of the limbs. The pain is as intense as that of angina of effort, but the cases are usually in women at the menopause.

It would be unfortunate if the term "angina innocens" were used without a further separation according to the clinical picture—I am, etc.,

Beckenham June 4

A E BLACKBURN

Animal Pathology

SIR,—In the annotation at page 1165 of the *Journal* of June 5 it is stated. We may reasonably ask ourselves whether disease in animals is being adequately studied in this country. It might have been supposed that the common diseases of our principal fauna were well known, but we may now wonder whether there are not other species, especially among wild animals and perhaps birds, whose entire pathology is an unexplored field.

I was privileged to share with the late Dr J G Adams a deep interest in wild birds. Adams told me how this and his work with Metchnikoff had quickened his desire to compare human disease with disease in our domesticated and wild fauna, a desire he had found little opportunity of satisfying. He shared with the late Sir Clifford Allbutt the conviction that more knowledge of comparative pathology was required for our understanding of disease in man, but he feared that for such pioneer work there would be no security and little or no prospects. Encouraged by Adams I embarked on comparative pathology and I have acquired sufficient experience unhesitatingly to assert (1) that there is a considerable corpus of knowledge of disease in our domesticated horses, cattle, pigs, sheep, goats, dogs, cats, and poultry (2) that a large amount is known of disease occurring naturally among laboratory animals, (3) that during the past ten years several workers have contributed much to our knowledge of disease among the animals farmed in Great Britain for fur (for example, silver fox, mink, marten, fitch, rabbits and nutria) and (4) that to those familiar with the subject there is a not insignificant amount of data on disease in the wild fauna of this country. There are species of our wild fauna of whose pathology little appears to be known—for example voles, shrews, dormice, field-mice. Charles Elton and his colleagues are to be congratulated on their pioneer work in the ecology of these small rodents. My own experience of disease in our wild fauna has been derived mainly from birds, however I am not unfamiliar with some of the pathology of squirrels, fox, rabbit, hare, blue hare, and stoat while occasional specimens of wild cat, hedgehog and badger have been received.

I have had the temerity to mention my work not because I see clearly what to make of it all but because it has brought me into close touch with other workers on the wild fauna. They like myself do not earn their living by such pursuits, this may explain why these unfamiliar with the subject regard it as an unexplored field. If

the writer of the annotation should reply that the work done and proceeding is "inadequate" to the needs of pathology I should agree with him. Some day, perhaps, those in authority will recognize that there is something after all in Adams's notions, and in the work of John Hunter, Tegetmeier, Bland-Sutton, Wilson, Frank Colyer, Pillers, Henry Gray, and many others. Some day, perhaps, finance will be made available to establish an institute of comparative pathology where disease in our domesticated and wild fauna can be studied for the service of the science of medicine—I am, etc.,

Veterinary Research Laboratories,
London NW3, June 7

TOM HARE.

Intermittent Venous Occlusion

SIR,—I am much interested in Brown and Arnott's account of treatment by intermittent venous occlusion (*Journal* May 29, p 1106), in which the earliest date they mention is 1925. As I was treated by this method in Germany in 1917 when a prisoner of war, and during my subsequent medical course, 1919–23, I never heard any mention of this method, can any of your readers tell me if it was used in the military hospitals on our side of the line?

I was wounded and taken prisoner near Cambrai on November 30 1917, and in three or four days arrived at Le Cateau. On December 17 my ankle was x-rayed and on the 18th I was removed to a ward in another empty factory. It was the best ward in the town there were sixty beds, four day nurses, and two night nurses under the care of Professor "Blue Nose" (I know no other name) who operated on my ankle forthwith and removed a metal fragment. The theatre was primitive and the anaesthetist unqualified.

Five or six hours later a nurse fitted an intermittent venous occlusion ring on my leg above the knee. She told me it would remain on for seventy-two hours. All the fifteen beds in my row were similarly fitted. A gaspipe ran along the wall at the head of the beds, and a T-piece with a tap came off at each one. The apparatus working this was in the middle of the row and so far as I can remember it consisted of a couple of oxygen cylinders and a larger cylinder, measuring four or five feet by two feet in diameter with a pressure gauge and a clock. I thought it worked by the boiling of liquid oxygen. From each T-piece came a thick rubber tube attached to a thin rubber ring 1½ in. wide enclosed in a stout canvas case. The period was sixty seconds with fifteen seconds complete relaxation and fifteen seconds maximum pressure.

All wounds were septic in every ward I was in owing doubtless, to the lack of staff and materials. This apparatus was applied to all the patients who were with me, all picked cases—I was there because I was an officer and the only prisoner who spoke German—and I understood it was to help the patient to overcome sepsis. I spoke of this apparatus during my subsequent hospital training to various members of the staff, but no one seemed to have heard of it—I am, etc.,

G D SUMMERS M.R.C.S. L.R.C.P.,
Late Lieutenant 7th Battalion The Norfolk
Regiment B.E.F. France
Lincoln May 29

Orthopaedic Conditions

SIR—I feel that a reply to your unfavourable review of my book on *Elements of Orthopaedic Surgery* is justifiable. It seems that your reviewer has read it from the point of view of the specialist for whom the book was not, of course, intended and has little appreciation of the real needs of the auxiliary worker.

for whom the book was written. Thus he maintains that diagnosis should have been given a pre-eminent position. The truth about the diagnosis of orthopaedic conditions is that in the majority deformity or disability is obvious even to the layman, while in the minority the diagnosis of the cause of pain or other symptoms is so difficult as to need special knowledge and often special means of investigation. There is accordingly no value in an elementary book giving more than the salient points of diagnosis. Most important is the need to emphasize the risks of delay in determining the diagnosis and in beginning treatment, and this I was careful to do.

The examples your reviewer gives are unfortunate. As one who did the first work on the intervertebral disks in this country I might have been excused if I had taken more than one sentence to discuss adolescent kyphosis, but I refrained from doing so because of its relative unimportance practically. If your reviewer knows of any effective treatment for it at an early or late stage, I and other orthopaedic surgeons would be glad to know it also. Again, he complains that the reader is not told how to distinguish tuberculous disease from non-specific arthritis of childhood. He must be well aware that this is a specialized matter, and even with special knowledge and laboratory investigations may be very difficult. What need is there to discuss such differential diagnosis in an elementary textbook or to go into fine points of x-ray appearances, as your reviewer would have had me do?

I agree with the reviewer in the importance of the part played by the general practitioner and nurses in the early recognition and the successful treatment of an orthopaedic case. Every orthopaedic surgeon realizes this, and that the success of his work is largely dependent on the well-organized and understanding co-operation of these and others who assist him or see to the welfare of the patient. It was precisely for this reason and because there was no recent suitable book to which they could turn for information that this book was written. It may have failed, perhaps, to give all the information these persons need, but I deny that it is lacking in the ways your review indicates—I am, etc.,

Bournemouth May 31

N ROSS SMITH

Air Raid Precautions

SIR—I find myself very much in sympathy with the opinions expressed by Dr Leys and Dr Macdonald Ladell (May 22, p 1091, and June 5, p 1179) on this subject. Has not the time come for a more collective expression of opinion by the medical profession, or at least for more serious consideration and discussion of the duties in connexion with air raid protection for which doctors throughout the country are now being called upon to prepare themselves and others? The instruction which is being given is mainly in connexion with gas while the real danger it is well known would be from high explosive and incendiary bombs or a combination of all three methods. Adequate protection against all of these in a crowded city is generally regarded as impossible and attack with high explosive and incendiary bombs would in fact largely neutralize the efficacy of all the methods of protection against gas except perhaps the wearing of a mask. Under military discipline it is possible to train men in the use of gas masks but the training of the whole civil population is out of the question and in any case it would be a poor comfort to parents to learn the use of masks when these cannot be provided for or worn by small children.

The present anti gas drills are deluding the public into a belief that useful steps are being taken for their protection and at the same time, as Dr Macdonald Ladell points out are fostering the war mentality and the idea that war in the near future is probable or inevitable. Is it proper for doctors to subscribe to a prophylactic measure which is so inadequate and deceptive, or to support educational procedures of which the psychological consequences are so undesirable?

Although I hold my own views, the columns of the *British Medical Journal* are not, perhaps, the place to discuss whether an intensification of pacifist endeavour or rearmament in order to "do likewise" to the enemy in the event of an attack is the better form of prophylaxis. These are matters for all of us to consider constantly. If, however, war comes there will remain one indisputable duty for doctors, and that will be the task of supplying as efficient an ambulance and hospital service as possible for the stricken multitudes. No provision for such services seems to be contemplated at present either by the Government or by our profession. The organization of such services would surely be more consistent with the true function of our profession than playing at gas attacks and delivering lectures to lay audiences with an assumption of authority which neither experience nor conscience can justify—I am, etc.,

Cambridge, June 7

JOHN A RYLE

*: The task of supplying efficient hospital services is being carefully considered by the Committee for Imperial Defence in co-operation with the British Medical Association—Ed. *BMJ*

SIR—I think the letter under the above heading by Dr Duncan Leys (*Journal* May 22, p 1091), admirable, and I heartily agree that the present precautions are hopelessly inadequate. We, as a profession, are being asked to participate in defence measures, but as far as I know no opportunity has been given to us to express any opinion on the efficacy, or otherwise, of those schemes in which we are to play such an important part. Little opportunity is given during official lectures for discussion and constructive criticism. Scientific and controlled experiments conducted at Cambridge cast grave doubts on the whole Government scheme. These have been passed over by the Government with the insinuation that they are the work of Communists. The medical profession is moving rapidly towards the preventive aspects of medicine, and I suggest that in this respect it has a right and a duty to see that if war does come the population has knowledge of what to expect and also knowledge that everything possible has been done to minimize the senseless destruction of human life. To date an impartial observer must agree that our weapons of offence have received far more attention than those of defence—I am, etc.

London W.5 June 1

H JOULFS

SIR—Dr Ladell (June 5 p 1179) states that he refuses to take part in air raid precautions. I take it he would not withhold any active treatment of any gas cases. If so he says in effect "I will do all I can to treat gas cases but I refuse to give any precautionary advice as to respirator drill—a somewhat illogical statement—I am, etc.

W A BELLAMY Lieutenant R.A.M.C.(T)
London S.E.26 June 5

Prevention of Constipation

SIR—May I emphasize the importance of the psychological factor in the treatment of constipation by referring to the way I have attempted to deal with the problem at a certain L.C.C. mental hospital.

A distressingly large proportion of the public have been hypnotized by a barrage of advertisements, and now firmly believe that (1) they are constipated, (2) this does them harm, (3) it requires regular treatment by salts, pills, chocolate laxatives, or patent what nots to restore their normal bowel function. Patients in mental hospitals are in this respect like the rest of the public. They often state that they are constipated—usually without adequate proof. They insist on being given a regular dose of white mixture at least once a week and often more frequently. If this request is granted by the nurse in charge (ordinary aperients in mental hospitals being given at the discretion of the nurse and signed for by the doctor *after* the event) a habit is formed and the patient regards his regular dose as a necessity. If deprived of it he may develop hypochondriacal ideas and believe his bowels are becoming blocked.

I have in my own hospital work found a satisfactory compromise. All the patients who ask for their regular 'dose of white' are given it as usual, but the prescription, originally mag sulph 60 grains or more, with mag carb levis, 10 grains, and peppermint water, has been secretly and gradually reduced until there is now no magnesium sulphate in the mixture at all. The magnesium carbonate is retained so that the mixture looks exactly the same. No patient has yet remarked on the reduced efficiency of the present medicine, nor has any nurse. As neither know of the change, it would seem that the present mixture works chiefly by suggestion.

The routine administration of aperients is, in my opinion, strongly to be deprecated. If the constipation is of significance it should be investigated, the cause found, and if possible treated. May not organic alimentary trouble be overlooked in its earlier stages if the patient is given aperients at the discretion of the nurse? Alternatively, if the constipation is without significance or illusory, are we considering the best interests of the patient if we tacitly allow him to be dosed with aperients until he develops a habit and possibly a real constipation as a result? I suggest that the time has come to combat the mass suggestion of the aperient advertisers and manufacturers. It has been said that constipation is practically unknown among savage tribes—or among the inhabitants of this country in the Middle Ages. Is the reason entirely one of diet or mode of life? May it not be that these people had not yet heard of constipation? When they were ill they took a purge but when they were well did they think of taking anything to preserve their inner cleanliness?

The public has been given an irrational fear of constipation by the aperient monger. It is our duty to allay that fear even if it results in reducing the profits of the firms involved. So as not to break the spell which is at present working the bowels of the 500 male patients in my wards may I sign myself—*anonymously*—

J. M. T.

MAG SULPH

Maternity Services

SIR—Dr Elam's letter in the *Journal* of May 29 (p. 1170) is interesting but does not take us much further towards solving the problems before us. The desirability of one practitioner being "responsible for each patient before and after her confinement" is recognized

by everyone. Where "failed forceps" is due to their too early application all would agree that to have soothed the patient, either as Dr Elam suggests or with nembatal or hyoscine, would have been sound treatment.

Obstetric operations in unsuitable homes are certainly undesirable, but before we rush in with sweeping plans for the conduct of our brother practitioners' practices, should we not inquire how often each of these factors occurs by itself and how often are both present in any case? Are not about 95 per cent of confinements obstetrically normal? And if ante-natal work is efficient, will it not result in the abnormal case being detected and if necessary referred to hospital? Then again, are unsuitable homes so very common? The nurses from two London hospitals, attending poor patients in their own homes, can show a maternal mortality rate of only 1 per 1,000.

A maternity scheme is bound to be evolved in each area, as Dr Elam suggests, and until we see how much help this is going to provide for the general practitioner who is interested in this work it would be best, I submit, not to come to any hasty conclusions regarding the future of domiciliary midwifery—I am, etc.,

London, W 10, May 31

HUGH SUTHERLAND

Medico-Legal

HERMAPHRODITISM

Some Medico-legal Conundrums

Hermaphrodites have always excited interest, but recent developments in sexual endocrinology have given these rare and curious persons much greater importance. Mr Harold Chapple, in his article in the *Journal* of April 17, considers that the value of the ovarian secretions is more superficial than is usually supposed in determining the type of an individual. Other authorities have, however, expressed strong disagreement with him in the correspondence columns of the *Journal*, and minute investigations on a series of hermaphrodites might do great service in defining more precisely the role of the gonads in producing a sexual type. A case not unlike Mr Chapple's was described several years ago in which a supposed female person appeared to have neither uterus nor ovaries but two buried testicles.

Dr L. Ombrédanne¹ describes a "gynander" who set him a few legal conundrums. (As by French law this patient is a male it will be convenient to use the male pronoun.) At 22 years he has a hairless body except for the pubic region, breasts like a girl, a more or less female pelvis but large hands and feet. He has a small penile organ in a condition which would pass for a male hypospadias but which was not remedied by an earlier operation. On the right there was before intervention, an ample pocket containing a palpable gland the shape of an almond and surrounded by an organ which felt like an epididymis with a large head. On the left there is an empty scrotal fold. The lower aspect of the penis and the perineum are covered with scrotal skin and this conceals in front of the anus, a small orifice lined with mucosa and large enough to admit a sound. This is the outlet of the urinary canal and of a menstrual flow. The patient has behaved sexually like a man, and since the age of 16 has had connexion with several women: he experiences erection but no ejaculation and does not obtain complete satisfaction. His voice however is feminine and since 13 years he has menstruated regularly every twenty-eight days for six days at a time. At birth the doctor had no doubt that he was a male and he was registered as

¹ *Presse Méd.*, March 3 1937, p. 229.

one, at 14 the gland which has been described descended into the right scrotal cavity. At 20 he was declared unfit for military service, and at 21, when a surgeon suggested removing his breasts, he came to Professor Lecomte for advice. An exploratory laparotomy revealed a slightly small uterus and a large polycystic left ovary complete with salpinx. On the right the adnexae disappeared into the inguinal canal, the salpinx and the upper margin of the broad ligament were pulled out into a string and were housed in a right inguinal hernia. The next problem was to establish the patient's legal sex. This is important in France to a degree unintelligible in this country. To change the sexual status of a French person it is necessary for the parents, if the person is a minor, or the person himself if he is of age, to move the court to examine into the circumstances, judgement is given on the evidence. In the present case the patient is legally a male and wishes to remain one. Although he has a uterus, ovaries, and periods, he has no patent vagina, and Dr Ombrédanne considers there is little reason why he should not remain a male. On the other hand, he was intending to marry a girl with whom he had been living for two years, and she could undoubtedly in France have obtained a decree of nullity on the ground of the husband's real or "abdominal" sex—if she could get over the obstacle of the French legal prohibition which forbids the surgeon who attended the husband to reveal any facts concerning his patient. The author decided on balance that it would be better to facilitate the patient's life as a male, according to his wish. In this country the only objection to this course would probably be that the patient might marry, and as he is sufficiently competent sexually to penetrate the vagina his wife would find it very difficult to obtain a decree of nullity if she wanted one.

A somewhat similar case is reported from Nancy by Drs A. Binet and Demange,¹ but that person had more obviously male external organs and a well-developed pair of female breasts, also a rudimentary vagina in which he was in the habit of concealing stolen jewellery. He was a Jew of 37 and had been circumcised. The authors did not investigate his internal organs and so the story is very incomplete.

Surgical Intervention

Our comparative lack of interest in hermaphroditism or gynandry, in this country may be due to its comparative insignificance in English law. In countries which need to maintain large conscript armies every male person is a national asset of great importance, to be carefully watched over from birth. In France, for instance, the sex is registered at birth as in this country, but the entry in the register seems to have a much more conclusive legal effect and if there is any doubt about the sex the register can only be amended by the order of a special tribunal. The register seems to decide questions of inheritance and others in which sex is important. There is also a specific legal prohibition against castrating a male person, and Dr Ombrédanne refers to this as though a French surgeon ran a serious risk if in a case of doubtful sexuality he decided to remove a pair of buried testicles and let the patient live as a female. In this country the somewhat theoretical legal prohibition of castration which is always quoted in discussions on sterilization would never be invoked against a surgeon who removed testicles on good medical grounds. Mr Chapple ran no risk at all in removing the testicle—assuming that it was a testicle which does not seem to be universally admitted—from his attractive patient. Similarly we hardly ever hear of hermaphrodites in questions of inheritance probably because sex only matters in connexion with entailed property which is a family affair. The rules for the division of the estate of a man who does not leave a will make no distinction of sex.

Criminological Aspects

One other branch of law in which hermaphroditism might theoretically be significant is the criminal law against indecent conduct. The law prohibits sodomy and punishes it very heavily, a lesser but still grave offence is that of gross indecency between male persons. There is no legal prohibition against lesbianism. It is impossible, however, to imagine a court convicting a man of gross indecency if his partner's sex were in any substantial doubt. Mr Chapple does not seem to have suggested, in his closing remarks about the law, that his patient would be regarded legally as a male person. The most likely circumstance in which there could be any dispute about the sex of a partner would be if the accused man pleaded in his defence that the partner was not a male and called expert medical evidence.

Obituary

CHARLES SHORNEY WEBB, M.S., F.R.C.S.

On June 1 Charles H. Shorney Webb died in the hospital where he received his medical education and where for a dozen years he had been a brilliant member of the honorary surgical staff. Webb had a fine academic career, gaining honours and distinctions not only in the Middlesex Hospital Medical School but also in the University of London, he was only the fourth "Middlesex" student to secure the M.S. degree, and obtained marks qualifying for the gold medal on that occasion.

During his tenure of a surgical registrarship at Middlesex Hospital the "wanderlust" seized him, and he served in the Balkan Campaign in 1912, in 1914 the first day of the great war saw him eager alike for adventure and to place his talents at the disposal of the British wounded. Webb landed in the original Expeditionary Force with the Fourth Casualty Clearing Station, a unit with which he remained until 1918, when he was appointed to the charge of a surgical division of the 24th General Hospital at Étaples. At a time when opinion was still divided as to the desirability of exploration for gunshot wounds of the abdomen he was one of the first to operate for this type of injury. To Owen Richards, of course, belongs the credit of demonstrating and of urging the need of surgery in these particular wounds of warfare, but the first considerable communication dealing with the subject was written by Webb and Milligan.

Elected *in absentia* to the honorary staff of his old hospital during the war years he did not assume his duties until after the armistice. With a far greater operative experience than usually belongs to a newly appointed assistant surgeon, Webb proved himself also a fine teacher, acquiring a popularity with the students akin to that which he had enjoyed among his fellow workers in his early days and in France. Furthermore, his surgical advice and services were eagerly sought by his colleagues and their families.

We read in Euripides how those whom the gods wish to destroy they first drive mad. Thus it seemed with Webb his camaraderie and his genius for friendship became a vengeful Alastor, diligence languished, and he slipped suddenly from our midst. Nevertheless when all seemed lost when all was plunged in "lead-eyed despair" pluck still burned within him, and surprisingly unexpectedly a veritable Samson Agonistes he staged a great come back. The London County Council sponsored this return—he lived long enough to justify the con-

¹ *Rev. med. Nancy*, March 15, 1937, p. 267.

fidence again reposed in him, and became a valued operating surgeon to the Middlesex County Council. Time was indeed granted him to earn again the admiration of his erstwhile colleagues, but the events of his life might well be the theme of an Aeschylean tragedy 'the mighty Fury from her dark depth of counsel requites to the uttermost', his days were cut short by an infective endocarditis, which killed with inexorable certainty.

Webb's gifts were many. He was a fine linguist, a lover of music, he played piano and organ, he loved churches and old ecclesiastical architecture, and the memory may still linger in the minds of his war comrades of the strains of some church organ, by strange caprice intact, pealing forth from a ruined church without roof, with walls wide open to the air, an anthem perchance strange to the rude ears of that time, and within a debonair surgeon playing intently and with an exquisite skill. His surgery demands this tribute from an old chief and former colleague, as does also the courage of the man. And yet how difficult it is to stifle the thought of what might have been.

G G-T

CHARLES IRVINE MILNE, MD

Physician North Staffordshire Royal Infirmary Stoke-on Trent

The death of Dr Charles I Milne on May 29 at the age of 53 has come as a profound shock to the entire population of Stoke-on-Trent, where he was esteemed and beloved alike by patients and colleagues. Son of the late Dr Irvine Milne of Shipdham, Norfolk, he was educated at George Watson's College Edinburgh and Edinburgh University, where he graduated M.B., B.Ch. in 1907, and later obtained the M.D. degree, after serving as clinical assistant in the University medical wards.

Dr Milne came to the "Potteries" as a young man, and served as house physician and later as house surgeon at the North Staffordshire Royal Infirmary. He relinquished these appointments to take up practice in this district where he worked with untiring energy, giving himself wholeheartedly to the service of his patients. During the war he served with distinction in India attaining the rank of captain R.A.M.C. He afterwards returned to his practice and was appointed honorary assistant physician at the Infirmary in 1927 and became honorary physician in 1932. At the time of his death Dr Milne was chairman of the Medical Board. A regular attendant in the wards and an ever present member of many committees he lived to be highly respected and honoured by all who had the pleasure to work with him. For the past twelve years he acted as honorary secretary to the North Staffs Medical Society and this society owes a deep debt of gratitude for his courtesy, tact and capacity for hard work at all times. He joined the British Medical Association in 1911 and was deputy representative for the Annual Meeting of 1920.

Of a rather retiring disposition and unassuming character it took some time before one knew Charlie Milne really well, but then it was evident that there was a genuine note to the core whose whole aim and object in life was to play his part manfully and well and give of his best to those depending upon him. He had not in even in his old age and has been very truthfully said of him that nobody ever heard him use an unkind word of any sort. His sympathy was extended to his wife and his two young sons.

R A. K.

A familiar figure at international medical meetings, Professor EDVARD LAURITZ EHLERS will be missed by a wide circle of friends. His death occurred on May 6 in his seventy-fifth year. He was born in 1863 and began his studies in Copenhagen in 1880. He studied dermatology in Germany, Austria, and France, and in Denmark he was in charge of the Welander Homes for children suffering from congenital syphilis. His studies in leprosy took him to Iceland, the Balkans, the West Indies and many other parts of the world, and he was the organizer and secretary-general of the First International Leprosy Conference, held in Berlin in 1897. He was editor-in-chief of the *International Archives of Leprosy* and president of both the Danish and the International Union against Venereal Disease. The honours bestowed on him abroad by medical societies, universities and Governments were many, and included membership of the French Academy of Medicine. One of his most valuable contributions to medicine was his ambulant treatment of scabies. At international meetings Professor Ehlers was thoroughly at his ease thanks to his linguistic gifts and happy knack of mixing easily with all sorts and conditions of men. He had a genius for making the complete strangers he met at medical congresses instinctively feel that they were at least his equals—a remarkable gift in a man with few equals in his own sphere.

We regret to announce the death on June 4 of Dr WILLIAM FRYER HARVEY at the age of 52. From Bootham School, York, he went to Balliol College, Oxford, taking the M.A. in 1910, and the M.B., B.Ch. in 1917 after further medical study at Leeds. He had joined the Quaker training camp at Jordans in August, 1914, and went with the first detachment of the Friends Ambulance Unit to Flanders. On graduating in medicine he took a commission as temporary surgeon lieutenant R.N., and two days before the armistice was awarded the Albert medal for saving life at sea. This act of bravery was the risking of his life to operate on an engineer trapped in the wrecked and flooding engine room of a destroyer. Dr Harvey was dragged out unconscious from the effect of oil fumes and never fully recovered from the strain. He acted for a time as Warden of the Fircroft Working Men's College at Selly Oak, Birmingham, but had to abandon this owing to a breakdown of health. For some years he lived at Weybridge and devoted himself to literary work, in 1935 he moved to Leichworth.

The death of Dr A. CHARLES E. GRAY was reported in the *Journal* of May 22. L. A. H. writes: 'To-day there is a tendency to belittle the work of all voluntary social agencies, and to prophesy their ultimate replacement by State control, but it must not be forgotten that at the end of last century there was a band of voluntary social workers keenly interested in promoting schemes for the improvement of public health conditions. One of these was the late Dr Charles Gray. In 1894 Dr Gray became a member of the Medical Advisory Sub-committee of the Charity Organization Society, a connexion which lasted for over thirty years during most of which time he acted as chairman. With the late Sir Charles Lock and the late Colonel Montefiore he was responsible for placing the training of hospital almoners on a scientific basis and when at the end of 1907 the Training Council which later became the Institute of Hospital Almoners was formed Dr Gray was chairman from that date until his retirement in 1931. Before the Maternity and Child Welfare Act of 1918 came into force most if not all child welfare centres were in the hands of voluntary workers. Dr Gray was honorary medical officer to the Stepney Centre from its inception until the control was handed over to the medical officer of health in Stepney. When the first voluntary tuberculosis dispensaries in London were instituted by Herbert Woolf, came Lady Jones and Miss McGaw. Dr Gray was a prominent member of the Stepney Dispensary which, after being set up, was afterwards purchased by Lady Jones and the local authorities.'

Dr JOHN ROUND who died after a long illness on May 18, was born at Dudley, Worcestershire in 1862, and studied medicine at the Birmingham Medical School becoming L.R.C.P. & S.Ed and L.R.F.P.S.Glas in 1889. He later obtained the D.Sc of the Inter-Collegiate University, Chicago. After serving as assistant physician to the Plymouth Public Dispensary Dr Round settled in general practice in South London, and was for some years honorary physician to the Battersea General Hospital. He joined the British Medical Association in 1890, and had been chairman of the Greenwich and Deptford Division. Dr Round was a man of wide interests, and contributed from time to time to medical journals. His death in hospital following an operation, took place seven months after his retirement from active practice.

Third M.B., B.S.—P A S Aldie, †M S Campbell
 †H W C Fuller (University Medal) †A J Hines †H N G
 Hudson J Ketcher †C J Longland †Elizabeth J Rook
 †F H Scadding †F R C Wofinden H I C Balfour J D Ball
 Marjorie Bellon E R Bowes M A Carpen et J E Cates North
 H C Clarke May D C Cluford P R K Coe J C Colbeck
 W J C Crisp J A Currie J B Cuthbert Mary D Dale
 H J Davies G S W de Saram W R S Don I A Donaldson
 A C Dornhorst G H H Dunkert J A Dunlap Katherine W

MASTERY OF MIDWINTER — Isobel McArthur Brown '11 B. Ch B
D.P.H. Henry Canwarden M.P.C.S., L.R.C.P., Mohamed S
Ben Abdul Hamid M.R.C.S. L.R.C.P., D.P.H. Bowie Hatt
M.B. Ch B., Stanley Henderson '11 B., Ch B. Isabela A
Milne M.B. Ch B. Margaret Catherine O'Brien '11 B. Ch B
D.P.H., Amos J. Abraham Weisberg '11 D.

Medical Notes in Parliament

On June 8 in the House of Lords the Widows', Orphans', and Old Age Contributory Pensions (Voluntary Contributors) Bill passed through committee. The second reading of the Marriage Bill in the House of Lords is set down for June 17. Lord Kinnaird is in charge of the measure. The committee stage of the Methylated Spirits (Scotland) Bill in this House is also down for June 17. Lord Kinnaird sponsors this Bill.

The House of Commons this week discussed the estimates for the Ministry of Health and for the Ministry of Agriculture and Fisheries and began the committee stage of the Finance Bill. Introducing the Health Estimates Sir Kingsley Wood spoke of the progress in influenza research and the incidence of other diseases. He drew attention to the fall in the birth rate, and announced that inquiries were in progress into the trend of population. Further information would be secured about fertility. He discussed housing, nutrition, and maternity and child welfare services.

A new initiative for regulation of the trade in proprietary medicines may soon begin. There was a preliminary discussion at the House of Commons this week. The Drainage of Trade Premises Bill passed through a Standing Committee of the House of Commons with amendments on June 8. The committee stage of the Trade Marks Amendment Bill is set down for Standing Committee on June 15. Three days next week in the House of Commons will probably be allotted to the report stage of the Factories Bill.

Health in the Colonies

The Vote for the Colonial Office was debated in the House of Commons on June 2. Mr. ORMESBY GORE said he wished immediately to explain his position on the *mutisai* question. He awaited the considered comments of the Governors of Hong Kong and of the Straits Settlements and of their Executive Councils on both the majority and the minority reports on this question. Both in China and in the settled Chinese population of British Malaya and Hong Kong there was a growing public opinion of a more Western character which viewed these old social customs of China as things which ought to be done away with or to be changed.

Mr. WILLIAM LUSK moved the reduction of the vote and discussed the possibility of abolishing the *mutisai* system. He also spoke on problems in the African colonies. He drew attention to a report by a committee instituted by the Governor of Nyasaland to inquire into migrant labour. This report said that 120,000 adult natives, a quarter of the adult male population of Nyasaland were living away from their homes and not more than 5 per cent. had their women with them. In the West Indies problems of education and health called for attention. In Barbados malaria and typhoid were common. Food was poor and lacking in nutritive value. Sanitation was bad. People lived in overcrowded conditions. Wages were low and unemployment was high.

Mr. JAMES H. KENNEDY spoke of the social problems

be profitably employed in the lower levels of the mine. The Labour Opposition opposed the drawing upon the colonies for this kind of labour. Conditions in the Rand were unnatural and there was a tremendous amount of vice in the compound. Already Nyasaland was being denuded, and in some districts at least 80 per cent. of the men who left the villages did not return again.

Mr. ORMESBY GORE said it was desirable that the Government should take greater control than in the past of the migration of the Nyasaland boys. The Nyasaland native was particularly independent but if he went to the big mining areas he had to be looked after. He hoped to ratify the International Labour Convention on the recruitment of native labour. Experience of the migration of Nyasaland boys was so far satisfactory on the health side, and Mr. Creech Jones was out of date when he talked of the vicious life in the compounds. The improvement in the compound system of the mines in recent times had been remarkable.

NATIVE HEALTH IN KENYA

Sir ERNEST GRAHAM LITTLE quoted a West African chief who had said that the natives of West Africa owed their retention of the land to the mosquito which had checked the flow of white emigration into West Africa. In Kenya, on the other hand the native reserves represented a small proportion of the total acreage and the density of population in those reserves was calculated at 250 to the square mile which exceeded the density of population in British India and was accompanied by desperate poverty that was largely responsible for the health conditions. The Director of Medical Services in Kenya had told him it was impossible in most instances to collect a hut tax of 12s. 6d. per year, the whole income of a native family in Kenya being estimated by him at about £3 a year. In Nyasaland the position was even worse and the resulting migration of 50 per cent. of the adult males broke up the tribal system and spread infection.

An important research was conducted in Kenya in 1926. The conditions of two neighbouring tribes in the native reserves was compared and one tribe was found to be inferior to the other in height, weight, muscular strength and in resistance to disease. The dietary of the inferior tribe was found to have weakened their resistance to disease. The members lived chiefly on agricultural products while the diet of the other tribe was principally fresh meat and fresh food of every kind. A second investigation was made of the incidence of disease in certain parts of Kenya. A sample of some 650 individuals was taken a quarter of whom were children. Anaemia was found in 570 out of the 650 (haemic) murmurs in 546 malnutrition in 425 rashes in 446 pyorrhoea in 406 malaria in some 300 tuberculosis in 159 and venereal disease in only 5. These figures disproved the assertion that venereal disease was the cause of so much ill health in Africa. Of 436 individuals in that sample specially examined for worm infection 344 showed infection from hookworm. Each of the individuals examined could be described as an ambulant pathological museum. It was a grave indictment that Parliament allowed such a degree of preventable disease in any part of the world for which it was responsible.

Infantile mortality in many parts of Kenya was estimated at 40 to 50 per cent. this was partly the result of the general incidence of disease. Some 95 per cent. of a large sample of children under 10 were found to be suffering from malaria and there was a 75 per cent. incidence of hookworm. Yaws

and the relation of the capacity of the skull to the brain underneath went out to Kenya and conducted an investigation on his own account. The results of the investigation were published in the medical press and in many of the newspapers in November, 1933. In January 1934 the medical profession in East Africa represented by the combined Branches of the British Medical Association in East Africa, discussed the investigations and urged the Government of Kenya and the Home Government to prosecute a research investigation was also urged in influential medical quarters and the Press, but nothing was done, although the Colonial Secretary admitted the desirability of the research.

In May, 1936 the medical profession again urged prosecution of the same research. A startling thing happened. One of the doctors engaged in the research received an offer of promotion to leave Kenya. The consternation of the medical profession in Kenya was shown by the dispatch of a petition to the Governor protesting against the proposal to move this doctor. There were two reasons for this: the immediate cessation of the research, and the effect on the great laboratory in Nairobi. The Pim Report pointed out that this was the centre of research for the whole of Africa, and at a cost for the whole laboratory of under £16,000 a year it provided pathological data which would cost at the ordinary price over £20,000 a year. The doctor was reinstated and was given a right salary and an improved status. Since then there had been another example of administrative harshness. Dr H. L. Gordon, the senior doctor of the research team, learnt from the newspapers that he had been retired. He had been left without means after a long period of service and the work of the team was destroyed by that removal.

MEDICAL ESTABLISHMENT ON THE GOLD COAST

Mr SORESENSEN said Dr Selwyn Clark's report on the Medical Department of the Gold Coast for 1935 was disturbing regarding the deterioration of the physical well being of the natives. That report was less reassuring than in recent years, a fact connected with the decline in the available medical staff even though the number of patients had increased. In 1929 ninety medical officers attended 249,476 patients, whereas in 1935 sixty-six medical officers attended 273,000 patients. For the treatment of leprosy there was a shortage of staff. Mr Sorensen would like to hear some indication that investigation was going on into possible incidence of silicosis and tuberculosis on the Gold Coast.

Sir HENRY PAGE CROFT said the huts in Kenya of whose insanitary condition Sir E. Graham Little had spoken were all in the native reserves. The Government attempted to leave the natives in the conditions of life in which they preferred to dwell. He begged the Committee not to press too far the idea that they could compel certain tribes to eat a form of diet which specialists in this country considered to be good for them. He had himself tried experiments in this matter with native employees in East Africa and received weekly reports on the physical condition of those in his employ. It was in the interests of everyone engaged in productive work in Kenya to see that the natives were fit. Mr PALING said experience had proved that natives from the Tropics employed on the Rand were subject to a very high death rate. A considerable number had pneumonia and because of the high mortality the migration was stopped. Now recruiting had begun again. It was a dangerous experiment to renew. He hoped there was some real guarantee that the circumstances which existed previously had been altered.

Mr ORMSBY-GORE said he would deal with the questions raised by Sir E. Graham Little. He (Mr Ormsby-Gore) had not been as impressed as Sir Ernest with the scientific value of the research into brain capacity of certain natives and although some doctors agreed with Sir Ernest a great many doctors agreed with him (Mr Ormsby-Gore). Before he could authorize any expenditure for medical research, either of this or of any other character in Kenya or elsewhere he must take advice from the Medical Research Council of this country and that body did not advise this research. Dr Gordon was

never a Government medical officer. He went out to Kenya on his own after the age of 60. He was a well known alienist who had specialized in particular branches of mental illness, and the Government of Kenya was glad to employ him as a local consultant in connexion with the asylum at Nairobi. When he reached the age of 70, which was far beyond the retiring age of most people in the Tropics and had been in Kenya six or seven years the Government concluded it was essential to have a whole time medical consultant and a younger man and they therefore dispensed with the services of Dr Gordon. Mr Ormsby-Gore said he was glad that Dr Vint, a young and able consultant, had been able to carry on in Kenya. He had been offered a better post with higher pay in Mauritius, but there was a great wish that he should stay in Kenya, and he had been induced to stay there.

Sir E. Graham Little had suggested it might be possible that brain deficiency was the cause of malaria and other diseases. That could not be so. Malnutrition might be one of the causes but the causes of most of these tropical diseases were known. There was only one way to deal with malaria, and that was to kill the mosquitos. Yaws was a disease on which remarkable work was being done by the British medical staff all over Africa. The experimental migration of natives from Nyasaland to the Rand had been allowed because there had already been a successful migration of natives north of latitude 22. The results were now very different, and although there were some cases of pneumonia there were very few deaths. Until we had a full report no more natives would be allowed to go but so far the reports were satisfactory and he had no ground to believe there was any special danger to health. There would be a further opportunity of debating this vote.

The House divided, and the vote was approved by 141 to 89.

Certified Insane in Scottish Mental Institutions

On May 25 Mr ROBERT GIBSON asked the Secretary of State for Scotland how many persons were detained in mental institutions in Scotland as certified lunatics on December 31 in the years 1930 to 1936.

Mr ELLIOT in reply, circulated the following table

	1930	1931	1932	1933	1934	1935	1936
Numbers of persons detained as certified lunatics in mental institutions in Scotland on December 31 of each year	17,650	17,935	17,915	18,069	18,251	18,353	18,304
Numbers received into such institutions each year	3,061	3,009	2,800	2,987	2,732	2,760	2,533
Numbers who were received and who were married persons	1,100	1,147	1,093	1,098	988	1,039	962
Numbers who were discharged each year	1,396	1,262	1,285	1,314	1,186	1,221	1,217
Numbers who were discharged and who were married persons	588	535	558	570	529	509	504
(a) Married and had been detained							
(1) for less than 3 years	547	490	520	520	455	460	449
(2) for 3 years and less than 5 years	17	22	22	19	22	23	13
(3) for 5 years and less than 10 years	15	14	10	24	16	15	2
(4) for 10 years and less than 15 years	5	5	4	5	3	7	3
(5) for over 15 years	4	4	2	2	3	4	2
(b) Unmarried (including widowed and divorced persons) and had been detained							
(1) for less than 3 years	729	649	654	674	579	635	633
(2) for 3 years and less than 5 years	40	30	33	27	33	3	5
(3) for 5 years and less than 10 years	29	26	21	23	24	23	30
(4) for 10 years and less than 15 years	5	7	10	11	10	9	14
(5) for over 15 years	5	5	9	9	11	10	9

Tuberculosis in Wales

Sir KINGSLEY WOOD replying on May 27 to Mr James Griffiths, said that although the rate of mortality from tuber-

culosis in Wales was higher than in England and Wales as a whole there had been a substantial decline in the rate in Wales as well as in the rest of the country. This decline amounted to 38 per cent. on the figures for 1935 as compared with 1910. In Wales the arrangements for the treatment of tuberculosis were made by the Welsh National Memorial Association on behalf of the Welsh county and county borough councils. A survey of the services provided by the Association was being undertaken by one of the medical officers of the Welsh Board of Health. He awaited the results of this survey before considering what further measures were required.

On the same day (May 27) Mr JAMES GRIFFITHS asked the President of the Board of Education whether having regard to the high incidence of tuberculosis in Wales the school medical officers of health in the Principality had made any reports on the large number of school buildings that were unsuitable and should be replaced, and on the fact that in the rural areas children have to walk long distances to school, and during inclement weather had no facilities for drying their clothes. Mr OLIVER STANLEY replied that a few school medical officers had called attention to these matters in their reports but the great majority had not done so. He knew the importance of improving or replacing unsatisfactory school buildings. Progress was continual in this respect. As regards provision of facilities for drying children's clothes and for providing a midday meal, attention had been called to these matters in the Board's pamphlet on elementary school buildings and in a circular issued last year. He hoped to secure a substantial extension of these facilities.

Marriage Bill

The remainder of the report stage of the Marriage Bill was taken in the House of Commons on May 28 and the third reading followed. This Bill is a private member's measure but the Government provided the time for these stages. On the report stage Sir THOMAS O'CONNOR, Solicitor General explained an amendment previously proposed dealing with grounds of divorce. He said that under the Bill a party could not within five years of marriage ask for a divorce for adultery but the party could go to the court and ask for a judicial separation on the grounds of adultery. The amendment was drawn to make it clear that in those circumstances when the five years were up the party might ask on the same grounds for a divorce. The amendment was accepted. The House accepted an amendment moved by Mr SELLERS providing that the Act should come into operation on January 1, 1938.

Mr DR L. A. HURF moved that the Bill be read a third time. Sir ARTHUR WILSON, in seconding, said the marriage laws had been under consideration four times since 1912. Public opinion had developed rapidly since then and although the need for marriage might have weakened among certain classes it had strengthened in others. A report recently presented to the House on maternity showed that of 26,000 illegitimate births registered less than half were first births. The remainder were the offspring of men and women living lawfully together who were precluded by the law from regularising their union by marriage. Once the Bill became law he was confident there would be a steady reduction in the number of illegitimate births registered.

suffering from mild mental disorder to know that if she required care and treatment for five years she could be divorced would be likely to induce serious mental disease.

Sir WM WAYLAND said a very small percentage of lunatics and people of unsound mind recovered after five years. Mr LYONS said the word lunatic did not occur in the Bill. There was not a word in it about certification or about any technical classification. There was a great difference between an act committed by either husband or wife which was clearly a matrimonial offence and the visitation of a disease which nobody could prevent. Mr H. STRAUSS said Clause 1 of the Bill which forbids a divorce within five years of the marriage introduced a provision which did not exist in the law of any other country. It would cause suffering and the number of hasty marriages which would be prevented was infinitesimal.

Mr A. P. HERBERT replying to the debate said the definition of cruelty in the Bill was one which had been accepted by the Ecclesiastical Courts for hundreds of years and did not include anything in the nature of mental cruelty.

The Bill was then read a third time by 190 to 37, and was sent to the House of Lords.

Admission of Alien Doctors

Mr ROSTRON DUCKWORTH on May 28 asked the present policy with regard to the admission into this country of foreign doctors, dentists, research workers and students etc. the aggregate number permitted to settle here in the last two years and what representations had been received from professional bodies in this country on the subject of this form of competition.

Mr GEOFFREY LLOYD replied that the policy was to restrict closely the admission of foreign doctors and dentists who wished to set up in practice in this country after being admitted to the *Medical and Dentists Registers*. Since March 1935 the rule had been not to permit foreigners to engage in medical practice in the United Kingdom save in the most exceptional circumstances. The same rule had been applied in the case of foreign dentists since February 1936. No general figures of the numbers to whom permission to practise had been granted were available. The admission of refugee doctors and dentists from Germany had been the subject of representations from and discussion with the various professional bodies concerned and separate figures had been kept of the numbers of refugee doctors and dentists to whom permission to set up in practice had been granted. They were 183 doctors and seventy-eight dentists of whom the large majority, in the case of the doctors had either been granted permission to practise or had commenced their studies for a British degree before March, 1935 and in the case of the dentists had been admitted to the *Dentists Register* before February, 1936. As regards research workers and students whose work did not involve employment in the service of a person or firm in this country no obstacles were placed in the way of their admission provided their maintenance here was assured but they were expected to leave on the completion of their research or study. If employment was involved they were not admitted unless in possession of a permit issued by the Minister of Labour to their respective employer in accordance with Article 1 (3) (b) of the Aliens Order 1920.

invitations to serve on it Lady Amptill, Mrs. A. E. Astley, Professor J. L. Brierley, Mr. E. Ford Duncanson, Dr. Robert Hutchison, Sir William McKechnie, Mr. H. R. Tutt and Mr. Cecil Whiteley, K.C. One other woman member will be announced soon.

Eradication of Diseases Among Cattle

The following is a statement on agricultural policy made to the House of Commons by Mr. W. S. Morrison on May 27:

The Government proposes to initiate a large scale and more comprehensive campaign for the eradication of animal diseases in Great Britain. Our object is to improve the health of our livestock and increase agricultural productivity by seeking to eliminate what is perhaps the worst of all forms of wastage and economic loss in agriculture. In the first instance efforts will mainly be directed to the eradication of diseases among cattle. The scheme will involve an additional charge on the Exchequer of about £600,000 per annum for the first four years. It will, however, involve centralization of public veterinary services, and as against the increased cost to the Exchequer the expenditure by local authorities will be reduced by about £170,000. Parliamentary authority will be required for these proposals. The Government is anxious, however, to lose no time in developing the existing schemes of control of disease, and accordingly I am arranging at once to amend the Attested Herds Scheme under the Milk Act 1934 by providing additional assistance in England and Wales as has already been done in Scotland to owners of dairy stock who are desirous of eradicating tuberculosis from their herds. This revised scheme will become operative on June 1 next. The necessary legislation to give effect to these proposals will be introduced at the earliest possible moment."

It was subsequently explained that the whole of the inspection of livestock and diagnosis of scheduled diseases would be incorporated in the central veterinary service, but the other duties, including the work of the police, would be unaffected. The following would be transferred duties under the Tuberculosis Order 1925, routine veterinary inspection of dairy herds under the milk and dairies legislation, tuberculin tests under the Milk (Special Designations) Order, diagnostic inquiries into scheduled diseases.

Co-operation of Diseases of Animals Committees of local authorities, the police forces, the public health authorities with the central veterinary inspectorate would be essential.

Maternal Mortality Report

Sir KINGSLEY WOOD on May 27, told Mr. Hepworth that he had already taken action on the principal recommendations contained in the report on an investigation into maternal mortality. He recalled that on May 7 he addressed a circular requesting all maternity and child welfare authorities in this country to take steps to extend and improve the services already available in their areas. Sir Kingsley added that he was in communication with the Medical Research Council on the questions recommended in the report for further research.

Trade Effluents

Sir KINGSLEY WOOD in the House of Commons on May 27 moved the second reading of the Public Health (Drainage of Trade Premises) Bill. This Bill has already passed the House of Lords. Sir Kingsley said its object was to improve the purity of the streams and rivers of this country and also to relieve traders of a troublesome condition. The problem was pressing because of the tendency for manufacturers to settle on rivers which had not been industrialized before and because of the importance of conserving available sources of water supply, both domestic and industrial. The Joint Advisory Committee on River Pollution concluded in 1930 that local sanitary authorities should be under a general obligation to take and dispose of the trade effluent of their district that the trader should have a right to discharge such effluents to the public sewers and that there should be certain safeguards and conditions. This measure provided that local authorities either by agreement with traders on individual applications or by means of the enforcement of the by-laws should settle the terms on

which effluents might be discharged into sewers. These by-laws must be approved by the Ministry of Health. Traders were given a right of appeal and power was given to make exceptions to deal with particular cases. The Bill only dealt with the regulation of what might be passed through drains, as the drains themselves were regulated by the Public Health Act 1936. Provisions were included for protection of authorities who were under an obligation to treat sewage from other local authorities' areas and from docks and harbour authorities.

Mr. SHORT said the Bill was an improvement on that introduced by Lord Gainford in the House of Lords last year which had failed to reach the Statute Book. The pollution of streams and rivers by trade effluents was general and the measure was long overdue. Mr. GALLACHER said the Bill defined trade effluent as effluent with or without particles of matter, but he had in mind a coal pit which had dumped its rubbish into a harbour, and so caused pollution and desolation. Mr. MATHERS also spoke of coal dust going directly into streams from the settling ponds at collieries and said this did immense harm to rivers but did not seem to be dealt with by the Bill. Mr. DAVID ADAMS said the Tyne was really a large sewer undoubtedly highly polluted and yet no medical officer of health from the Tyneside area would state that the health of the community was in any degree affected by the fact.

Mr. R. S. HUDSON said he understood a separate Bill was needed for Scotland and was under consideration by the Scottish Office. The discharge of coal dust was already an offence under an Act passed in 1876 for the prevention of pollution of rivers. He would investigate a complaint made by a member about pollution by deposit of night soil on a river bank.

The House agreed to the Bill without a division, and it was sent to a Standing Committee.

Drinking of Methylated Spirits in Scotland

In the House of Lords on June 1 Lord KINNAIRD moved the second reading of the Methylated Spirits (Scotland) Bill which has passed the House of Commons. He said that for many years the drinking of methylated spirits in Scotland had reached dimensions which had caused grave anxiety, and the object of the Bill was to put a stop to the practice. He was informed by the largest manufacturer, who made 60 per cent of all methylated spirits that 9.5 per cent of methylated spirits was wood alcohol. Professor Sydney Smith, Regius Professor of Forensic Medicine in the University of Edinburgh had stated that it was much more toxic than ordinary alcohol owing to the fact that it took much longer to destroy the tissues. One of the most disastrous of its effects was on the central nervous system. Medical officers of health, police surgeons and others confirmed the statement that it sapped moral strength and led to greater moral depravity than did the drinking of ordinary beverages. Those who drank methylated spirits were in great danger of becoming blind and if they persisted in becoming mad.

Lord ASQUITH said that while he did not want to oppose the principle of the Bill in so far as it was concerned with stopping the drinking of methylated spirits he saw nothing in the Bill to prevent a person buying four gallons in one place and four gallons more in at least another half a dozen places. When the Bill reached committee he would put down amendments to prevent overlapping and to protect the interests of the Pharmaceutical Society of Great Britain for which an Act of Parliament was passed in 1933 and which was under the discipline of the Lord President of the Council. He did not know if the Lord President of the Council and the Statutory Committee had been consulted in regard to the Bill which implied a double testing, and the taking away of power and authority given to the Pharmaceutical Society by the recent Act.

Lord ALSTON supporting the second reading said that if the principle of the Bill was that with the least possible interference to the public they should check and regulate the use of this noxious drug. That was a sound principle.

The LARL OF MANSTFIELD said that taxation had raised the price of ordinary spirits to such an extent that many people were unable to buy them and consequently sought refuge in some nefarious substitute. Some persons tried to drink methylated spirits diluted with water, others tried to disguise its taste by mixing it with cheap red wine, which, in itself was a noxious drink, producing such mixtures as 'Red Biddy,' 'Yellow Peril' and concoctions of other colours the effects of which were very serious.

Lord STRATHCONA said that the Government's attitude was one of benevolent neutrality. It considered the Bill most desirable and that it ought to go to Committee.

The Bill was then read a second time.

Expenditure on Tuberculosis in Scotland—On May 25 Mr WILSON asked the Secretary of State for Scotland what was the annual cost for the treatment of tuberculous crippled, and orthopaedic cases. Mr ELLIOT replied that local authorities in Scotland incurred a net expenditure of £640,670 on the treatment of tuberculosis in 1934-5 the latest year for which information was available. Orthopaedic and cripple cases were dealt with by local authorities under their tuberculosis child welfare and school health schemes and a separate figure for this expenditure was not available.

Deficiency in R.A.M.C. Establishment—On June 1 Mr HORE BELISHA replying to a question said that a deficiency of sixty three regular Royal Army Medical Corps officers on the present authorized establishment was being made good by thirty three temporary commissioned officers and a number of civilian medical practitioners. The number of candidates presenting themselves continued to improve.

School Dental Inspection—On May 31 Mr LINDSAY informed Mr Lyons that during the year ended December 31 1936 3,463,948 children in public elementary schools in England and Wales were subjected to dental inspection under arrangements made by local education authorities. Of these 2,425,299 children were found to require dental treatment and 1,536,627 were treated under arrangements made by local education authorities.

Notes in Brief

The total number of houses completed by private enterprise in England and Wales with State assistance from 1919 up to March 31 1937 was 423,723. From 1919 up to March 31, 1936 local housing authorities in England and Wales completed 829,851 houses with State assistance and during the year ended March 31 1937 they completed a further 71,029 houses. The total amount of State subsidy paid in respect of the houses from 1919 up to March 31 1937 was £178,715,463.

The number of houses completed in Scotland with State assistance from 1919 till March 31 1937 was 215,537. The State subsidy paid up to that date amounted to £23,549,148.

Medical News

Founders Day will be celebrated at Epsom College on Saturday June 19. The second day of the cricket match The College v The Old Boys will begin at 11 a.m., there will be service in chapel for boys and parents at noon, an assault at arms at 2.15 and presentation of prizes by Sir Hugh Walpole at 3.30.

The annual general meeting of the London and Counties Medical Protection Society Limited, will be held at Victory House, Leicester Square W.C. on Wednesday, June 16 at 4 p.m.

The twenty sixth Oxford Ophthalmological Congress will be held in Keble College from July 7 to 10. On the morning of July 8 a discussion on the Problem of Myopia will be opened by Mr Bishop Harman and Mr Arnold Sorsby. The Doyné Memorial Lecture by the late Dr D. J. Wood of Capetown on Night Blindness in Eye Disease—Suggestions and Speculations will be read by his friend and colleague Dr R. C. J. Meyer of

Johannesburg. The full programme of the congress may be obtained from the honorary secretary and treasurer, Dr F. A. Anderson, 12, St John's Hill, Shrewsbury.

The twenty fourth centenary of Hippocrates will be celebrated this summer at Cos, Athens, and Epidaurus by a cruise organized by the Latin Medical Union (Umfia). Further information can be obtained from Dr Dartigues, Bureau de l'Umfia, 81, Rue de la Pompe, Paris 16e.

An International Congress for Short Waves in Physics, Biology, and Medicine will be held in Vienna from July 12 to 17. Further information can be obtained from the secretariat, Alserstrasse 4, Wien 9.

The sixteenth International Neurological Congress will be held in Paris from July 8 to 14, when the subject for discussion will be pain in neurology. Further information can be obtained from Dr Crouzon, 70 bis Avenue de Jéna Paris 16e.

The fiftieth Congress of the French Society of Ophthalmology will be held in Paris from June 28 to 30. Further information can be obtained from the general secretary, M. René Onfray, 6, Avenue de La Motte-Picquet, Paris 7e.

The postponed eleventh International Congress of Psychology will be held in Paris from July 25 to 31, with Professor Pierre Janet as honorary president, Professor Henri Piéron as president of the executive committee and Professor I. Meyerson as general secretary. The headquarters of the congress are at the Laboratory of Psychology of the Sorbonne.

The issue of the *Wiener medizinische Wochenschrift* for May 22nd contains a history by Dr I. Fischer of the Vienna Medical Society, founded in 1837.

The April issue of the *Bulletin de l'Office International d'Hygiène Publique* is devoted to typhus and ankylostomiasis.

Dr Donald M. Johnson has been adopted by the Bewdley Liberal Association as candidate for the forthcoming Parliamentary by-election of a member for the Bewdley Division.

Mr Alexander Maclean in handing over to Lord Horder, chairman of the Empire Rheumatism Council, at a luncheon on May 26, a gift of 10,000 guineas to finance a rheumatism research unit, said that he regarded this campaign against rheumatism as the most urgent of the needs of to-day. Mr Maclean promised a further £2,500 to the Empire Rheumatism Council making his gift £13,000 in all. He marked Coronation year by distributing a total of £40,000 to medical charities.

On behalf of the Registrar-General for England and Wales a silver medal is being struck by the Royal Mint to commemorate the centenary of the births, deaths and marriages registration service, which came into operation in 1837. The medal is to be issued to active or retired members of the department and service subscribing to the celebrations.

Dr James Fenton, medical officer of health for the Royal Borough of Kensington, has been elected president of the Society of Medical Officers of Health for the session 1937-8. Dr. Fenton is present chairman of the Central Council for Health Education, and is a past chairman of the Royal Sanitary Institute.

Professors Bezançon, Carnot, Claude, and Gosset are among the eight French leaders of the medical profession who have been nominated *Professeurs de Classe Exceptionnelle*—a distinction which counts from October 1, 1937 and which qualifies them for remaining in office till the age of 70.

The Paris University and municipal authorities have come to terms with regard to the creation of a professorship in social medicine as from October 1, 1937. The incumbent of this chair will initiate medical students in their fifth year into certain elements of preventive medicine such as sickness insurance.

Letters, Notes, and Answers

LETTERS, NOTES, ETC

All communications in regard to editorial business should be addressed to THE EDITOR, BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

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QUERIES AND ANSWERS

Disfiguring Pigmentation

"MB CM writes I have an elderly patient whose cheek is much disfigured by the presence of a fairly large pigmented deposit of a deep brown colour and she is naturally sensitive to its presence as it attracts attention. Will any reader suggest a form of treatment for its obliteration?"

Splitting Finger-nails

"A D K. writes in reply to 'Stumped' (*Journal* May 29 p 1144) Splitting finger nails is a form of atrophy of the nails found in conditions in which there is venous stasis in the extremities and in nervous diseases, chronic tuberculosis, nephritis diabetes, and as a chemical effect—for example after soaking the hands in soda water. For treatment a nightly application of balsam of peru 50 per cent in castor oil, to the cuticles stimulates the nail growth. Klander has had good results from a diet rich in sulphur, since the metabolism of sulphur seems to play a part in the development of nails. In the house I should advise protecting the nails with small pieces of adhesive plaster. The nails are best kept short by cutting rather than filing as the use of a file often produces further splitting.

Oxaluria

Dr VIOLET HASTINGS (Auckland New Zealand) in reply to Perplexed (*Journal* March 13 p 593) writes Dr C C Higgins of the Cleveland Clinic Cleveland Ohio U.S.A., is obtaining successful results in preventing and also in dissolving urinary calculi by diet. The treatment is a diet rich in vitamin A and the maintenance of the pH of the urine at the desired degree by the adjustment of acid and base-forming foods. Particulars of the treatment can be obtained from Dr Higgins himself.

Income Tax

Professional Subscriptions

SERVICE inquires whether a deduction for professional subscriptions can be claimed (a) by a medical officer serving in one of the armed Forces, and (b) by an officer on retired pay employed in a whole-time appointment.

* There is judicial authority for holding that such deductions are allowable under Schedule E—which is the schedule dealing with employment including Crown service—only where the individual assessed is required by the terms of his appointment to belong to the society in question. This would seem to exclude "Services" claim. The strictness of the rule was criticized in the report of the fairly recent Income Tax Codification Committee.

LETTERS, NOTES, ETC

Frars' Balsam for Dressings

Dr H KNIGHTS RAYSON (Kirkwood South Africa) writes I read with interest the remarks of Dr Charles Barber on the external use of iodine and his eulogy of frars balsam (March 6 p 540). I agree with him entirely, and although I at first used tinct iodine I soon gave it up and reverted to an old tried friend tinct benzoin. As I was ward clerk to Mr Durham at Guy's, and noted the excellent results he obtained from its use as a dressing for all he did after suturing the wound was to apply a strip of lint saturated with the drug. I could if space permitted give many illustrations of its usefulness and my advice to the young practitioner is to try it in different cases. If wounds are dirty when seen do not wash but apply it frequently and plentifully. The only trouble is it is painful on application.

Reducing by the Book

Surgeon Lieutenant D P GURD R.N. writes I have been interested to note in the *Journal* and in many magazines, advertisements which display various types of belt and abdominal supports. The prescribing of these appliances for the correction of visceroptosis and herniae or for a short period after operation, appears reasonable enough, but they are also advertised for persons of sedentary occupation as a substitute for exercise! It would appear to me that provided the abdominal musculature is of moderate development the use of such supports is contra-indicated and would, if adopted, make the muscles still more lazy. To lie supine with a heavy book on one's abdomen and to practise abdominal breathing in this position for five minutes each morning would appear to be within the capabilities of most people, however busy and is quite effective in reducing most cases of premature girth.

The A.A. Irish Handbook

The 1937-8 A.A. Irish Handbook which has been completely revised, contains a great deal of useful information for resident or visiting motorists. Details are given of inspected hotels and garages in the Irish Free State and Northern Ireland, and shipping charges to and from Great Britain are shown together with particulars of steamship routes and times of sailing. A.A. services to members are fully described and insurance information lists of car parks in Dublin, Cork and Belfast, and tables showing lighting up times and amounts of motor taxation are included, as well as summaries of the Irish Free State Road Traffic Act and motor law in Northern Ireland. Members of the Automobile Association visiting Ireland may obtain the handbook without charge on application to any A.A. office.

Gas Cooking in Hospital

A booklet illustrated with examples of modern hospitals has been published by the British Commercial Gas Association under the title "Gas Equipment for Hospital Kitchens." This can be obtained post free on application to the publishers at Gas Industry House 1 Grosvenor Place London S.W.1. It contains much of value to those on the administrative side of hospitals, clinics, and nursing homes.

Medical Golf

The seventh spring meeting of the Sussex Medical and Dental Golfing Society was held on the links of the Manning Heath Golf Club Hoveham on Sunday May 30, when twenty six members were present. The morning round for the Rolls Hoare Cup was won by Dr Craig with a net score of 69. Messrs Ditch and Thwaites were runners up with a score of 72. The afternoon round a ball against bogey resulted in a tie between Messrs Craig and A.A. Smith with a score of 8 up. Messrs Elliott J Thwaites Anderson and Wright were second with 7 up.

Disclaimer

D. VIVIAN METTIVE (Port of Spain Trinidad B.W.I.) writes The announcement in the *Trinidad Diocesan Magazine* of May 1937 which alludes to my work and in particular to an *oration* performed by me on the wife of a clergyman was in no way authorized or sanctioned by me. I know no hint of it until a copy of the magazine was sent to my wife by a friend.

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

461 Iron Metabolism in Normal Women

R M LEVERTON and L J ROBERTS (*J Nutrit* January, 1937, p 65) have investigated the iron balance in four healthy women, three aged 21 and one 27, for continuous periods of 110 days for two of them and 140 days for the other two. Food intake was adequate and controlled, and its iron content was determined, together with that of all excreta and menstrual and other blood losses (sampling epistaxis, etc). Daily records of weight and of the haemoglobin and erythrocyte content of the blood were kept. Detailed figures are given for each subject, showing iron intake and excretory loss, menstrual and other losses, and the corresponding iron balances. The mean daily intakes of iron in the food ranged from 10.03 to 13.61 mg, and the mean daily balances between iron in food and excreta from -0.2 to +1.48 mg. Although there were periods of negative and of positive iron balance, a negative balance never occurred when the daily intake of iron from food was 0.225 mg or more per kilogramme of body weight. The mean menstrual losses ranged from 11.13 to 22.84 mg of iron, corresponding to 24 to 52 c.c. of blood. The losses were relatively constant from period to period in the same subject. There was no relationship between the time of iron storage and its loss during a menstrual period, but in nine of the sixteen menstrual cycles studied the subjects were in iron equilibrium or slight positive iron balance when the menstrual losses were taken into consideration. One subject, given 5 mg. of iron as ferric ammonium citrate daily for forty-five days in the middle of the experiment, showed an increased excretion and decreased retention of iron as compared with the periods when the supplementary iron was not given. All the subjects increased the haemoglobin content of their blood by at least 1 mg per 100 c.c. during the experiment, red cell counts remained remarkably constant. The haphazard variations in the iron balances from time to time indicate that balances worked out from a few days' observations are valueless. The authors calculate that the minimum daily requirement of iron for a young woman weighing 56 kilos is 16 to 17 mg. They conclude that as the average dietary seldom contains more than 15 mg this deficiency may account for the low haemoglobin content of women's blood at present accepted as normal.

462 Artificial Pneumothorax

C M F SINDING LARSEN (*Acta med scand* Supplement, 1937, 80, p 212) has studied 1,126 sputum positive patients suffering from pulmonary tuberculosis for whom lung collapse treatment was prescribed at the Vejleford Sanatorium in Denmark between 1906 and 1932. Only in 5 per cent of all these cases was a technically effective pneumothorax induced. It was relatively effective in 11 per cent, less effective in 24 per cent, ineffective in 25 per cent (extensive adhesions preventing any appreciable collapse of the diseased pulmonary tissues), and entirely unsuccessful in 35 per cent. All the patients were traced, and 640 were found to have died. A comparison of the mortality among these patients with that of the healthy population showed it to be twelve times higher in the former than in the latter. But while this ratio was only 5.8 for the patients in whom an effective or relatively effective pneumothorax was induced it was 9.4 for the patients with a less effective pneumothorax, 27.1 for the patients with an ineffective pneumothorax, and 22.1 for the patients in whom pneumothorax was quite unsuccessful. The last two figures suggest that a partial pneumothorax which is so small as to be ineffective is likely to

do the patient more harm than good. Approximately half of all the patients developed a pleural effusion within the first six months, the percentage of such cases being as high among patients with a technically effective pneumothorax as among those in whom a pneumothorax was ineffective. These pleural effusions had no essential influence on the prognosis. The author recommends the maintenance of a pneumothorax for at least two years after it has become clinically effective, its discontinuation should be gradual and under the most careful clinical, radiological, and bacteriological control.

463 Turpentine and Ill health among Painters

G RUNDBERG (*Hygien* Stockh, April 15, 1937, p 209), under the auspices of the Swedish Government, has conducted an investigation into the health of painters, with special reference to the possibility of turpentine being responsible for at any rate part of the ill health from which they suffer. Of the 450 Stockholm painters examined 110 were found to be suffering from eczema and fifty six from slight changes in the skin which might have been a very early form of eczema. The most common ailment was conjunctivitis. Disorders of the digestive system were also common, anorexia being the most frequent complaint, while chronic gastric catarrh was diagnosed in as many as twenty three cases and gastric ulcer in seventeen. The central nervous system was also often involved, many patients complaining of giddiness, headache, and lassitude. A dry cough was observed in fifty-eight cases and albuminuria in seventeen. The author finds that there has of late been a gradual displacement of pure turpentine by cheaper and inferior products as well as by turpentine substitutes made from petroleum. His problem was therefore complicated by the variety of turpentine preparations and substitutes with which he had to deal, and it was only after an investigation lasting a year that he came to the provisional conclusion that the comparatively pure French turpentine was less injurious than the Swedish sulphate turpentine and charcoal turpentine. The manufacturers of these Swedish preparations have co-operated with him and are now proposing to adopt measures calculated to yield a comparatively pure turpentine.

464 Serum Treatment of Anthrax

I ANDREW (*Dtsch med Wschr* April 2, 1937 p 556) records his experiences in Bulgaria with 307 cases of anthrax in the five-year period 1931-5. The mortality was 7.8 per cent though if cases in which the patient was already moribund on admission to hospital were excluded it was only 4.2 per cent. Before the introduction of serum treatment the mortality was about 25 per cent. The serum was obtained from the Veterinary Bacteriological Institute of Sofia, and comparatively large doses were given by intramuscular injection, which was, as a rule, preferred to intravenous injection on account of the possibility of shock. The amount of serum given ranged from 50 to 500 c.c., and when the maximum dose was given it was distributed over two to three successive days. Serum reactions were comparatively rare and never serious. Moderately severe cases in which the general condition was not very alarming but in which merely expectant treatment had failed benefited most. As a rule the only local treatment was the application of compresses and the general treatment with intramuscular and intravenous injections of serum was supplemented by three subcutaneous injections of 5 c.c. each of oil of camphor. Among the milder cases there were no deaths and as many as 40 per cent of the severe cases ended in recovery. The author interpreted as a favourable sign

the transitory appearance of erythema about the anthrax pustule some twenty-four to forty-eight hours after the first injection

465 Thoracic Lymphogranulomatosis

F KUHLMANN and H SCHULZE-FORSTHOEVEL (*Med Welt*, April 10, 1937, p 494) have analysed thirty-eight cases of Hodgkin's disease. In a proportion of the cases the diagnosis was confirmed by a post-mortem examination. They describe the usual clinical features and the thoracic type of the disease. It appears that an early localization of the tumour in the right upper mediastinum is typical and is an important differential diagnostic sign in the early stages. Generally speaking, the disease seems to spread along the right side of the mediastinum and into the right lung. The spread seems to follow a certain definite course, which the authors present in a diagrammatic drawing

Surgery

466 Intraspinal Injections of Alcohol

A ADSON (*Minnesota Med*, March, 1937, p 135) states that the introduction of alcohol in limited amounts of various concentrations into the subarachnoid space of the spinal canal results in changes in the nerves and spinal cord the effects of which may vary from relief of pain to complete paralysis. Small quantities, 2 to 16 minims of 95 per cent alcohol, are capable of relieving pain without producing motor paralysis, and such injections are of use in the treatment of intractable pain caused by neuritis, neuralgia or a metastatic lesion. Subarachnoid injection of alcohol is especially indicated also in cases of radiculitis and intractable pruritus ani and pruritus vulvae. Vaso-spastic conditions, such as Raynaud's disease, thrombo-angitis obliterans, essential hypertension, spastic ureter, and dystonia musculorum deformans have also benefited. The patient is placed on his side with the spinal roots to be treated on the upper side. A Becton and Dickinson 1 c cm syringe is used, and a Barker 21 gauge Luer spinal puncture needle. Absolute alcohol is best, and should be sterilized in an autoclave to ensure against injection of living spores. The needle is introduced through a vertebral space just below or above the roots to be treated, and 3 c cm. of cerebro spinal fluid are withdrawn before the alcohol is injected. Following injection the patient will feel a sensation of warmth over the body, and in a few minutes pain disappears, and is sometimes followed by impairment in tactile sensations. About 6 to 8 minims is injected followed by a further injection if necessary. In thirty six cases treated, sixteen patients experienced complete relief and twelve partial relief while twelve were unchanged. It is emphasized that excessive doses and improper administration will result in motor paralysis. This method of treatment will not, of course, relieve pain of functional or central origin.

467 Volkmann's Contracture

According to F VON DANCKELMANN (*Med Klinik*, March 25 1937 p 429) ischaemia in the general sense used originally by Volkmann is the primary cause of the rare disturbance of the neuro muscular apparatus of the forearm which bears his name. It most commonly follows supracondylar fracture of the humerus less often fracture of the forearm occasionally dislocation of the elbow and very rarely haematoma formation without bone injury or displacement. It is practically confined to children under 10. More commonly coldness paraesthesia and pain are reported in the hand soon after injury and the contracture is visible when the bandage is removed during the first three weeks sometimes however there are no early symptoms and the signs develop considerably more than three weeks after appar-

ently not very serious trauma. Nerve palsies may be absent or may complicate the morbid muscular condition, and the radial pulse may be palpable or impalpable. It is certain that many cases have occurred in which plaster fixation has never been adopted. From clinical observation and animal experiments it is safe to conclude that lasting neuro muscular damage may occur within a few hours from arrest of venous circulation and the formation of subfascial haematomata. The treatment, which should be carried out whenever, in spite of correct reposition and fixation, pain persists and the mobility of the fingers is impaired, is immediate wide splitting of the fascia to diminish tension in the haematoma.

468 Mega-oesophagus

G HICQUET (*J Chir*, Brux, February, 1937, p 69) reports a case of mega oesophagus and also one of carcinoma and another of cicatricial stenosis of the oesophagus, as the comparative symptoms and radiography of the three different lesions are of interest. In the case of mega oesophagus there was gross enlargement and the oesophagus terminated in a funnel shaped dilatation which opened below into a filiform channel 5 cm in length. There was spasm of the cardia. Radiography showed that the stomach was distended and posed, and extended from the diaphragm to the pubis. Oesophagoscopy showed that the oesophagus ended in a cul de sac and no opening was visible. The opening was found after passing a bougie, and dilatation was carried out, this was continued twice a week and the patient improved considerably and gained weight. In the second case progressive dysphagia had developed and had been complete for eight days. Radiography showed that there was a neoplasm of the oesophagus with dilatation above the growth. In the third case there was difficulty in swallowing but radiography did not show any evidence of dilatation above a cicatricial stenosis. In all three cases the symptoms were the same, and were due to obstruction of the oesophagus, although this was caused by three different conditions. In cases of cicatricial stenosis there is no oesophageal spasm, narrowing develops progressively, and the part above the stricture is not dilated. In cases of spasm of the cardia the dysphagia frequently improves after one treatment by oesophagoscopy and the patient is able to swallow. In the case of mega oesophagus reported it is suggested that the spasm of the cardia and dilatation of the oesophageal wall were complementary lesions. There are many different methods of dilatation, but it is considered that oesophagoscopy is the most satisfactory and the least dangerous. By this means it is possible to wash out the oesophagus and to dilate the cardiac orifice under visual control. Treatment is carried out once or twice a week and is accompanied by marked and rapid improvement.

469 Malignant Changes in Pigmented Naevi

H HALKIN (*Paris med*, March 20, 1937, p 241) states that pigmented cutaneous epitheliomata have been studied by dermatologists, clinicians and histologists for many years. He considers that a pigmented naevus may undergo malignant changes, although it is possible for a pigmented epithelial tumour to develop on healthy skin. In the personal cases he describes it was noted that the tumour often developed at the site of a birthmark. In three cases reported the epithelioma was of the basal-celled type. In the first instance it was seen at the root of the nose where an area of pigmented skin had existed for many years. In the second the epithelioma had developed slowly on a naevus on the front of the elbow. Both cases occurred in women in the seventh decade while the third was seen in a man of 48. In another instance a small epithelioma of the scalp was treated by radiation on two occasions but continued to increase in size until it was removed surgically. Histological examination

showed a small-celled tumour, and it is suggested that, under the influence of radium a naevus of the scalp had developed into a sarcoma. In a further case an epithelioma in the region of the hip was apparently cured by means of carbon dioxide snow, but six months later one pigmented nodule developed in the scar, another a little way off in healthy skin the glands were so involved that radical treatment was impossible, and the patient died a few months later. Naevi are very common on the face, and a case is described of a small basal-celled epithelioma which recurred and spread after treatment with carbon dioxide snow, and in this case also the patient died. It is pointed out that in these three cases treatment had an irritating effect resulting in malignant changes. Many other cases are described, and it is concluded that when pigmentation is present local treatment should be avoided and diathermic excision, whenever possible, should be the treatment of choice.

Therapeutics

470 Chemotherapy in Experimental Bacillary Dysentery

K. W. JÖTTEN and G. HOLTSMANN (*Deutsch med Wschr* April 30, 1937, p. 714) report from the Hygiene Institute in Münster their experiments with the administration by the mouth of a silver compound of oxybenzylidene. Their studies were facilitated by the fact that an experimental dysentery like disease of a transitory character can be induced in hens. The drug was first tested *in vitro* on various bacilli—coliform, typhoid, paratyphoid and dysentery. Typhoid bacilli and dysentery bacilli still more, were found to be remarkably sensitive to this drug. It was then tested on hens suffering from experimental dysentery, 10 ccm of a 20 per cent solution being given by the mouth through a tube after the gastric juice had been neutralized by sodium bicarbonate. Within three to six days of starting this daily medication the stools again became solid and ceased to contain dysentery bacilli, whereas the control hens continued to pass fluid stools in which dysentery bacilli were found. In the only case in which a relapse occurred after such treatment a renewal of it was successful.

471 Placental-Extract in Measles

C. F. MCKHANN (*New Engl J Med* March 18, 1937) found that immunity following the injection of placental extract, like that following the use of convalescent serum, was passive in type and of short duration. Observations on fifty-four children re-exposed to measles within a few weeks of receiving placental extract showed that the injection was insufficient to protect for more than two weeks, and that the attack of measles was not even modified if re-exposure occurred more than three or four weeks after the injection.

472 Cod liver Oil Ointment

H. H. MUTSCHLER (*Münch med Wschr* April 30, 1937, p. 692) recommends the use of cod liver oil ointment in wounds, as originally suggested by Löhr in 1932. The treatment is successful when the following conditions are observed. The application must be copious and the treated part must be protected from contact with air. Absolute rest of the wound is important. In extensive wounds the part must be immobilized even in the absence of fracture. The dressing must not be changed too often. Occupational wounds may be left under the first dressing for two to three weeks. Other wounds should not be dressed more often than every fourth day, preferably every six to eight days. Between successive dressings the wound should be exposed to air. The treatment is also suitable for purulent wounds, osteomyelitis, badly healing amputation stumps, burns, etc.

Ophthalmology

473 Visual Sequelae of Epidemic Meningococcus Meningitis

P. HEATH (*Amer J Ophthalm* April 1937, p. 401) notes that the records of visual complications following this disease vary from 65.3 to 95 per cent. The incidence is affected by immunity, age, strain of organism, site, stage of the disease, treatment, and standards of observation. In sixty-eight cases analysed by the author the observations were made about twenty-six months after the acute stage in patients whose average age was 10.6 years. The morbidity rate was 37.3 per cent., the coccus was Type III, and the treatment was by the injection of serum. The visual disturbances totalled 161 per cent. Endophthalmitis with hypopyon was early, painless, with low tension, and led to pseudo glioma and phthisis bulbi. Panophthalmitis, iritis, iridocyclitis, uveitis, choroiditis, acute conjunctivitis, and optic atrophy were also found. Affections of the muscles vary with the site of the lesions, and when appearing early clear up well. Persistent dilatation of the pupils and inequality were seen. Only one case of optic neuritis and one of neuro retinitis were found. Many ocular complications in the acute stage were fugitive, but most visual damage was done during the early septicæmia and toxæmia.

474 Choroideremia

A. J. BEDELL (*Arch Ophthalm* Chicago, March, 1937, p. 444) remarks upon the fewness of recorded cases, none of which have been pathologically examined. Descriptions of cases going back to 1871 show night-blindness, reduction of fields, a white fundus, and lack of choroidal vessels, except in the region of the macula, where an island of choroid remains. In many a little scattered pigment, reduced retinal vessels, night-blindness, and a negative Wassermann reaction are noted. Five cases of the author's are fully documented and well illustrated, and in one transmission seemed to follow the male line. The differential diagnosis includes myopia with nyctalopia, birth injury, syphilis, retinitis pigmentosa, retinitis albens, coloboma of the choroid, and disseminated choroiditis. It would seem that in choroideremia the small vessels disappear first and the larger ones later, the venae vorticosae are attenuated and straight, the fundus pigment is partly or wholly dissolved, and the sclera becomes more visible but not ectatic, the early contraction of the field proceeds to almost complete loss. Almost all the cases are male.

475 Cirroid Aneurysm of the Retina

P. BONNET, J. DECHAUME and E. BLANC (*J méd Lyon* March 20, 1937, p. 165) describe two cases of cirroid aneurysm of the retina. They regard the condition as congenital, disagreeing with Seber, who states that the communication between the arterial and venous systems begins in the capillaries which eventually dilate sufficiently to become ophthalmoscopically visible. They believe that the larger vessels are dilated and communicate from the beginning, a proposition which does not exclude later anatomical changes such as local obliterations and haemorrhages. Variations in the colour of the blood stream in a vessel are characteristic. The dilatation of the vessels may be due to adaptation or to an inherent hyperplasia. Rarely the aneurysm exists alone, it is more commonly associated with similar lesions elsewhere as in the orbit, the facial vein or perhaps facial and cerebral veins together. In the last type the neurological symptoms predominate with signs of intracranial pressure or meningitis. The reduction of vision in these cases, apart from those in which the macula is obstructed by vascular loops, indicates a central complication, and the presence of congenital tortuosity of the retinal vessels and telangiectases.

of the face with cerebral crises makes one suspect an angiomatous intracranial tumour. Where the tortuosity of the retinal vessels is associated with telangiectases they occur on the same side.

476 Familial Hyaline Dystrophy in the Fundus Oculi

M. TREE (*Brit J Ophthalmol*, February, 1937, p. 65) writes at length and gives the notes and fields of several cases of this condition, which is also known as Dooyne's familial honeycomb "choroiditis." It appears in early adult life, there being circular greyish white or putty-coloured patches of exudate at the macular region. These patches of which the average diameter is twice or three times that of the vessels at the disk, later coalesce, and, finally, when atrophy supervenes, are associated with loss of vision. There are no other accompanying ocular lesions. The differential diagnosis from Tay's choroiditis, retinitis circinata, cerebromacular degeneration, retinitis punctata albens, disseminated choroiditis, arteriosclerotic retinitis, diffuse choroiditis, and Coats's disease is fully described.

Obstetrics and Gynaecology

477 Combined Hormonal Treatment of Pruritus

E. KLAFTEN (*Med Klinik*, April 23, 1937, p. 566) has obtained very good results in cases of pruritus and kraurosis vulvae from a combined hormonal treatment. A follicular hormone preparation is administered by injection, while at the same time the affected parts are treated with an ointment containing 50,000 international units of follicular hormone to each 50 grammes of ointment. 4,000 units are rubbed into the affected parts every day. At the same time the patient receives an injection of 30,000 international mouse units every second day. Recurrences are treated in a similar way. In cases of kraurosis vulvae 50,000 international units of vitamin A are added to the 50 grammes of the follicular hormone ointment.

478 Ovulation Syndrome

J. G. H. HOLT (*Nederl Tijdschr Geneesk*, May 1, 1937, p. 1906) under this title describes a group of clinical symptoms which in his opinion indicates the periods of fertility in women as well as other methods, and can be detected by any woman from regular observation of her own symptoms. The syndrome consists of intermenstrual pain and a number of genital, cutaneous (pruritus), psychical (irritability and depression), and intestinal symptoms (diarrhoea) including premenstrual swelling and tenderness of the breasts.

479 Hydroperturbation

B. SLAMOVA (*Zbl Gynäk*, April 17 1937, p. 938) prefers physiological saline to air in testing the patency of the Fallopian tubes. She describes a special simple apparatus used for this purpose. The advantages of this method which she calls hydroperturbation over the usual perturbation with air are as follows: the hydroperturbation is more reliable; there is no risk of air embolism; therefore the pressure may be raised up to 300 mm Hg; it allows conclusions with regard to the prognosis in each case. Pregnancy may be hoped for in every case in which the saline passes through the tubes, whereas pregnancy is in all probability impossible whenever there is obstruction to the flow of the saline. In such cases hysterosalpingography with iodized oils is indicated in order to ascertain the nature and location of the obstruction with a view to surgical operation for removal of the cause of the obstruction. Theoretically there are two objections to hydroperturbation. One is the possibility of spread of an existing infection. This danger can be eliminated by a judicious selection of cases. The second disadvan-

tage is the absence of auscultatory signs during the injection. But according to the author manometric readings during the injection of the saline are more instructive than the information obtained from auscultation during the injection of air.

Pathology

480 Experimental Haemorrhagic Syndromes

G. P. VERATTI (*Sperimentale*, December, 1936, p. 597) states that the phenomenon described by Apitz in 1930 consists of two distinct stages of a different character. The first is in the kidney, and leads to a deposit of fibrin in the glomeruli with extravasations of blood in Bowman's capsules and the convoluted tubules, which show signs of necrosis. The second is situated in the lung and is characterized by more or less extensive capillary haemorrhages without deposit of fibrin in the vessels and without any inflammatory or regressive change. The substance producing this phenomenon is principally derived from *B. coli* lysed by a bacteriophage. It is thermostable, non-volatile, and does not pass through ultra filters. A necessary condition for the production of Apitz's phenomenon is that a toxin should be introduced into the general circulation in repeated and increasing doses. The phenomenon does not occur in animals previously immunized by repeated subcutaneous and intravenous injections of bacterial extract. Transfusion of a large quantity of fresh blood from an animal in which Apitz's phenomenon is taking place into another animal has no effect even if a maximal dose of bacterial extract is injected. The phenomenon can be produced by extracts of some organisms other than *B. coli*, especially *B. paratyphosis B*, the results, however, are not always identical with those produced by *B. coli*.

481 Urine Analysis in Lung Disease

G. F. BUME and E. WERBER (*Med Klinik*, April 16, 1937, p. 539) report on the diagnostic value of biochemical analysis of the urine in 132 cases of lung disease. The products of normal cell metabolism are rapidly excreted in the urine which, containing as it does nucleoproteinase, has the property of digesting extracts made from different organs. In the case of lung extract digestion takes place if the lung is healthy, not if it is diseased. The technique of analysis is as follows: Equal amounts of the patient's urine are run into two test tubes. Acetic acid is added to one, which becomes opaque in one to three minutes. Ether is added to the other to prevent bacterial growth and the tube incubated for six hours. In patients with lung disease opacity appears in the second tube similar to that in the first. In the urine of healthy patients there is no opacity in the second tube after six hours even when acetic acid is added to it. In 130 of the specimens of urine tested the authors noted the absence of the property of the urine to digest the specific nucleoproteins of the lung. In cases of pneumonia digestion of lung extract occurred in the convalescent but not in the acute stage. The test was correct in thirty-six out of thirty-seven cases of progressive tuberculosis and in sixteen out of twenty-one assumed to be arrested. In six cases of pleurisy, three of which had a lung affection, digestion occurred in three and was absent in those associated with lung disease. In one case of bronchial asthma digestion did not occur. A reaction cannot be obtained when albuminuria is present, since the addition of acetic acid produces an opacity indistinguishable from that produced by the nucleoproteinase. The authors investigated patients' serum with the hope that it might contain nucleoproteinase but the results were too contradictory to be of value. They believe that biochemical analysis of the urine affords help in the diagnosis of doubtful cases of lung disease and that it will prove valuable in the differential diagnosis of acute and latent tuberculous infection.

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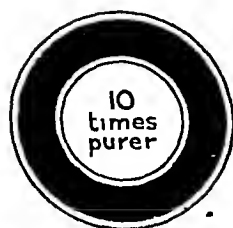
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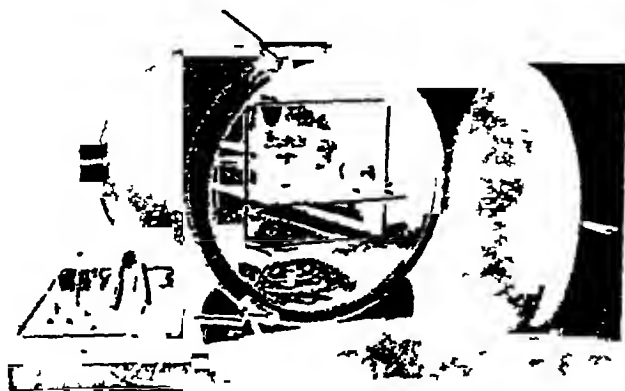
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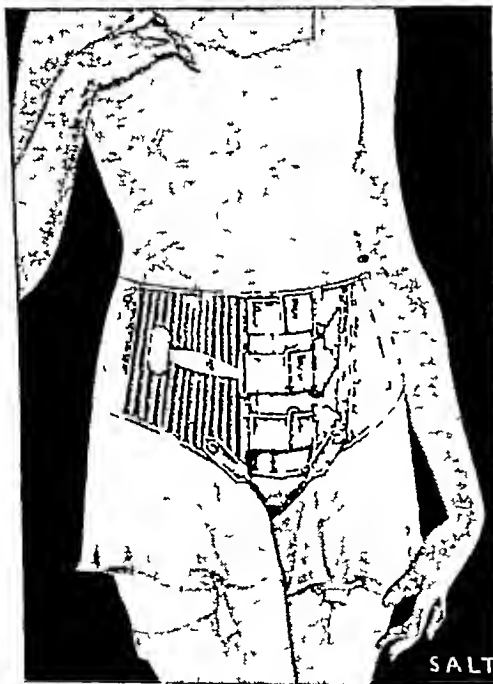


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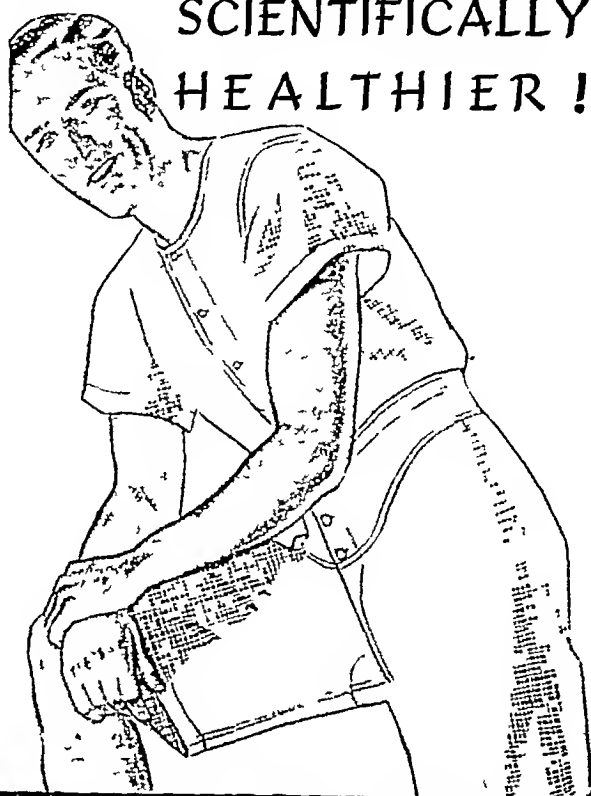
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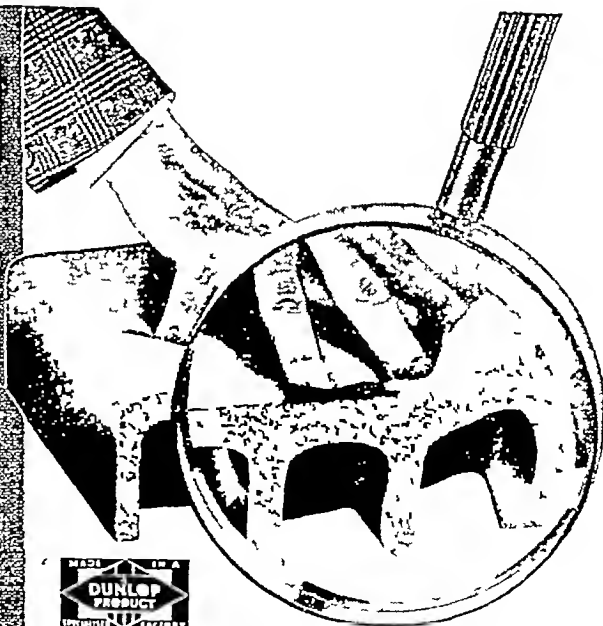
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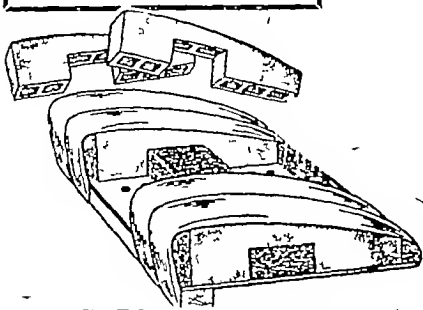
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(The Syllabus furnished by the Lecturer will appear in next week's advertisement)

CHAS. H. WILSON

BRITISH POSTGRADUATE MEDICAL SCHOOL

(UNIVERSITY OF LONDON).

An Intensive Refresher Course for General Practitioners will be held in the fortnight commencing 28th June as follows

1937	10.30 to 1.0	Conducted by—	2.0 to 4.30	Conducted by—
Monday 28th June	Principles of the Examination of Patients.	Dr A. E. CLARK KENNEDY M.A. M.D., F.R.C.P.	Hæmorrhoids, Fistula and Fissure in Ano	Sir CHARLES GORDON-WATSON K.B.E. C.M.G. F.R.C.S.
Tuesday, 29th June	Diabetes.	Dr R. S. AITKEN, D.Phil. F.R.C.P.	The Management of Pregnancy and Labour	Mr A. J. WRIGLEY M.D. F.R.C.S.
Wednesday 30th June	Local Anaesthesia in General Practice.	The Staff of the School.	Infectious Diseases.	Dr E. H. R. HARRIES M.D. D.P.H. North Eastern Hospital, St. Ann's Road N.15
Thursday 1st July	Infections and Injuries of the Hand and Wrist.	Mr Cecil P. G. WAKELEY D.Sc. F.R.C.S. F.R.S.E.	Heart Diseases in General Practice.	Dr DONALD HALL M.D. F.R.C.P.
Friday 2nd July	Difficult Labour Prostoma in Obstetrics.	Mr ALEC BOURNE, M.A. F.R.C.S., F.C.O.G. Dr MEAVE KENNY M.B. B.S. M.C.O.G.	Diseases of the Breast.	Mr Cecil ROWNTREE, F.R.C.S.
Saturday 3rd July	Eye Conditions in General Practice.	The Staff of the Royal London Ophthalmic Hospital, City Road E.C.1	—	—
Monday 5th July	Common Gynaecological Conditions	Dr CHASSAR MOIR M.D., F.R.C.S. F.C.O.G.	The Diagnosis and Management of Tuberculosis	Dr ALEC WINGFIELD M.D. F.R.C.P.
Tuesday, 6th July	The Acute Abdomen.	Mr W. H. C. ROMANIS, M.A. F.R.C.S. F.R.S.E.	Peptic Ulcer	Dr J. J. CONYBEARE, M.C. M.D. F.R.C.P.
Wednesday 7th July	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street, W.C.1	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children Great Ormond Street
Thursday 8th July	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital	Diagnosis of Nervous Diseases	The Staff of the National Hospital Queen Square
Friday 9th July	Chronic Rheumatism	The Staff of the Red Cross Clinic for Rheumatism.	Retention of Urine.	Mr VICTOR W. DIX M.A., M.R.C.P. F.R.C.S.
Saturday 10th July	Psychiatry in General Practice.	Professor E. MAPOTHER F.R.C.P. F.R.C.S. at Maudsley Hospital	—	—

Early application is recommended as only a limited number can be admitted. Fee £5 5 0

Similar courses lasting a fortnight will commence on the following dates —

20th September 18th October 15th November

Detailed programme and any further information can be obtained from the Dean British Postgraduate Medical School, Ducane Road W.12.

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST-GRADUATE TEACHING in Glasgow during the Summer of 1937

A A General Medical and Surgical Course from August 16th to September 10th

Fee £10 10s or £6 6s for first or second fortnight

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary Post Graduate Medical Association, The University Glasgow

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For rules, fees, etc. apply H. B. STOKES, Secretary Superintending

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Applications are invited for the above Fellowship of an annual value of £640 commencing October 1st 1937 the tenure of which is limited to men students of University College Hospital who have held a resident appointment or its equivalent at the Hospital.

Candidates must hold the qualification of M.R.C.P. (London) or F.R.C.S. (England) and must declare their intention of engaging in the practice of medicine or surgery.

Forms of application can be obtained from the Secretary of University College Hospital Gower Street, W.C.1 and must be returned not later than Friday June 25th.

THE INSTITUTE OF CHILD PSYCHOLOGY

TRAINING and EXPERIENCE in the PSYCHO THERAPY of CHILDHOOD are offered to Medical men and women. One year course beginning in September.

All particulars may be had on application to the Secretary 26, Warwick Avenue London W9.

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SOUTHERN RHODESIA MEDICAL SERVICE.

GOVERNMENT MEDICAL OFFICER

Applications are invited from fully qualified male Medical Practitioners for appointment as a GOVERNMENT MEDICAL OFFICER in the Southern Rhodesia Medical Service.

Salary will be on the scale £600-£25-£750 per annum. There is also a senior grade (£750-£25-£900) to which promotions are made as vacancies occur. Salary will commence from the date of a summons of duty in Southern Rhodesia. In addition private practice is allowed.

The successful applicant will be required to sign an agreement for three years' service in the first instance and thereafter may make application to be placed on the pensionable establishment.

A free second-class steamship passage to Cape Town and first-class railway ticket thence to Southern Rhodesia will be provided.

Candidates, either directly or indirectly will disqualify applicants.

The applicants should state the date on which they would be prepared to leave England if appointed.

Applications stating age, qualifications and experience together with copies of testimonials should reach the Official Secretary Office of the High Commissioner for Southern Rhodesia, Rhodesia House, 429 Strand, London, W.C.2 (from whom further particulars and application form may be obtained) not later than June 15th.

THE LEEDS VOLUNTARY HOSPITALS COUNCIL THE GENERAL INFIRMARY AT LEEDS

The Council is in application for the post of HONORARY ASSISTANT PHYSICIAN to the above Institution. Candidates must be Fellows or Members of the Royal College of Physicians of London.

Applications in relation to the post will be accepted on reference to the House Governor of the General Infirmary at Leeds.

There are copies of applications accompanied by copies of not less than three recent testimonials to be addressed to the Council and to be returned not later than July 1st. The Council is the Council of the Leeds Infirmary.

S. CLAYTON FRISER,

Secretary to the Council

The General Infirmary at Leeds

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Also Mastery of Midwifery

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Remarkable percentage of first attempt successes at all the higher medical examinations

The Guide to Medical Examinations sent post free on application gives full information relating to the various higher examinations

The following booklets may also be had post free—

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Name

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Examination in which interested }

SURREY COUNTY COUNCIL

MENTAL HOSPITALS COMMITTEE.

APPOINTMENT OF JUNIOR ASSISTANT MEDICAL OFFICERS (MALE)

Applications are invited for positions as Male Junior Assistant Medical Officers (unmarried) in the Surrey County Mental Hospital Service.

Commencing salary which will be subject to statutory deductions under the Asylum Officers Superannuation Act 1909 will be £340 rising by annual increments of £25 to a maximum of £440 per annum together with apartments, board, laundry and attendance, valued for superannuation purposes at £150 per annum. The persons appointed will also be paid in addition to their salaries the sum of £50 per annum if they hold the Diploma in Psychological Medicine.

The appointments will be subject to termination by one calendar month's notice on either side and the persons appointed will be required to undergo a medical examination.

Applications, stating age accompanied by copies of three recent testimonials, and enclosed in an envelope endorsed "Mental Hospitals Junior Medical Officer" must reach me not later than Wednesday June 23rd 1937.

DUDLEY AUKLAND

Clerk of the Council

Mental Hospitals Department County Hall

Kington-upon-Thames

June 23rd 1937

NORTHAMPTONSHIRE COUNTY COUNCIL.

RUSHDEN HOUSE SANATORIUM

ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited for the above appointment, the salary attaching to which is at the rate of £300 per annum together with board residence and laundry.

The appointment will be determinable by one month's notice on either side and is intended to extend over a period of twelve months.

Practical experience in modern methods of the treatment of pulmonary tuberculosis is essential.

Applications, giving details of age, qualifications and previous experience, and accompanied by copies of three recent testimonials, should be sent to the undersigned not later than June 25th 1937.

H. S. MARTIN

Clerk of the County Council

County Hall, Northampton

June 25th 1937

ERITH URBAN DISTRICT COUNCIL.

ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

The Council of the Urban District of Erith invite applications from Medical Practitioners of not less than three years standing in their profession for the above appointment.

The commencing salary will be £500 per annum. Annual increments of £25 will be given to a maximum salary of £700 per annum.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the person appointed will be required to pass a medical examination.

The appointment will be determinable by three months' written notice on either side and will also be subject to the Council's Standing Orders, Regulations and Resolutions governing staff.

The appointment is a whole-time one. The duties will consist mainly of work in the School Medical Department but will include also duty in any section of the Health Services of the Council.

Experience in the certification of mental defectives in ante-natal care and the possession of a respectable qualification in Public Health will be considered additional recommendations.

Applications accompanied by copies of not more than three recent testimonials must be made on forms obtainable from the Medical Officer of Health Council Offices Erith to whom they should be returned to reach him not later than June 21st 1937 endorsed "Assistant Medical Officer of Health".

Candidates either directly or indirectly will disqualify.

DOUGLAS S. TWIGG
Clerk to the Council

Council Offices, Erith
June 3rd 1937

COUNTY BOROUGH OF ST. HELENS

ASSISTANT MEDICAL OFFICER OF HEALTH

(Female)

(Amended Advertisement)

Applications are invited for the post of Assistant Medical Officer of Health (female). The duties will be mainly in connection with Maternity and Child Welfare and the School Medical Service together with such other duties as the Medical Officer of Health may direct. Candidates must have special experience in midwifery and in the diseases of children.

The salary will be at the rate of £500 per annum plus travelling expenses rising by annual increments of £25 to a maximum of £700 per annum and in the case of a candidate now in the service of another authority on a rising scale recognition may be given to past service with such authority in fixing the commencing salary.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to the successful candidate passing the necessary medical examination.

Forms of application may be obtained from the Medical Officer of Health Town Hall, St. Helens and completed applications accompanied by copies of not more than three recent testimonials should reach him not later than June 18th 1937.

FRANK HAUXWELL,
Medical Officer of Health

CITY AND COUNTY OF NEWCASTLE UPON TYNE

NEWCASTLE GENERAL HOSPITAL (1903 Beds)

TWO HOUSE SURGEONS (Male or Female)
ONE HOUSE PHYSICIAN (Male or Female)

The above posts will become vacant on July 1, 1937 and applications are invited from fully qualified and registered Medical Practitioners.

The salary in respect of each of the appointments which are tenable for six months is at the rate of £150 per annum with board, lodging etc.

Applications stating age and qualifications together with copies of not more than three recent testimonials must be submitted to the Medical Officer of Health Town Hall, Newcastle-upon-Tyne.

May 31st 1937

METROPOLITAN BOROUGH OF ST. PANCRAS

ASSISTANT MEDICAL OFFICER FOR A FIT NATAL CLINIC

Applications are invited for the post of Assistant Welfare Medical Officer under the Maternity and Child Welfare Scheme of the Metropolitan Borough Council. The duties will be confined to one a central clinic at the Town Hall, St. Pancras, for a period of four hours a week (11 a.m. to 12 noon, 2 p.m. to 4 p.m.) and will include the provision of ante-natal care and the supervision of the work done by the nurses and the midwives.

A. MURPHY, Clerk

St. Pancras Town Hall
Pancras Road, E.C.1

COUNTY COUNCIL OF DURHAM

ASSISTANT WELFARE MEDICAL OFFICER

The County Health Committee invite applications for an Assistant Welfare Medical Officer (woman) at a commencing salary of £500 per annum rising by annual increments of £25 to £700 per annum. Travelling allowance will be paid by the County Council in accordance with a scale to be approved from time to time.

The appointment will be held subject to three calendar months' notice on either side, and to the following conditions:

(1) The officer appointed must be a registered Medical Practitioner between the ages of 25 and 45 years, must devote the whole of her time to the duties of the office and must not engage in private practice.

(2) She should either have had a previous appointment as Medical Officer of an ante-natal clinic, with the approval of the Minister of Health, or have had at least three years' experience in the practice of her profession and special experience of practical midwifery and ante-natal work. The holding of a Diploma in Public Health will be deemed an additional qualification for the post.

(3) She will be subject to the directions of the County Medical Officer.

(4) She will be required to reside in Durham City or such other place as required by the Council.

(5) She must be prepared if called upon to act as locum tenens to other members of the medical staff of the County Medical Officer.

(6) The appointment will terminate on marriage.

(7) The candidate appointed will be required to pass the County Council's medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Applications endorsed Assistant Welfare Medical Officer with copies of not more than three recent testimonials must be addressed to the County Medical Officer, Shire Hall, Durham, and must be received by him not later than Saturday June 19th 1937.

Shire Hall, Durham
J. K. HOPE, Acting Clerk of the County Council
May 27th 1937

LANCASHIRE COUNTY COUNCIL

Park Hospital, Davyhulme near Manchester

APPOINTMENT OF SECOND RESIDENT MEDICAL OFFICER

Applications are invited from registered Male Medical Practitioners for the appointment of Second Resident Medical Officer at the above Hospital. Candidates must be unmarried.

The appointment will in the first instance be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Salary £2.5 per annum together with the usual residential allowances.

The Hospital comprises 500 beds for acute cases and is fully equipped in every respect.

The duties will include in addition to medical work those of House Surgeon to the Valentin Ear, Nose and Throat Out-patient.

The Hospital is recognised as a complete Training School for Nurses.

Forms of application may be obtained from the County Medical Officer of Health, Hospital and Medical Department, County Office, Preston, to whom all applications, accompanied by copies of not more than two recent testimonials must be forwarded so as to be received not later than Monday June 14th 1937.

County Office, Preston
GEOFF THURTON, Clerk of the County Council
May 11th 1937

CITY OF SALFORD

INTICHOLES DISEASES HOSPITAL (300 Beds)

Applications are invited for the post of JUNIOR ASSISTANT RESIDENT MEDICAL OFFICER (male). Salary £200 per annum plus board, rent, fuel and laundry. The appointment will be for one year.

Forms of application may be obtained from the Medical Officer of Health, 143, Regent Road, Salford, to whom it must be returned, and need not be accompanied by testimonials, and must be received not later than June 18th 1937.

H. H. TOMSON, Town Clerk

CITY OF SALFORD

ASSISTANT RESIDENT MEDICAL OFFICER, HOPE HOSPITAL (150 Beds)

Applications are invited for the post of Assistant Resident Medical Officer at Hope Hospital. The successful candidate will be required to devote the whole of his time to the duties of the office and must not engage in private practice. The appointment will be for a period of six months, the successful applicant being eligible for reappointment for a further period of six months at the end of that period.

Salary £2.5 per annum together with the usual residential allowances. The duties will include in addition to medical work those of House Surgeon to the Valentin Ear, Nose and Throat Out-patient.

H. H. TOMSON, Town Clerk

COUNTY COUNCIL OF DURHAM

DEPUTY COUNTY MEDICAL OFFICER OF HEALTH

The County Health Committee invite applications for the appointment of a Deputy County Medical Officer of Health at a salary of £960 per annum. Reasonable travelling and out-of-pocket expenses will be paid by the County Council.

Applicants must be duly registered medical practitioners holding a degree or diploma in Public Health and the gentleman appointed will be required to devote the whole of his time to the duties of the office and to reside in the City of Durham or other approved centre.

He will be expected to undertake any duties required of him by the Council, bearing on the health and medical services of the County, and will act under the administrative control of and be responsible to the County Medical Officer of Health for his duties.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and to a medical examination as required by the Council for the purposes of the Act and the statutory contributions to the Superannuation Fund under that Act will be deducted from the salary.

Applications marked "Deputy County Medical Officer of Health" together with copies of not more than three recent testimonials must be sent to the County Medical Officer of Health, Shire Hall, Durham, not later than Saturday June 19th 1937.

Shire Hall, Durham
J. K. HOPE, Acting Clerk of the County Council
May 27th 1937

DEVON COUNTY COUNCIL

(Medical Department)

ASSISTANT COUNTY MEDICAL OFFICER

Applications are invited from duly qualified Medical Practitioners for the appointment of Assistant County Medical Officer.

The salary which is in accordance with the Ask with Scale will be £500 rising by annual increments of £25 to £700.

The appointment will be subject to three months' notice on either side. The person appointed will be required for duties in connection with the medical inspection of school children and must have special postgraduate experience in Refraction work. A Diploma in Public Health is desirable.

The successful candidate must provide a motor car for his work. Travelling and subsistence allowance will be paid in accordance with the Devon County Council Scale.

The successful candidate will be required to pass a medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Forms of application and conditions of appointment may be obtained from the undersigned to whom they should be returned completed by June 21st 1937, together with copies of not more than three recent testimonials.

4 Barnfield Crescent, Exeter
L. MEREDITH DAVIES, County Medical Officer

DEVON COUNTY COUNCIL

(Medical Department)

SCHOOL DENTIST

Applications for the appointment of a School Dentist are invited from registered Dental Surgeons.

Salary £500 per annum rising by annual increments of £25 to £650. The person appointed will be required to provide his own motor car and will be allowed subsistence and travelling expenses in accordance with a scale approved by the Devon County Council.

The successful candidate will be required to pass a medical examination and will be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922.

Forms of application and conditions of appointment may be obtained from the undersigned to whom they should be returned completed by June 11th 1937, together with copies of not more than three recent testimonials.

4 Barnfield Crescent, Exeter
L. MEREDITH DAVIES, County Medical Officer

CITY OF BIRMINGHAM

Dudley Road Hospital (90 Beds)

Applications are invited from fully qualified Medical Practitioners for the post of Assistant Medical Officer (Male) at the Dudley Road Hospital, Birmingham. The appointment will be for a period of six months, the successful applicant being eligible for reappointment for a further period of not exceeding six months.

Salary at the rate of £200 per annum and full board and laundry. The person appointed will be required to devote the whole of his time to the duties of the office and must not engage in private practice.

Forms of application may be obtained from the Medical Officer of Health at Dudley Road Hospital, Birmingham, to whom they must be returned, and need not be accompanied by testimonials, and must be received not later than Thursday June 17th 1937.

LIVERPOOL COUNTY BOROUGH

LOCAL EDUCATION AUTHORITY

ASSISTANT SCHOOL MEDICAL OFFICERS.

Applications are invited for TWO ASSISTANT SCHOOL MEDICAL OFFICERS in the Department of the Medical Officer to the Local Education Authority at a salary in each case of £500 per annum rising by annual increments of £25 to £700 per annum.

(Where a successful candidate holds a similar appointment under another Local Education Authority and receives a salary in excess of the advertised minimum a commencing salary of not less than the salary which the candidate is receiving under his (or her) existing appointment (not exceeding the maximum under the Liverpool Scale) may be paid.)

Candidates must be registered medical practitioners, and must have had at least three years' experience. It is desirable that they should have had some special experience in school hygiene and in diseases of children.

The Officers appointed will be required to reside within the City and devote whole time service to the Local Education Authority under the direction of the Medical Officer to the Local Education Authority and will not be allowed to undertake any private practice.

The appointments will be subject to the Local Government and Other Officers Superannuation Act, 1922 and the Standing Orders of the City Council.

Form of application which may be obtained by forwarding a stamped addressed foolscap envelope should be returned together with copies of three recent testimonials to the undersigned not later than June 21st, 1937 and endorsed Assistant School Medical Officer.

The canvassing of Members of the Education Committee or the City Council is strictly prohibited and will be considered a disqualification.

W. H. BAINES, Town Clerk and Clerk to the Local Education Authority, Municipal Buildings, Liverpool 2, June 4th 1937.

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners (male and female) for the post of ASSISTANT TUBERCULOSIS MEDICAL OFFICER (resident) at the Sully Hospital, Sully, Glam (300 beds) for the treatment of pulmonary tuberculosis) situated between Penarth and Barry.

Salary £500 per annum rising by annual increments of £25 to £700 per annum less the value of emoluments amounting to £100 per annum.

Preferable candidates should have had six months' resident experience in a special institution (Hospital or Sanatorium) for the treatment of pulmonary and/or non-pulmonary tuberculosis with eighteen months' experience in general clinical work of which six months should have been spent in a hospital not confined to the treatment of tuberculosis. Experience in anaesthetics also desirable.

The person appointed to the above post will be required to pass a medical examination and to contribute 5 per cent. of his salary to the Superannuation Fund of the Association. Applicants not already in the service of the Association must be under 45 years of age.

Applications stating age, qualifications, experience etc. together with copies of three recent testimonials should reach the undersigned not later than Wednesday June 16th 1937.

Memorial Offices, D. A. POWELL, Westgate Street, Cardiff, Principal Medical Officer

CITY OF PLYMOUTH

CITY HOSPITAL, 370 Beds

DEPUTY MEDICAL SUPERINTENDENT

Applications are invited from fully qualified male Medical Practitioners for the post of Deputy Medical Superintendent at the City Hospital, Plymouth. The appointed candidate will work under the direction of the Medical Superintendent. The duties are mainly medical and candidates should have had medical experience and preference will be given to candidates possessing a high medical qualification.

Salary at the rate of £400 per annum with full residential emoluments.

The appointment will be held during the pleasure of the Council and will be subject to:

(1) The candidate passing a medical examination in accordance with the provisions of the Local Government and Other Officers Superannuation Act.

(2) Six weeks' notice on either side. The Officer will be required to attend the Council all fees at wages and emoluments, other than the fees received by him. Forms of application may be obtained from the undersigned and should be returned accompanied by copies of not more than three recent testimonials not later than June 21st, 1937.

T. PIERSON, Medical Officer of Health, Town Hall, Plymouth

COUNTY COUNCIL OF MIDDLESEX

DISTRICT MEDICAL OFFICER AND PUBLIC VACCINATOR HAMPTON WICK

Applications are invited from duly qualified Medical Practitioners for the undermentioned appointments

District Medical Officer for the Hampton Wick Medical Relief District. Salary £50 per annum plus the cost of expensive drugs and fees in respect of attendance at confinements and for the services of another medical practitioner to administer short anaesthetics for minor operations (e.g. septic finger abscesses).

The officer appointed will be required to carry out his duties in accordance with the Public Assistance Order 1930 of the Minister of Health to reside in the district unless the Council otherwise determines and to name to the Council some duly qualified Medical Practitioner who will in the case of his absence or other hindrance to his personal attendance act in his place.

Public Vaccinator for the Hampton Wick Vaccination District. The person appointed will be required to produce to the Council a certificate of proficiency in vaccination, except in a case in which such certificate was required as a condition of obtaining any diploma, licence or degree which he possesses. He will be required also to enter into a contract with the Council in accordance with the Vaccination Order 1930 of the Minister of Health. The contract will provide for the payment of the scale of fees laid down by the County Council.

The person or persons engaged will not have any superannuation rights under the Council's superannuation scheme.

Applications stating date of birth, qualifications and experience in vaccination, together with not more than three recent testimonials must be received by the undersigned not later than June 19th 1937. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed "District Medical Officer and/or Public Vaccinator as the case may be". Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
May 29th 1937

COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £250 per annum, with board, lodging and laundry. Candidates must be registered Medical Practitioners who have held resident appointments in a general hospital.

The appointment which will be subject to medical examination is for a period of six months with the option of renewal for a further period of six months. If desired and on the recommendation of the Medical Superintendent and subject to confirmation by the Council for promotion to the post of Assistant Medical Officer. If not so appointed he will leave the Council's service.

The officer appointed will work under the direction of the Medical Superintendent and will devote his whole time to his official duties.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 16th. Application forms are not provided. Envelopes must be endorsed "Junior Assistant Medical Officer North Middlesex County Hospital". Relationship to any member or officer of the Council must be disclosed in the application.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
June 3rd 1937

INSTITUTE FOR THE SCIENTIFIC TREATMENT OF DELINQUENCY (PSYCHOPATHIC CLINIC)

8, Park Street, London, W.1

Applications are invited for the post of part-time MEDICAL REGISTRAR at the above Institute. Candidates should have experience in my duty of pathology and forensic medicine and should be registered in the Institute of Medical Officers. The Council will receive three copies of an application form. A personal interview will be held on June 15th 1937. Date of commencement of appointment.

Applications should be sent to the undersigned (over a confidential letter) and should be accompanied by a letter of recommendation from a medical officer or other person of standing.

L. W. JAMES,
General Secretary

COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £350 per annum with board, lodging and laundry or a cash allowance at the rate of £100 per annum if the officer appointed prefers to reside outside the hospital. Candidates must be registered Medical Practitioners who have held the post of both House Physician and House Surgeon at a General Hospital, and have had considerable all-round experience.

The appointment, which will be subject to medical examination is for a period of six months with the option of renewal for a further period of six months. If desired and on the recommendation of the Medical Superintendent and is terminable by one month's notice on either side. Pensionable staff.

The officer appointed will work under the direction of the Medical Superintendent and will devote his whole time to his official duties. The hours of duty are 10 to 6 daily with Saturday afternoons and Sundays free.

Applications, stating age, qualifications and experience together with copies of not more than three recent testimonials, must be received by the undersigned not later than June 26th. Application forms are not provided. Envelopes must be endorsed "Casualty Officer North Middlesex County Hospital". Relationship to any member or officer of the Council must be disclosed in the application. Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
June 3rd 1937

COUNTY BOROUGH OF SOUTHAMPTON

BOROUGH GENERAL HOSPITAL (Maternity Unit)

RESIDENT OBSTETRIC MEDICAL OFFICER

Applications are invited from registered male medical practitioners for the above appointment. Candidates must be unmarried.

Applicants must have had considerable obstetric experience and have held previous residential hospital appointments.

The salary will be at the rate of £350 per annum rising by annual increments of £25 to a maximum of £450 per annum together with the usual residential allowances.

Form of application and conditions of the appointment may be obtained from the Medical Officer of Health City Centre Southampton.

Applications on the prescribed form endorsed "Obstetric Medical Officer" must be delivered at the Town Clerk's Office, City Centre Southampton on or before June 26th 1937.

R. RONALD H. MEGGESON
June 9th 1937 Town Clerk

COUNTY BOROUGH OF SOUTHAMPTON

APPOINTMENT OF ASSISTANT SCHOOL DENTIST

Applications are invited from fully qualified ladies or gentlemen for the above position.

The Local Government and Other Officers Superannuation Act 1928 will be applicable to the appointment, and the successful candidate will be required to satisfactorily pass a medical examination.

Salary £40 per annum. Applications on the prescribed form to be obtained from the Medical Officer of Health City Centre Southampton and endorsed "Assistant School Dentist" must be delivered at the Town Clerk's Office, City Centre Southampton on or before June 25th 1937.

R. RONALD H. MEGGESON
June 9th 1937 Town Clerk

COUNTY BOROUGH OF OLDHAM

MUNICIPAL HOSPITAL

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £200 per annum with board, residence and laundry. Candidates should be unmarried.

The appointment will be for the first year but for a period of six months. The successful candidate, however, will be eligible for reappointment for a further period of six months.

If the applicant comes to the interview with the interview and evidence of his qualifications.

Applications should be sent to the undersigned (over a confidential letter) and should be accompanied by a letter of recommendation from a medical officer or other person of standing.

JOSEPH WILLIAMS, Z.D.
Town Clerk

ESSEX COUNTY COUNCIL

APPOINTMENT OF MALE WHOLE-TIME VENEREAL DISEASES MEDICAL OFFICER

The County Council of the Administrative County of Essex invite applications for the above appointment from Registered Medical Practitioners qualified as a Venereal Diseases Medical Officer under the Local Government (Qualification of Medical Officers and Health Visitors) Regulations 1910.

The salary will be £750 per annum and will rise subject to satisfactory service, by annual increments of £25 to 1937 10s per annum.

At the discretion of the Council either a car will be provided or payment made for the use of the successful candidate's own car in connection with county duties.

The person appointed will be required under the County Medical Officer of Health to render general administrative assistance in connection with the diagnosis and treatment of venereal diseases and to undertake duties at the Council's Venereal Diseases Clinics. Preference will be given to candidates with previous experience in a hospital or a large Public Health Department.

The appointment will be held by the successful candidate during the pleasure of the Council and will be determinable by the Officer by three months' notice in writing.

The person appointed will be required to pass a medical examination and to contribute to the fund established by the County Council under the Local Government and Other Officers Superannuation Act 1922.

The appointment will be subject to the Council's Sick Pay Rules and Regulations, a copy of which will be forwarded on application.

Applications on the prescribed form obtainable from the undersigned accompanied by copies of not more than three testimonials (which will not be returned) should be addressed to me and delivered at the County Hall, Chelmsford not later than 10 a.m. on Monday June 21st 1937.

County Hall, E. S. HOLCROFT
Chelmsford, Clerk of the County Council
May 31st 1937

KENT COUNTY COUNCIL

A LOCUM TENENS (male) is required for a period of eight weeks commencing on August 3rd 1937 to act as ASSISTANT MEDICAL OFFICER at the COUNTY TUBERCULOSIS SANATORIUM, LENHAM (165 beds).

Applicants must be under 45 years of age and have had experience of a similar nature including pneumothorax treatment in a Hospital or Sanatorium.

The salary will be at the rate of seven guineas a week with free board, lodging and laundry.

Applications stating age and experience, with copies of not more than three recent testimonials must be sent to the County Medical Officer, Sessions House, Maidstone, and reach him not later than June 19th 1937.

W. L. PLATTS
Maidstone, Clerk of the County Council
June 8th 1937

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners (male also) for the post of RESIDENT MEDICAL OFFICER (twelve months appointment) at the South Wales Sanatorium (60 beds for male pulmonary cases) Talharth, Brecon.

Salary £350 per annum plus maintenance.

Preference will be given to applicants who have held the post of House Physician or House Surgeon at a general hospital and have had institutional experience in the treatment of pulmonary tuberculosis.

Applications stating age, qualifications and experience together with copies of three recent testimonials should reach the undersigned not later than Thursday June 17th 1937.

Memorial Office, D. A. POWELL
Westgate Street, Principal Medical Officer
Cardiff

CITY OF MANCHESTER

CRUMPSALL HOSPITAL (160 beds)

The Public Health Committee invites applications from registered medical practitioners for the post of RESIDENT ASSISTANT MEDICAL OFFICER at the above named hospital.

The salary for the appointment is £200 per annum with board, residence and laundry in addition subject to the Manchester Corporation's regulations of service.

The appointment will be for a period of six months, renewable for a further six months, but not for more than a year.

Full particulars and forms of application may be obtained from the Medical Officer of Health, City of Manchester, 1, 2 & 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

T. F. WAPPHICK, JOURNALIST

Town Clerk

June 12 1937

METROPOLITAN BOROUGH OF STEPNEY

APPOINTMENT OF AN ASSISTANT TUBERCULOSIS OFFICER

Applications are hereby invited for the appointment of an Assistant Tuberculosis Officer and Assistant Medical Officer of Health in the Borough. The person appointed will also be required to carry out such other duties as the Medical Officer of Health may from time to time determine.

The person to be appointed must possess the Diploma of Public Health as well as the qualifications prescribed by the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations 1930 with not less than two years' experience in a sanatorium or other tuberculosis institution or otherwise in whole-time work in relation to tuberculosis. He must be experienced in artificial pneumothorax treatment.

The salary will be at the rate of £600 per annum rising by annual increments of £25 to a maximum salary at the rate of £700 per annum.

The person to be appointed will be required to devote the whole of his time to the duties of the office act under the direction and supervision of the Medical Officer of Health and pass an examination by the Council's Medical Referee as to constitutional fitness. The appointment will also be subject to the provisions of the Stepney Borough Council (Superannuation) Acts 1905 to 1931 and to the Council's bye-laws. The appointment will moreover be for a probationary period of six months in the first instance.

Forms of application may be obtained from the undersigned to whom they must be returned in envelopes endorsed "Appointment of Assistant Tuberculosis Officer" so as to reach him not later than 12 noon on Saturday June 19th 1937.

Canvassing members or officers of the Council is strictly prohibited and will disqualify candidates. The Council do not bind themselves to appoint any of the candidates.

Municipal Offices, By Order
Raine Street, W. McCARTY
Old Gravel Lane, Town Clerk.
London E1 June 1st, 1937

COUNTY BOROUGH OF DONCASTER

ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an additional Assistant Medical Officer (Woman) to the duties of the appointment will be chiefly in connection with the Maternity and Child Welfare and School Medical Services, but in addition the person appointed will be required to carry out such other duties as the Medical Officer of Health may assign to her.

The salary will commence at from £500 to £550 according to experience and will increase annually by £25 to £700 per annum.

The appointment will be held subject to three months' notice on either side and to the following conditions—

(1) The officer appointed must be a registered medical practitioner below the age of 45 years and must devote the whole of her time to the duties of the office.

(2) She must hold a recognised qualification in Public Health and have previous experience in 17 cases of Children and in the treatment of Venereal Diseases. In addition she should either have held a previous approved appointment as a Medical Officer of an Ante Natal Clinic or have had at least three years' experience in the practice of her profession including special experience of practical midwifery and ante natal work.

(3) She will be required to reside within the Borough.

(4) The appointment will terminate on marriage.

(5) The successful candidate will be required to undergo a medical examination in the appointment by a panel of three members of the Local Government and Other Officers Superannuation Act 1922.

Applications on forms obtainable from the undersigned must be received by him together with three recent photographs not more than three months old, not later than June 15th 1937. The successful candidate will be required to pass an examination by the Council's Medical Referee as to constitutional fitness. The appointment will also be subject to the provisions of the Doncaster Borough Council (Superannuation) Acts 1905 to 1931 and to the Council's bye-laws. The appointment will moreover be for a probationary period of six months in the first instance.

R. WATSON,
Medical Officer of Health
Public Health Office, Wood Street,
Doncaster, June 1st, 1937

BOROUGH OF HESTON AND ISLEWORTH

APPOINTMENT OF ASSISTANT MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified medical men with a Public Health qualification for the position of Assistant Medical Officer of Health and School Medical Officer.

Candidates will be required to carry out medical inspection of school children, bacteriological work, child welfare work and administer dental anaesthetics and perform such other duties as may be allotted as Assistant to the Medical Officer of Health and School Medical Officer.

The person appointed will be required to devote his whole time to the duties and will not be allowed to engage in private practice. The salary will be at the rate of £500 per annum rising to £700 per annum by increments of £25 per annum.

A deduction of 5 per cent. will be made from the salary in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922 which has been adopted by the Council and the appointment will be subject to passing a medical examination in connection therewith.

Copies of the application form and terms of appointment can be obtained from the Medical Officer of Health 94a Bath Road Heston.

Applications accompanied by copies of not more than three recent testimonials must be delivered to the undersigned not later than first post on Saturday June 19th 1937.

Council House, HAROLD SWANN
Hounslow, Town Clerk.
June, 1937

NOTTINGHAMSHIRE COUNTY COUNCIL

PUBLIC HEALTH DEPARTMENT

ASSISTANT SCHOOL MEDICAL OFFICER (MALE)

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and must have had at least three years' experience since qualification.

The salary will be at the rate of £500 per annum rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's Scale.

Forms of application and conditions of the appointment may be obtained from me and applications accompanied by copies of not more than three recent testimonials should be forwarded to the County Medical Officer, Shire Hall Nottingham not later than June 21st 1937.

Shire Hall, K. TWEEGALE MCABY
Nottingham, Clerk of the County Council
June 8th 1937

CITY OF CAROLLE

CITY LODGE HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER

Applications are invited for the post of Junior Resident Medical Officer (male) at City Lodge Hospital. The Hospital has 600 beds and admits all except acute surgical cases. Special facilities are available for the study of midwifery.

The appointment will be for one year and the person appointed may be required to undertake duty at other hospitals of the Council in emergency.

The salary will be at the rate of £150 per annum with full residential emoluments.

Applicants should be qualified and experienced with copies of three recent testimonials endorsed "Junior Resident Medical Officer" must be sent to the Medical Officer of Health, City Hall, Cardiff so as to reach him not later than June 15th 1937.

City Hall, D. KENYON REES
Cardiff, Town Clerk.
June 14 1937

THE WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS

KING EDWARD VII MEMORIAL SANATORIUM

COUNTY BOROUGH OF DUOLEY

DEPUTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified Medical men registered in the Medical Register as holders of a Diploma in Sanitary Science, Public Health or State Medicine for the above appointment.

The duties entail a full-time appointment, 50 per cent being devoted to conducting a Venereal Disease Clinic and 50 per cent to Public Health activities. These latter include principally Maternity and Child Welfare work and such other duties as may be requested by the Medical Officer of Health. During the absence of the Medical Officer of Health the Deputy will be the responsible head of the Department.

The salary offered is £750 per annum rising by two increments of £25 annually to £800. A deduction of 5 per cent will be made from the salary in accordance with the Local Government and Other Officers Superannuation Act 1922 which has been adopted by the Council and the appointment will be subject to passing the Council's Medical Examination in connection therewith.

Applications stating age and full particulars of Post Graduate experience, together with the names of three persons to whom reference can be made, should be received by the undersigned not later than Monday morning June 26th 1937.

The Council House, GEO. C. V. CANT
Dudley, Town Clerk.
June 4th 1937

COUNTY BOROUGH OF WOLVERHAMPTON

ASSISTANT MEDICAL OFFICER OF HEALTH

The Corporation invite applications for the post of Assistant Medical Officer of Health (male). The salary will be £650 per annum rising by annual increments of £25 to a maximum of £750 per annum to be subject to percentage deductions in accordance with the provisions of the Local Government and Other Officers Superannuation Act 1922 together with a car allowance of £25. The successful candidate will be required to pass a medical examination and to devote the whole of his time to the duties of the office.

The appointment will be terminable by two months' notice on either side.

Applicants must hold a registrable degree or diploma in Public Health and have had at least three years' experience since qualification. Preference will be given to candidates who have held a resident post in an Infectious Diseases Hospital and have special experience in Maternity and Child Welfare work and School Medical work.

Applications endorsed "Assistant Medical Officer" giving age, degrees and qualifications and particulars of previous post graduate experience accompanied by copies of three recent testimonials must be received by me not later than June 21st 1937.

Town Hall, J. BROCK ALLEN
Wolverhampton, Town Clerk.
June 1937

THE WEST RIDING OF YORKSHIRE MENTAL HOSPITALS BOARD

MENSTON MENTAL HOSPITAL (near Leeds)

APPOINTMENT OF AN ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an ASSISTANT MEDICAL OFFICER in the Board's service at the above Mental Hospital at a commencing salary of £350 per annum, rising by annual increments of £25 to a maximum of £400, together with emoluments (board apartments and laundry) valued at £10 per annum. The Board will allow an extra £50 per annum to the successful candidate who (within this scale) holds or obtains the Diploma in Psychological Medicine for which this Hospital affords special study facilities.

Consideration will be given only to candidates who have had at least one year's (preferably two years') experience in general medicine after qualification.

The appointment is subject to the provisions of the Asylum Officers Superannuation Act 1909 (Class I).

Applications with copies of not more than two recent testimonials stating age and full particulars to reach the undersigned not later than June 21st 1937.

HULL ROYAL INFIRMARY

Applications are invited for the following posts (male) —

(1) **SECOND HOUSE PHYSICIAN** vacant now salary £150 per annum. The post is recognised by the University of London for the M.D. Branch 1 (Medicine) Examination.

(2) **HOUSE SURGEON** to the Ophthalmic and Ear, Nose and Throat Departments vacant now salary £150 per annum. The post is recognised for the clinical work required in the regulations for the D.O.M.S. and D.L.O.

(3) **HOUSE SURGEON** at Branch Hospital vacant July 3rd. Salary £160 per annum. The post is recognised for the F.R.C.S. Examinations and is also approved by the University of London for the M.S. Branch 1 (Surgery) Examination. The Branch Hospital is not a Recovery Annex, but a General Hospital of 100 beds 55 of which are reserved for surgical cases.

The holders of the above posts receive residence board and laundry.

The appointments will be for a period of six months, but will be determinable at any time by one month's notice on either side.

Applications are invited from particulars of experience and nationality together with copies of recent testimonials, should be addressed to the undersigned.

May 31st 1937

R. J. CARLESS
House Governor

CLAYTON HOSPITAL WAKEFIELD
(150 Beds, 4 Residents)

Required a **SENIOR HOUSE SURGEON** (male), with experience in *fractures and emergency surgery*. Salary at the rate of £250 p.a. with board residence and laundry. The appointment is for one year, with an option of extension. The selected candidate will be expected to take up the duties on July 24th.

Applications, stating age, qualifications, experience and nationality, accompanied by three testimonials, to be sent to the
Clayton Hospital ACTING SECRETARY
Wakefield.

CLAYTON HOSPITAL, WAKEFIELD

There is a vacancy for a **FOURTH HOUSE SURGEON** (Male British) for which post applications are invited. The appointment is for six months in the first instance and the salary is at the rate of £150 per annum together with board residence and laundry.

Applications stating age, qualifications and experience, together with copies of three recent testimonials should be sent to the undersigned as early as possible. The selected candidate will be expected to take up the duties on July 2nd.

J. H. GREAVES
President

LIVERPOOL HAHNEMANN HOSPITAL, HOPE STREET

Applications are invited for the post of **RESIDENT MEDICAL OFFICER** to the above Hospital which falls vacant on July 1st next. Only one R.M.O. kept.

Duties include occasional anaesthetics assisting at operations, general ophthalmic and aural. Appointment is for six months, renewable. Salary at the rate of £120 per annum. Knowledge of homoeopathy desirable but not essential.

Apply stating age, sex, nationality and previous experience and enclosing copies of testimonials to the Registrar on or before June 14th.

COUNTY MENTAL HOSPITAL, Rainhill near Liverpool

Wanted **SECOND ASSISTANT MEDICAL OFFICER**. Salary £650 per annum. Must be in possession of Diploma in Psychological Medicine for which an extra £50 per annum will be paid.

An unfurnished house is provided for which a rental of £50 per annum will be made.

The appointment is subject to the 3 per cent deduction under the Aylms Officers Superannuation Act 1909.

Applications, with testimonials and full particulars, to be sent to the Medical Superintendent not later than June 1st 1937.

COUNTY MENTAL HOSPITAL, Rainhill near Liverpool

Wanted **ASSISTANT MEDICAL OFFICER** (female). Locum Tenens required 1st summer in white. Seven guineas per week, with board, house and laundry.

Apply as soon as possible to the principal partner in experience, or to the Medical Superintendent, County Mental Hospital, Rainhill near Liverpool.

MIDLAND HOSPITAL, 125, R. BIRMINGHAM, C.O.R.

Applications are invited for the post of **HOUSE SURGEON**. Duties include general surgery, orthopaedics, and ophthalmic work. Salary £150 per annum with board, house and laundry. Applications should be sent to the Medical Superintendent, Midland Hospital, 125, R. Birmingham, C.O.R.

NORTH RIDING INFIRMARY, MIDDLESBROUGH
(General Hospital 143 Beds Three Residents.)

Wanted **SENIOR HOUSE SURGEON** to take up duties July 1st. Candidates must be male, unmarried and of British nationality. Preference will be given to applicants who have held a previous hospital appointment.

The present Casualty Officer is a candidate for the post and applicants are requested to state whether they wish to apply for the Casualty Officer post salary £150 in the event of him being appointed.

Salary is at the rate of £175 per annum with board residence and laundry.

Applications stating age, qualifications and experience together with copies of three recent testimonials should be sent to the undersigned forthwith.

GERALD A. KENYON
Secretary-Superintendent.

NORTH RIDING INFIRMARY, MIDDLESBROUGH
(General Hospital 143 Beds Three Residents.)

Wanted **THIRD HOUSE SURGEON** male (Medical work forms part of duties).

Candidates must be unmarried and of British nationality. Appointment will be for not less than six months and renewable. Salary is at the rate of £140 per annum, with board residence and laundry.

Applications stating age, qualifications and experience, together with copies of three recent testimonials, should be sent to the undersigned forthwith.

GERALD A. KENYON
Secretary-Superintendent.

SOUTH EASTERN HOSPITAL FOR CHILDREN SYDENHAM S.E.26
(100 Beds)

Recognised by the Examining Board for post graduate study for the Diploma of Child Health. Applications are invited for the post of **RESIDENT MEDICAL OFFICER** male or female (two vacancies). The appointment will be for six months from July 1st. Honorarium £100 per annum with board residence and laundry.

Applications by letter or stating age, qualifications and experience, with copies of three testimonials should be sent to Dr. W. A. BRIDGMAN 24 Silverdale Sydenham S.E.26 to be received on or before Monday June 21st.

SOUTH EASTERN HOSPITAL FOR CHILDREN SYDENHAM S.E.26
(100 Beds.)

Recognised by the Examining Board for post graduate study for the Diploma of Child Health. Applications are invited for the post of **HON. ASSISTANT PHYSICIAN** to the above Hospital (Out-patients Tuesday afternoons at 2).

Applications stating age and experience, should be sent to the Hon. Secretary of the Medical Committee Dr. W. A. BRIDGMAN 24 Silverdale Sydenham S.E.26 to be received by June 21st.

ROYAL WEST SUSSEX HOSPITAL, CHICHESTER

(114 Beds including 12 in the Private Patients Block. Two Residents.)

JUNIOR HOUSE SURGEON wanted from July 16th. Salary at the rate of £1.5 per annum with board, residence and laundry.

Applications should reach the undersigned by June 3rd together with not less than three recent testimonials stating age, nationality, experience and qualifications.

By Order of the Board of Management
ALAN RUDDLE, A.M.O.A. Secretary
June 3rd 1937

EAR AND THROAT HOSPITAL, BIRMINGHAM 3

SECOND HOUSE SURGEON wanted (Resident). Must be fully qualified and with clinical experience. Salary at the rate of £1.0 per annum with full board and residence.

Duties to commence as soon as possible. Facilities for training for D.L.O. Applications and testimonials to be forwarded to the undersigned immediately.

W. H. LOMAS
Secretary

BRIDGWATER GENERAL HOSPITAL
Salt in Parad, Bridgewater 5 miles (2 Bed)

HOUSE SURGEON required. Salary £110 per annum with board and laundry.

Applicants with copies of three recent testimonials stating age, nationality and qualifications, to be sent to the Secretary as soon as possible.

RESIDENT MEDICAL OFFICER, BRIDGWATER GENERAL HOSPITAL, KENT

Applications are invited for the post of **RESIDENT MEDICAL OFFICER** to the above Hospital. Salary £120 per annum with board and laundry. Applications should be sent to the Secretary as soon as possible.

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL
(280 Beds)

Applications are invited for the following appointments —

One **CASUALTY OFFICER**
One **RESIDENT ANAESTHETIST** and **HOUSE SURGEON** to the Ear, Nose and Throat Department.

For the six months commencing July 1st 1937 at a salary of £150 per annum with board, lodging and laundry. Candidates must be male and unmarried.

Applications accompanied by not more than three testimonials should be sent to the undersigned at once.

H. Y. TRUSSON
House Governor and Secretary

GENERAL INFIRMARY SALISBURY

(Voluntary Hospital 191 beds, now in course of extension to 225 beds)

HOUSE PHYSICIAN (male) required to commence duty as soon as possible.

The appointment is for six months with the right of applying for reappointment for a further period of six months. Candidates must be unmarried, fully qualified and registered.

Salary £125 per annum with board-residence. Applications with copies of testimonials, to be sent to the House Governor and Secretary from whom a copy of the rules may be obtained.

KETERING AND DISTRICT GENERAL HOSPITAL

Applications are invited for the post of **HOUSE SURGEON** and **HOUSE PHYSICIAN** (male).

Salaries £160 and £140 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months.

Applications, stating age, nationality and qualifications, together with copies of three testimonials to be sent to the undersigned as soon as possible.

G. W. JACKSON
Secretary-Supt.

GENERAL HOSPITAL, NOTTINGHAM
(386 Beds.)

A **HOUSE SURGEON** is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out-Patient Department. The appointment is for six months, with salary at the rate of £150 a year with board residence and laundry. Candidates are desired to send applications, stating age, qualifications and experience together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible.

PETER M. MCCOLL
House Governor and Secretary

ROYAL UNITED HOSPITAL, BATH

HOUSE PHYSICIAN required immediately. Resident Staff of two House Physicians and three House Surgeons.

Duties include some Casualty. Salary £150 per annum board residence and laundry.

The appointment is for six months and candidates must be male, unmarried and of British nationality.

Applications with copies of three testimonials, to be addressed to the undersigned at once.

J. LAWRENCE MEARS
Secretary-Superintendent

WORCESTER ROYAL INFIRMARY
(165 Beds)

Applications are invited for the post of **HOUSE SURGEON** to the Gynaecological Department with special experience in Anaesthetics and with some casualty work.

Salary at the rate of £140 per annum with board residence and laundry.

Applications to be sent to the undersigned immediately.

A. R. WIST
Superintendent Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD
(140 Beds)

HOUSE SURGEON required immediately. Salary £100 per annum with board residence and laundry. Candidates must be male and unmarried, who must possess registered qualifications and forward applications stating age, nationality and qualifications, together with copies of three recent testimonials to the undersigned.

J. H. G. CARLAND
Superintendent and Secretary

LONDON HOSPITAL, STOKES TRIEST
(10 Beds)

HOUSE SURGEON required immediately. Salary £100 per annum with board residence and laundry. Candidates must be male and unmarried, who must possess registered qualifications and forward applications stating age, nationality and qualifications, together with copies of three recent testimonials to the undersigned.

J. H. G. CARLAND
Superintendent and Secretary

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL (220 Surgical and Medical Beds)

RESIDENT SURGICAL OFFICER

Applications are invited from fully qualified men for the above post.
Candidates must have had previous Resident Appointments. The appointment is for twelve months. Salary at the rate of £100 per annum with board, apartments and laundry.
Applications stating age, together with copies of three recent testimonials should be sent to the undersigned on or before Thursday June 24th.

HOUSE SURGEON

Applications are invited from fully qualified men for the above post.
The appointment is for six months. Salary at the rate of £150 per annum with board, apartments and laundry.
Applications stating age, together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

G SUNNUCK

June 7th 1937

Supt. and Secretary

ROYAL VICTORIA INFIRMARY NEWCASTLE UPON TYNE (758 Beds)

Applications are invited for the post of REGISTRAR TO THE THROAT AND EAR DEPARTMENT. Candidates must be registered in Medicine and Surgery.

The appointment which will commence on Monday July 5th 1937 will be for one year in the first instance and is renewable annually provided that the holder of the office has within three years of his first appointment obtained either the Fellowship of the Royal College of Surgeons of England or of Edinburgh.

The rate of remuneration is £100 per annum. Applications stating full particulars and accompanied by copies of not more than three recent testimonials must be received on or before Wednesday June 23rd 1937 by the undersigned from whom further particulars may be obtained.

S. DUNSTAN

June 7th 1937 House Governor and Secretary

COUNTY MENTAL HOSPITAL, LANCASTER

Applications are invited for the post of ASSISTANT MEDICAL OFFICER (lady). Candidates must be single and under 35 years of age. Commensurate salary £500 rising by annual increments of £50 to £600 with further increase on promotion subject to a deduction of 3 per cent under the Asylum Officers Superannuation Act. There are no emoluments.

The selected candidate will be required to live in the Hospital and he will be provided with board, laundry etc. for which a charge of £150 a year is made.

The possession of a Diploma in Psychological Medicine will entitle the Officer to an additional £50 per annum.

Applicants giving full particulars with testimonials (3 per cent only) should be forwarded at once to the Medical Superintendent.

THE PRINCE OF WALES HOSPITAL
Greenbank Road, Plymouth
(110 Beds) South Devon and L. Cornwall
(Hospital)
(174 Beds)

THE ROYAL LIVERPOOL CHILDREN'S HOSPITAL

There will be vacancies on October 1st next for TWO RESIDENT HOUSE PHYSICIANS and TWO RESIDENT HOUSE SURGEONS at the CITY BRANCH MYRTLE STREET. The appointments will be for a period of six months. Salary in each case at the rate of £100 per annum. Applications with copies of recent testimonials to be sent to the Secretary, Royal Liverpool Children's Hospital, Myrtle Street, Liverpool 7, on or before Saturday June 19th 1937.

There will be vacancies on October 1st next for ONE RESIDENT MEDICAL OFFICER and ONE RESIDENT SURGICAL OFFICER at the HESWALL BRANCH of the Institution (240 beds). The appointments will be for a period of six months. Salary in each case at the rate of £120 per annum. Applications with copies of recent testimonials to be sent to the Secretary, Royal Liverpool Children's Hospital, Myrtle Street, Liverpool 7, on or before Saturday June 19th 1937.

ANCOATS HOSPITAL MANCHESTER

CASUALTY OFFICER required. Appointment for twelve months as from July 1st. Salary £50 per annum with luncheon and tea provided. Applicants should have passed their primary Fellowship examination. Hours of duty 9 a.m. to 5 p.m. Saturdays to 1 p.m.

The successful applicant will be expected to do locum for the Resident Surgical Officer at every alternate week-end and at scheduled times as required. He shall reside outside the Hospital excepting when taking the Resident Surgical Officer's alternate week-ends.

Applications stating age, experience, qualifications etc. together with copies of three recent testimonials to be forwarded to the undersigned on or before June 23rd.

By order of the Board

HERBERT J. DAFFORNE

General Supt. and Secretary

THE WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL (112 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post which becomes vacant on July 1st next. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist.

The post is for six months in the first instance—offers valuable experience in both in-patient and out-patient work.

Applications with copies of recent testimonials should be sent to the undersigned as early as possible.

JOSEPH E. SEARJEANT F.C.C.S.

House Governor and Secretary

NORTH STAFFORDSHIRE ROYAL INFIRMARY STOKES-ON-TRENT A General Hospital of 390 Beds. Recognised for the D.L.O. and F.F.C.S. Examinations

HOUSE SURGEON FOR AURAL AND OPHTHALMIC DEPT.

The Committee invite applications for the above post.
Salary at the rate of £150 per annum with board, residence and laundry.

The appointment will be made for six months renewable.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

(225 Beds Five Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN (male). The salary for each post is at the rate of £150 per annum with board, residence, and laundry.

The appointments are for six months which may be extended for similar periods by re-election from time to time.

Applications stating age, qualifications, experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned.

The elected candidates will be required to enter upon their duties at once.

F. J. SYMONS

June 10th 1937

Secretary

KENT AND SUSSEX HOSPITAL, TUNBRIDGE WELLS (204 Beds)

Applications are invited for the post of HOUSE SURGEON AND CASUALTY OFFICER. Salary £150 per annum with board, residence and laundry in the Hospital.

The Hospital is approved by the University of London for the purpose of the M.D. and M.S. Examinations and includes the following Departments:

Medical, Surgical, Ear, Nose and Throat, Ophthalmic, Orthopaedic, Gynaecological, X-ray and Electro-therapeutic, Massage, Pathological, Venereal Diseases etc.

Applications stating qualifications together with Certificate of Registration and copies of not more than three recent testimonials should be sent to the undersigned as soon as possible.

TOM D. HARRISON

June 7th 1937

Superintendent Secretary

NORTHAMPTON GENERAL HOSPITAL (293 Beds)

There is a vacancy for a HOUSE SURGEON immediately. The appointment will be made to September 30th and the successful candidate will be eligible for re-election for a further period of six months.

The salary will be at the rate of £150 per annum with board, residence and laundry.

Candidates who must be duly qualified and registered must be males and of British nationality.

Applications stating age, qualifications etc. with copies of three testimonials must reach the undersigned not later than the first post on Wednesday June 23rd.

P. SOURCE

June 7th 1937

Assistant Secretary

BIRMINGHAM AND MIDLAND EYE HOSPITAL (114 Beds)

Applications are invited from duly qualified Medical Practitioners for the post of HOUSE SURGEON at the above Hospital.

Salary £130 per annum (rising to £140 at the end of six months satisfactory service) and £10 laundry allowance.

The Resident Staff consists of a Resident Surgical Officer and three House Surgeons.

Applications with testimonials and evidence of registration must be received not later than Thursday June 4th next.

Church Street

I. W. PEARCE

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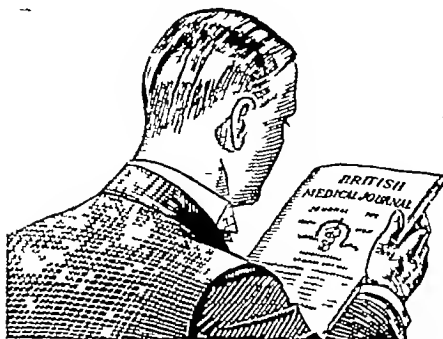
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CITY OF LONDON APPOINTMENT—Income over £100 p.a. clear with no expenses. Possible increase to £300 p.a. in two years time. Four hours a week. Price £100.—Address No. 4440 B.M.A. House Tavistock Square W.C.1

FREE HOLIDAY (WITH TRAVELLING EXPENSES) offered to doctor who can play golf and drive car and would like to join perfectly healthy house party in Co. Donegal for six weeks (from end July)—Address No. 4350 B.M.A. House Tavistock Square W.C.1

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RESIDENT PATIENT—COMFORTABLE House offered to elderly person or invalid lady preferred in doctor's residence. Beautiful country district near London. Every attention given. Terms moderate—Address No. 4391 B.M.A. House Tavistock Square W.C.1

TYPEWRITING—SPECIALISTS IN TYPING medical and scientific papers, lectures, notes and books. Short-hand-presses always available. Free of charge—Address—A. ROBERT WATSON, LTD., 16, Palace Chambers Bridge Street S.W.1. Whitehall 1415

ASSISTANCES

WANTED—AN OUTDOOR ASSISTANT FOR a general country practice in the Home Counties. Assistant must have held a house appointment. Commencing salary £240 per annum and a car. Address—No. 4440 B.M.A. House Tavistock Square W.C.1

WANTED AS FULL TIME ASSISTANT IN a general country practice in the Home Counties. Assistant must have held a house appointment. Commencing salary £240 per annum and a car. Address—No. 4440 B.M.A. House Tavistock Square W.C.1

WANTED—ASSISTANT EYE, EAR, NOSE, Throat practice in S. Africa. Commencing salary £200. Must have D.O.M.S. and D.L.O. or F.R.C.S. Good appearance, temperate, experienced. View later partnership. Address with photo references No. 3359 B.M.A. House, Tavistock Square W.C.1

WANTED ASSISTANT FOR JULY 31st South Midlands country practice with view to partnership. Terms £260 with house. Must drive own car for which may allowance of £7 per week. Person of over five years experience preferred—Address No. 4386 B.M.A. House Tavistock Square W.C.1

WANTED ASSISTANT MALE MARRIED or unmarried age 25-40 for general Practice W. London suburb. Salary £300 per annum plus keep. Partnership considered later. If desired—Address No. 4399 B.M.A. House, Tavistock Square W.C.1

WANTED ASSISTANT (MALE) SOME EXPERIENCE (essential), £416 per annum plus £50 car allowance (town car). Branch surgery house free. Large northern city. About July 21st—Address No. 4449 B.M.A. House Tavistock Square W.C.1

WANTED—ASSISTANTSHIP OR LOCUM by medical woman. Experience in panel and private practice. Can drive car. Go anywhere—Address No. 4398, B.M.A. House, Tavistock Square W.C.1

WANTED AT ONCE IN LARGE PANEL and private practice near Manchester. INDOOR ASSISTANT with view to PARTNERSHIP after a few months. £350 p.a. and car allowance—Address No. 4354 B.M.A. House, Tavistock Square W.C.1

WANTED IMMEDIATELY INDOOR AND outdoor ASSISTANTS for Town and Country Practices with and without view to partnership. Good salaries offered—State full particulars, British Medical Bureau 33 Cross Street Manchester

WANTED IMMEDIATELY OUTDOOR ASSISTANT male own car for mixed Practice in South Wales. Salary £350 per annum, plus £0 car allowance and partly furnished house. British nationality—Address No. 4394 B.M.A. House Tavistock Square W.C.1

WANTED IMMEDIATELY YOUNG SINGLE male reliable ASSISTANT for large and mixed indoor and outdoor practice in the Home Counties. Initial salary £41 per annum and all found with an increase of 5% a year. He must be a qualified medical professional—Address No. 4440 B.M.A. House Tavistock Square W.C.1

WANTED 1 DOOR ASSISTANT FOR a general country practice in the Home Counties. Assistant must have held a house appointment. Commencing salary £240 per annum and a car. Address—No. 4440 B.M.A. House Tavistock Square W.C.1

WANTED PERMANENT EXPERIENCED ASSISTANT for a general country practice in the Home Counties. Assistant must have held a house appointment. Commencing salary £240 per annum and a car. Address—No. 4440 B.M.A. House Tavistock Square W.C.1

WANTED—INDOOR ASSISTANT WITH view Middle class and panel practice in English county town—Address No. 4406 B.M.A. House Tavistock Square W.C.1

WANTED IN PLEASANT LANSHIRE town outdoor ASSISTANT preferably Scots. Would suit recently qualified graduate. Salary £400. Applicants please state nationality age and religion—Address No. 1558 B.M.A. House, Tavistock Square W.C.1

ASSISTANT OUTDOOR REQUIRED FOR a coast practice Scotland. Salary £470 per annum—Address No. 4387 B.M.A. House Tavistock Square W.C.1

ASSISTANT WANTED FOR MIDDLE CLASS surgical and panel Practice in Lancashire. Good salary and prospects offered to good anaesthetist keen on midwifery—Address No. 4444 B.M.A. House Tavistock Square W.C.1

ASSISTANT WANTED SCOTLAND GOOD District £300 rising half yearly. Like income. Prospects for suitable man—Address No. 4400 B.M.A. House Tavistock Square W.C.1

MEDICAL—MALE ASSISTANT WITH VIEW to Junior Partner wanted for Glasgow West end Practice—Apply with full particulars of experience etc. to Crawford Hutton and Cameron Solicitors 257 West George Street Glasgow C.2

OUTDOOR ASSISTANT MUST HAVE HAD hospital experience. Salary £450 per annum. Car provided—Apply R. SUMNER and Co. Ltd. 40 Hanover Street Liverpool

REQUIRED IMMEDIATELY MALE INDOOR ASSISTANT for mixed Private and Panel Practice in a pleasant seaside resort in South of England. Salary £300 per annum. No objection to newly qualified man. Send testimonials and photo—No. 4415 B.M.A. House Tavistock Square W.C.1

YOUNG LADY WANTED TO ASSIST DR in N.W. London. Resident post ample dispensing receipts, receptionist, and be generally useful. Commencing salary 45s per week all found except laundry—Address No. 4435 B.M.A. House Tavistock Square W.C.1

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WANTED BY EXPERIENCED LONDON medical man an introduction to POLITICAL MEDICAL WORK, preferably of POLITICAL MEDICAL nature. Remuneration secondary concern. In interview sought, affording full references and bona fides—Address No. 4440 B.M.A. House Tavistock Square W.C.1

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Full particulars sent free

1 LONDON (Western District)—PARTNERSHIP (after preliminary Assistantship) in middle-class non-dispensing Practice about £4 800 p.a. in good residential neighbourhood Panel 300 only Visits 5/ to 10/6 Pleasantly situated house (5 bedrooms) to rent Share worth about £1,000 at first at two years purchase Applicant should be aged 28-35, married held hospital appointments and must be good anaesthetist

2 N WALES BORDER—PARTNERSHIP (with early succession) in old-established County Practice about £2,500 p.a. in important town No panel Surgery premises could be purchased or rented The private residence is available if required A share up to one half would be sold at first with early succession Premium two years purchase

3 CHANNEL ISLANDS—Old established mixed PRACTICE averaging £1,235 p.a. including appointments worth £90 £100 p.a. Visits 5/ to 10/ Midwifery refused but scope Convenient house in best residential quarter for sale or rent Partnership introduction up to six months Good schools Premium £2,000

4 DEATH VACANCY—ESSEX SUBURB—Receipts average nearly £850 p.a. Panel 423 Semi-detached house (4 bedrooms) Price £800 freehold Reasonable offer accepted

5 SW OF ENGLAND—PARTNERSHIP in mixed Practice in industrial district Receipts average over £3,200 p.a. Panel about 2 100 House (4-5 bedrooms) garage and small garden for sale Good hospital Premium two fifths share one and three-quarter years purchase Short preliminary Assistantship

6 LONDON SW1—SPECIAL PRACTICE for catarrhal conditions nasal catarrh hay fever asthma etc., etc. about £1 000 p.a., in commanding position in Grosvenor Place Consultations 13 guineas Special terms for series of treatments Excellent accommodation to rent at £100 p.a., on lease Scope Premium one and a half years purchase

7 SEASIDE TOWN WITHIN AN HOUR OF LONDON—Very old-established PRACTICE Receipts average £625 p.a. Panel about 300 Nice detached house (5 bedrooms) with garage and garden for sale or rent Good scope Premium two years purchase

8 SCOTLAND—Good-class family PRACTICE, average income £1,200 Panel over 900 Also House for sale Reasonable premium.

9 MIDDLESEX—NUCLEUS OF PRACTICE in growing district about ten miles from London Receipts last twelve months £55 Panel 90 Modern detached house (4 bedrooms etc.) to rent Good scope Premium £150

10 SURREY—Very old established PRACTICE in populated suburban area Cash receipts last year about £1,500 Appointments worth over £100 and a panel of 1 300 Visits 1/6 to 10/6 Rent of private residence (6 bedrooms dressing room etc.) garage and fair sized garden £90 p.a. Surgery close by for sale or rent Scope Premium £2 500

11 N DEVON—PARTNERSHIP in old-established Practice averaging £2 050 p.a., in delightful country district Panel 1 40 Visits 3/6 to £1 1s House (6 or 7 bedroom) garage and good garden Rent £60 p.a. Good hospital and scope for surgery Premium one third share £1 500 and up to one half life

12 RESIDENTIAL DISTRICT WITHIN 15 MILES OF LONDON—Old established PRACTICE Receipts last

year over £2 000 Panel about 1 600 Visits 3/6 to 10/6 Nice residence (4 bedrooms, dressing room etc.) good garage and garden for sale or rent

13 S.E. COAST—Very old established upper-class non-dispensing PRACTICE, averaging £600 p.a. in residential part of popular seaside resort. No panel Visits 5/ to £1 1s and £2 2s No Midwifery Good house (6 bedrooms) for sale or rent Definite scope for increase Premium £1 000

14 LONDON (Western District)—PARTNERSHIP in Practice averaging about £3,550 p.a. including panel House containing 4 bedrooms etc. large garage and nice garden for sale One third share at first Premium two years purchase

15 LIVERPOOL—Well established PRACTICE Receipts 1936 £2 900 Appointments worth about £150 Panel 2,650

16 MIDLANDS—Old established non dispensing PRACTICE in first rate residential town Cash receipts average £1,640 p.a. Panel 560 House contains 6 bedrooms etc., garage and small garden Price £2 400 freehold Scope Hospital Premium £2 850

17 LONDON, S.W.—Old-established good-class non-dispensing PRACTICE in neighbourhood of Victoria Receipts last year over £660 including an appointment worth £60 and panel of about 200 Visits range from 3/6 to £1 1s mostly 10/6 to 12/6 No Midwifery Nice flat (3 bedrooms) rent £275 p.a. on lease inclusive Scope Premium £1,200

18 E MIDLANDS—Old-established country PRACTICE, averaging nearly £650 p.a., in pleasant village Appointments worth over £150 and panel 500 Charming stone built house (6 bedrooms) with central heating main electric light and power and water supply Large garage garden about 14 acres Price freehold £1 700 Scope Premium two years purchase

19 ESSEX—PARTNERSHIP in well-established and steadily increasing practice in growing residential district within 12 miles of London Receipts past year £2 200 Panel about 1 150 Suitable house or other accommodation available One-third share at two years purchase further share later Good Cottage Hospital

20 SURREY—NUCLEUS OF PRACTICE in one of the best outlying rapidly growing districts Receipts last year £280 Panel 87 Modern detached (specially built) house (4 bedrooms etc.) with garage and garden Price £1 765 freehold Plenty of scope for energetic man Premium £100

21 LONDON—Well-established RADIOLOGICAL PRACTICE in thickly populated suburban district Receipts last three years averaged £1 000 p.a. Fees range from 10/6 to £3 7s House containing 10 rooms would be sold for £800 or let at £50 p.a. on lease Good introduction Premium £1 800

22 KENT—Old-established and steadily increasing PRACTICE (in hands of Medical Woman) in rapidly developing district Receipts last year £600 No panel Visits mostly 5/ midwifery extra Suitable residence could be obtained Excellent scope Premium £1 600

23 W HAM—Old-established PRACTICE Receipts average £2 125 p.a., including appointments worth about £200 p.a. and a panel of £300 Well located corner house (about 6 bedrooms) and up to 100 accommodation with separate entrance Garage and fair sized garden Rent £1 1 on lease Premium two years purchase

British Medical Bureau

(THE SCHOLASTIC, CLINICAL & MEDICAL ASSOCIATION LTD.)
(INCORPORATED IN 1870)

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11645

Practices and Partnerships for Disposal (continued)

- 24 N.E. COAST—PARTNERSHIP (after preliminary Assistantship) in mixed Practice about £1,000 p.a. in seaport town. Panel 2,000. A suitable house could be obtained. One third share at first to suitable man at two years' purchase (or near offer) with option to increase to two fifths in three years and to four fifths in four years.
- 25 S. OF ENGLAND—Old-established PRACTICE in agricultural district about two miles from the sea. Cash receipts 1936-1935 including panel of 4,000. Fees 2,6 to £1 1s. Medicine extra. Good house (5 bedrooms, 2 box rooms, etc.) in half-acre of ground with garage. Central heating. Electric light. Free freehold £1,000. Scope for increase. Premium £1,750.
- 26 S. DEVON—Increasing PRACTICE of £1,000 in delightful country district. Panel 2,000. Fees 7/6 to £2 2s. House with 5 bedrooms, garage and garden, etc., to rent at £50 p.a. Scope. Premium £1,000 or near offer.
- 27 LONDON S.W.—Well-established PRACTICE (held by Medical Woman) in outlying suburban district. Cash receipts average £900 p.a. No panel, but scope if desired. Purchaser could have use of surgery premises and living accommodation with services by arrangement. Premium one and three quarter years' purchase.
- 28 S. COAST—PARTNERSHIP in very old-established good middle-class Practice £4,000 p.a. in rapidly growing watering place. Panel 4,000. Visits range from 3/6 to £1 1s. Suitable house obtainable. Scope. One fourth share would be sold at first at two years' purchase.
- 29 N.E. COAST—Old-established and easily worked middle and better working-class PRACTICE averaging over £1,150 p.a. in seaport town. No panel—a few contractions outpatients. Visits 5/ to 15/. Rent of consulting rooms £26 p.a. A suitable residence could be obtained. Good scope much building going on. Premium £1,500. (Contents of consulting rooms—including X Ray plant and electrical apparatus—about £150).
- 30 W. WALES—PARTNERSHIP in first-class country Practice near sea coast. Good house available to rent. Facilities for country sport and for golf, tennis and bathing. Premium for share of £1,200 to £1,400 one and a half years' purchase. Knowledge of Welsh desirable.
- 31 N. WALES—Old-established PRACTICE in growing district with beautiful surrounding country. Receipts average £1,550 p.a. including over £200 from panel. Visits 5/ to 15/. Nice private residence which can be bought or rented on lease. Professional accommodation rented at £45 p.a. on lease. Premium two years' purchase or near offer. Knowledge of Welsh an advantage though not essential.
- 32 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London. Panel 400 increasing. Semi-detached house (2 bed and dressing rooms) with garage and garden to rent. Scope for increase. Premium £500.

33 YORKSHIRE (N.R.)—Very old-established and steadily increasing country PRACTICE between £1,400 and £1,600 a year including operations and panel worth £500 p.a. Extremely attractive house in central position (5 or more bedrooms, garage and small garden, etc.). Good schools and sports. Scope. Premium one and a half years' purchase.

34 WESTERN AUSTRALIA—Old-established PRACTICE averaging £1,200 p.a. in small town in centre of one of the best and most fertile pastoral areas. Black but house (5 bedrooms), electric light and water. Rent £100 lease. Premium £650 including Two Horse Van to rent.

35 OPHTHALMIC PRACTICE in S. Rhodesia—Former Tenants required firm licence with view to purchase. Gross receipts £11 monthly. Good Medical Unit. £1,500. Possibilities of expansion for man with D.O. or D.O. and operative experience. Good well-equipped Hospital.

36 CORNWALL—Very old-established PRACTICE in delightfully situated sea-side village. Cash Receipts £1,120 monthly. £1,200. Panel over 900. Small convenient detached house (5 bedrooms) with electric light, main water, etc. garage and garden for sale. Premium £1,100.

37 EAST ANGLIA—PARTNERSHIP in old established country practice about £1,500 p.a. Easy distance of the coast. Panel over 2,000. House (6 bedrooms), electric light and main drainage, garage and about 3 acres of land for sale freehold. Premium two fifths share two years' purchase. Partner must be married aged 35-40. Preliminary Assn. £1,000.

38 LONDON N.W.—Increasing PRACTICE of £725 p.a. in growing district 30 minutes from Piccadilly. Receipts last year £764 (recently obtained appointment value £50 p.a. not included). Panel 400. No midwifery. Considerable double-fronted freehold corner residence (4 bedrooms) for sale and garden for sale. Scope. Premium £1,450.

39 EASTERN COUNTIES—PARTNERSHIP in very old-established Country Practice averaging over £2,000 p.a. Panel 1,700. House with 4 bedrooms and separate surgery accommodation, garage and garden to rent at £55 p.a. Scope. Premium one third share two years' purchase.

40 S. OF ENGLAND—PARTNERSHIP (after preliminary Assistantship) in well-established Practice about £2,500 in Market Town about 100 miles from London. Panel 900. Well built house (5 bedrooms, etc.) available for sale. One third or two fifths share at two years' purchase.

41 S. OF ENGLAND—Well-established PRACTICE averaging nearly £1,200 p.a. in a seaside resort. Panel over 700. Visits 3/6 to 10/6 mostly 5/. Very little midwifery. Good corner house (5 bedrooms) with central heating, garage and small garden for sale. Well-equipped Cottage Hospital. Good scope. Premium £2,000.

Purchasers for cash are available for Practices with Incomes of £1,250 to £2,000 p.a.
Purchasers can raise additional capital for the purchase of approved practices or shares.
Particulars will be forwarded on application.

A number of Assistantships can be offered to suitable applicants.
All communications to be addressed to The Manager.

The British Medical Bureau have pleasure in announcing the opening of a BRANCH in SCOTLAND

The Scottish Board of Directors are—
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The Offices are situated at 21 ALVA STREET Edinburgh being quite close to the West End of Princes Street, and within two minutes' walk from the offices of the British Medical Association and Medical Insurance Agency Ltd at 7 Drumshough Gardens.
Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed.

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The maximum commission payable on the sale of any Practice or Partnership in Great Britain placed exclusively in the hands of this Agency is £50 (fifty pounds), which sum covers goodwill, drugs, surgery, fittings, fixtures and furniture, instruments and book debts but not house property. Schedule of Terms will be forwarded on application.

Accountancy and legal services furnished by the Agency where desired at moderate inclusive charges. No charge is made to Principals for the introduction of Locum Tenens or Assistants.

- 1 UNOPPOSED COUNTRY PRACTICE WITHIN 150 MILES OF LONDON—Sited in attractive district and producing for the past 12 months £1 500 including £600 p.a. from Panel and £200 from Clubs and Public Assistance. Excellent house recently re-decorated with 3 reception and 6 bedrooms. Beautiful garden and orchard. Rent on lease £65 p.a. Good scope for further development. Local hospital. Vendor on Staff. Premium 2 years purchase.
- 2 LONDON—WESTERN DISTRICT—Old-established Private PRACTICE for disposal after being held for many years by the Vendor who is retiring. Approximate cash receipts for the last year amount to £1 062. There is stated to be scope for increase, particularly if Panel work is undertaken and also midwifery. Fees 3/6 to 10/6. Small compact house available on rental at £90 p.a. containing consulting room, 2 reception rooms, 3 bedrooms etc. Premium £1 800.
- 3 ESSEX—Death Vacancy—Old-established PRACTICE for disposal. It has been held by the Vendor for the past twelve years. The gross cash receipts for the last year were approximately £756. Panel of 424 patients. Fees 2/6 and 3/6 with a few midwifery cases at 3 guineas. Suitable house for disposal containing 2 reception rooms, 3 bedrooms, etc.
- 4 DEATH VACANCY—FAVOURITE SOUTH COAST TOWN—Old established PRACTICE producing £800 p.a. of which about £600 is derived from a Panel of 1,200 patients, and an appointment producing about £30 p.a. House with 3 reception, 4 bedrooms, etc. to be rented on lease. Premium £1 500 to include household fittings and fixtures.
- 5 SOUTH-COAST SEAPORT—Long-established PRACTICE for disposal owing to Vendor's retirement. He has held it for the past 39 years. Income last year approximately £573 with a Panel of about 460 patients. Vendor previously held a public appointment producing £450 p.a., which he relinquished owing to age limit. It is considered that anyone devoting whole time to the Practice would increase the receipts. Suitable accommodation available on rental.
- 6 HAMPSHIRE—VILLAGE PRACTICE NEAR COAST—Recently established Practice producing at the rate of about £260 p.a. and stated to be capable of considerable extension. Very nice small house to be rented on lease.
- 7 EASTERN COUNTIES—Mixed-class PRACTICE in pleasant agricultural district producing for last 12 months over £1 300 p.a. Fees 3/6 to 2/1. Nice house in good position with 2 reception, 4 bedrooms, dressing room etc. Separate professional accommodation. Modern conveniences. Garden garage. Price for freehold £1 300. Sport of all kinds and schools within reach.
- 8 MONMOUTHSHIRE—Middle-class PRACTICE established 20 years and producing for last 12 months £1 430 p.a., including small Panel of about 300. Fees 3/6 to 2/1. Good house with 2 reception, 6 bedrooms, etc. Separate professional rooms. Garden garage. Rent £125 p.a. Premium 14 years freelease.
- 9 EAST ANGLIA—WITHIN REACH OF TWO GOOD TOWNS—Old established unopposed country PRACTICE averaging over £1 000 p.a., including Panel producing over £450 a year. Low expenses. Detached house in own grounds, containing 2 sitting rooms, 5 bedrooms, etc. Rent £70 a year. Premium £1 750.
- 10 NORTH WALES—Chiefly working-class PRACTICE producing for last 12 months £1 025 including Panel worth £438 p.a. and appointments worth over £400 p.a. Low expenses. Suitable surgery premises for sale. Premium, to include surgery, £2 050.
- 11 LONDON—NORTH WEST—Recently established and steadily developing PRACTICE producing for last 12 months approximately £1 000 and increasing at the rate of about £200 p.a. Suitable house can be rented or flat obtainable. Premium 2 years purchase.
- 12 DEATH VACANCY—CUMBERLAND—Old-established unopposed PRACTICE held by late incumbent thirty years. Gross cash receipts average about £800 p.a., including Panel worth over £250 p.a. and appointments worth nearly £80 p.a. Suitable 2-roomed house with bathroom, surgery, dispensary, etc., garden, garage. Rent £30 p.a. Shooting fishing golf etc. Premium offers invited.
- 13 LONDON—SOUTH WEST—OUTLYING SUBURB—Old-established good middle-class PRACTICE averaging between £1 150 and £1 500 p.a. including Panel of about 1 300. Suitable house with 2 reception, 4 bedrooms, etc. can be rented at £80 p.a. Premium 2 years purchase or near offer. Illness reason for sale.
- 14 EASTERN COUNTIES—Very sound unopposed middle and working-class PRACTICE in agricultural district averaging £1 150 p.a. including Panel worth about £450 p.a. Fees from 3/6. Nice house with 2 reception, 6 bedrooms, etc. electric light garden garage. Premium for Practice and house £3 350.
- 15 NORTHERN SUBURB WITHIN 10 MILES OF HYDE PARK—Recently established better-class PRACTICE, steadily increasing and producing for last 12 months £760. Panel of about 600 and appointments worth £40 p.a. Good freehold, 1½ storey with 4 bedrooms, etc. garden, garage. Price £1 450. Premium £1 400 for near offer. Vendor retiring.
- 16 LONDON—SOUTH WESTERN DISTRICT—Well-established middle-class PRACTICE. Gross cash receipts for last 12 months approximately £800 including Panel of £250. Fees from 2/6. Suitable house stated to be in good repair. Good scope for increase. Moderate premium.
- 17 EASTERN COUNTIES—COUNTY TOWN—Well-established PRACTICE averaging about £1 100 p.a. including Panel of 1 051 and clubs producing about £150. £400 p.a. Very nice single storey house with 4 bedrooms and sits on a beautiful site with a large garden. Premium 1 year's purchase.
- 18 LONDON N.W.—Recent established PRACTICE at present producing £200 p.a. but capable of great increase. Fees from 3/6 to 10/6. House available on rental at £45 p.a. could be well used as a kitchen. Premium 1 year's purchase.
- 19 OUTLYING NORTHERN DISTRICT—Recently established PRACTICE at present producing over £340. Suitable house on rental at £90 p.a. Premium £350.
- 20 ESSEX COAST TOWN—PARTNERSHIP—A share producing about £1 500 p.a. is offered in a very sound and increasing, mixed-class Practice at present bringing in about £4 000 p.a. with substantial Panel. Suitable house with 2 reception, 5 bedrooms etc. Small garden garage. Rent £120 p.a. Premium 2 years purchase.
- 21 SOUTHERN COUNTIES—Well established non-Panel PRACTICE producing about £3 000 p.a. Fees from 5/1. Suitable house can be rented.
- 22 NORTH EAST COAST—Old established PRACTICE producing about £900 p.a. but stated to be capable of considerable increase. Choice of houses. Partnership introduction given as vendor retiring.
- 23 EAST COAST TOWN—PARTNERSHIP—A share worth about £1 000 p.a. is for disposal in an old-established Practice the gross cash receipts of which are about £4 000 p.a. House containing 3 or 4 bedrooms with garden and garage can be rented at £90 p.a. Premium 2 years purchase.
- 24 MIDLANDS—FAVOURITE RESIDENTIAL TOWN—Chiefly better class non-dispensing PRACTICE, producing for last 12 months over £1 600. Panel of 560 and one appointment worth £150 p.a. Fees 3/6 to 2/1. Very nice house with ample accommodation garden and garage. Freehold for sale. Premium 2 years purchase.
- 25 SOUTH EAST COAST—RESIDENTIAL TOWN—Old-established non-dispensing better-class PRACTICE averaging for last 3 years about £1 450. Selected Panel of 500. Fees 3/6 to 2/1. Ground floor flat containing large hall consulting room, 2 reception, 3 bedrooms, etc. inclusive rent £190 p.a. Premium 2 years purchase.
- 26 CENTRAL LONDON—PRACTICE is worked as a 'Lock up' and averages about £1 000 p.a. Fees from 2/6. Suitable accommodation can be obtained. Premium 2 years purchase.
- 27 CROYDON AREA—Recently established PRACTICE. Receipts for last 12 months over £660 including Panel of 350. House with 3 bedrooms, etc., garden and garage can be rented at £85 p.a. Premium £750.
- 28 OUTLYING NORTHERN DISTRICT—Mixed-class PRACTICE receipts last 12 months £1 250 including Panel of 1 000. Suitable flat above surgery premises. Inclusive rental £184 p.a. Premium 2 years purchase.
- 29 SUSSEX—ATTRACTIVE DISTRICT NEAR SEA—PARTNERSHIP—A ONE-FOURTH SHARE in old-established Practice having good scope. Gross cash receipts for last 12 months approximately £3 275. Panel of about 1 300. Appointments worth over £300. Choice of houses on rental for incoming partner. Premium 2 years purchase.
- 30 SURREY—RAPIDLY DEVELOPING AREA—Recently established PRACTICE producing for last 12 months £720 including Panel of 680. Suitable house can be purchased. Moderate premium. Ill health reason for sale.
- 31 NORTH LONDON—Old-established PRACTICE producing about £700 p.a. including Panel of nearly 600 patients. Suitable house ample accommodation and good garden garage to rent at £100 p.a. Premium £1 200.
- 32 LONDON—WESTERN AREA—Mixed-class PRACTICE in populous district. Gross cash receipts for last 12 months about £700, but capable of increase. Panel of 500. Well situated house with ample accommodation, will be put into thorough repair. Good garden. Price for Practice and house £2 300. £500 down.
- 33 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £600. There is stated to be scope for increase as receipts have fallen owing to Vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 34 LONDON SOUTH EAST—Old-established PRACTICE producing about £1 850 p.a., including selected panel of 500. Fees from 3/6. Suitable house available with 2 reception, 5 bedrooms etc. Freehold for sale. Premium 2 years purchase.
- 35 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1 100 p.a. including selected panel of about 350. Fees from 3/1. Good freehold house for sale or smaller house available. Premium £2 000. Vendor retiring.
- 36 NORTH WALES—FAVOURITE SEASIDE RESORT—A ONE-THIRD SHARE (with increase later) is offered after short preliminary anti-trust in old-established better-class practice producing about £3 400 p.a. Panel of 1 100. Suitable flat available for incoming partner who should be experienced. Premium 2 years purchase.
- 37 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing for last 12 months approximately £1 340. Selected panel of 400 to 450 patients. Visits from 5/1. Very nice house in good repair with ample accommodation. Garden. Garage. Price for freehold £2 000. Premium £1 250.
- 38 MIDLANDS PARTNERSHIP—ONE-HALF SHARE in mixed-class Practice in attractive district producing over £2 400 p.a. Panel of 1 350 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 11 years purchase.
- 39 MIDLANDS—PARTNERSHIP—A SHARE representing approximately £1 300 p.a. with increase later, is offered in exceptionally sound and established practice averaging about £2 000 p.a. with substantial panel and very good appointments. Excellent scope for more surgery. Suitable house available. Premium 2 years purchase.

WANTED TO PURCHASE—PRACTICE or PARTNERSHIP producing £200 p.a. or more on a standard basis. For details apply to the Agency.

The Agency has made arrangements for special facilities on very favourable terms to be afforded to approved purchasers for the advance of part of the premium for any suitable practice or partnership. Full details on application.

BRITISH MEDICAL BUREAU

(The Scholastic, Clerical and Medical Association Ltd.)
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FOR DISPOSAL

For particulars see our report

Practices and Partnerships wanted Large list of bona fide purchasers with ample capital available Enquiries invited from prospective vendors All information treated in strict confidence

YORKSHIRE (WR.)—Sound old-established middle and working-class PRACTICE in important city. If desired, a two-fifths share would be sold now and remaining share in 12 months. Cash receipts last year £4,355 and increasing. Panel 2,600. Great scope. 1 excellent corner house with modern conveniences. 2 reception 6 bedrooms. 3 professional rooms, garage for 3 cars. Premium—Practice or Share—1½ years purchase. Vendor retiring owing to ill health—No 971.

DERBYSHIRE—Old-established mixed-class PRACTICE in large town. Cash receipts last year £1,041. Panel 1,600. Good scope. 1 excellent detached house 3 large and 3 small bedrooms, garage for 2 cars and 1 acre garden. Premium—Practice—1½ years purchase—No 977.

NEAR NEWCASTLE-ON-TYNE—Colliery PRACTICE. Cash receipts last year 1936, Panel 800. Scope. Good house to rent. Premium—1½ years purchase—No 978.

LIVERPOOL—Sound mixed-class PRACTICE. Cash receipts £2,900. Panel over 2,500. Good house to rent. Premium best offer—No 927.

NOTTINGHAM—PARTNERSHIP in old-established mixed-class Practice. Cash receipts over £2,500 p.a. Panel over 3,000. Scope. Nice detached residence 2 reception 5 bedrooms, garage and garden. Premium—half share—2 years purchase—No 975.

LINCOLNSHIRE—PARTNERSHIP in old established Country Practice in beautiful district. Cash receipts last year £2,801. Panel 2,000. Very good house 3 reception, 5 bedrooms, garage and garden of one acre with tennis lawn etc. Rent £60 p.a. Premium—half share—£2,200—No 933.

DEATH VACANCY—CUMBERLAND—Old established unopposed Country PRACTICE. Cash receipts last year £1,032. Panel 350 and transferable appointments. £65 p.a. Excellent detached house beautifully situated 8 rooms. Professional rooms, garage for 2 cars and large garden. Premium—best offer for quick sale—No 972.

MONMOUTHSHIRE—Old-established Panel Contract and Private PRACTICE in prosperous district. Cash receipts last year £1,400. Panel 1,200 plus Contract work, yields £1,230 p.a. Good house 2 reception 5 bedrooms, professional rooms (separate entrance) and garage. Rent £40 p.a. Expenses low. Premium—£2,000—No 970.

YORKS (NR.)—Old-established unopposed Country PRACTICE in beautiful district near to large town. Cash receipts approximately £1,200 p.a. (including £455 p.a. from Panel). Good house 2 reception 5 bedrooms, large garden, garage with gas and electricity. Rent £70 p.a. on lease. Premium—2 years purchase or near offer to include drugs and fittings—No 973.

NEAR NOTTINGHAM—PARTNERSHIP in practically unopposed mixed class Country Practice. Average cash receipts £3,500 p.a. Panel over 1,600. Appointments £120 p.a. Attractive house 2 reception, 5 bedrooms, garage and pleasant garden. Premium—1½th share—2 years purchase—No 953.

NEAR MANCHESTER—Sound middle and working-class PRACTICE. Average cash receipts £2,692 p.a. Panel over 2,500. Scope. Detached corner house 2 reception 4 bedrooms, 3 professional rooms, garage and garden. Premium—1½ years purchase—No 952.

LANCS TOWN—Mixed panel and private PRACTICE. In present hands 30 years. Cash receipts approximately £1,500 p.a. Panel 1,500. Great scope. Good house 2 reception, 4 bedrooms, garage and small garden. Rent £50 p.a. Premium, best offer—No 945.

MANCHESTER—PRACTICE in Industrial district. Cash receipts £880 Panel 904. House to rent. Premium—any reasonable offer—No 955.

ANGLESEY—Mixed Panel and Private PRACTICE about £600 p.a. Scope. Large house for sale or may be rented. Premium—1 year's purchase—No 980.

YORKSHIRE (WR.)—PARTNERSHIP in middle-class Practice with unlimited scope. Income £2,000 p.a. Panel 1,500. Good house to rent. Premium 3/8th share—2 years purchase. Half share in 2 years—No 979.

NORTH WALES—Old-established PRACTICE near Sea and Country. Capable of great increase. Cash receipts p.a. last year £1,026. Panel 800. Nice surgery premises. Premium best offer—No 905.

NEAR LIVERPOOL—Well-established middle-class PRACTICE in pleasant district. Ample scope at distinct development. Cash receipts p.a. £2,500 p.a. Panel 650. Nice house 2 reception 5 bedrooms and garden. Premium—1 year's purchase. Vendor retiring—No 944.

MANCHESTER—Middle and better-class PRACTICE. In present hands 40 years. Cash receipts last year £2,151. Panel over 600. Good house, 3 reception, 6 bedrooms, garage and garden. Premium—Practice and house—£3,000. Long introduction if desired. Vendor retiring—No 883.

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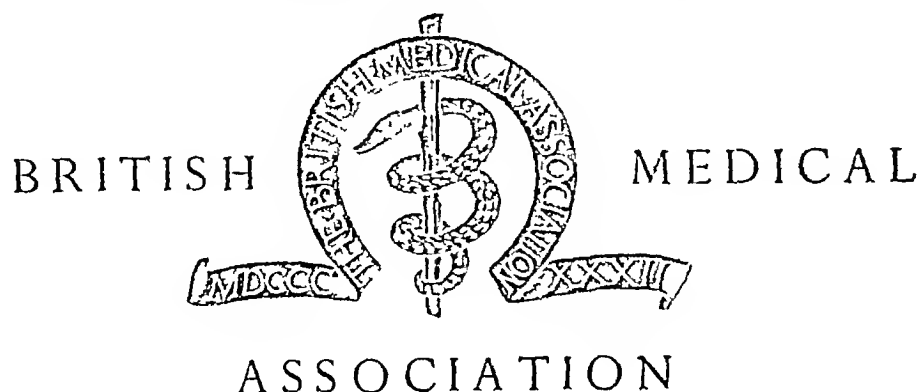
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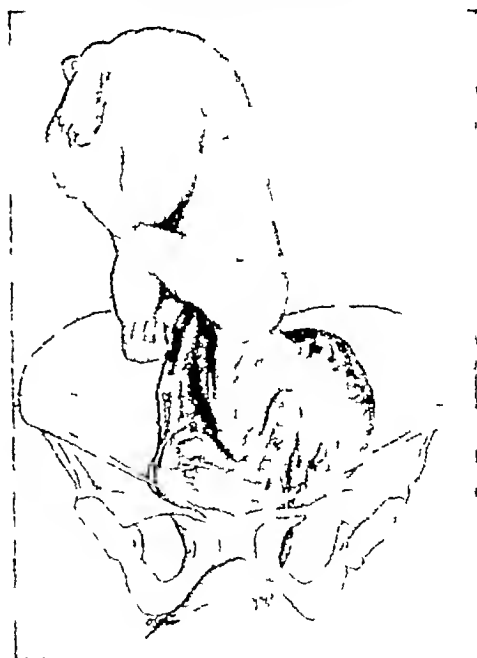
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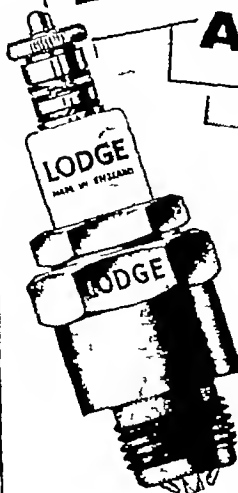
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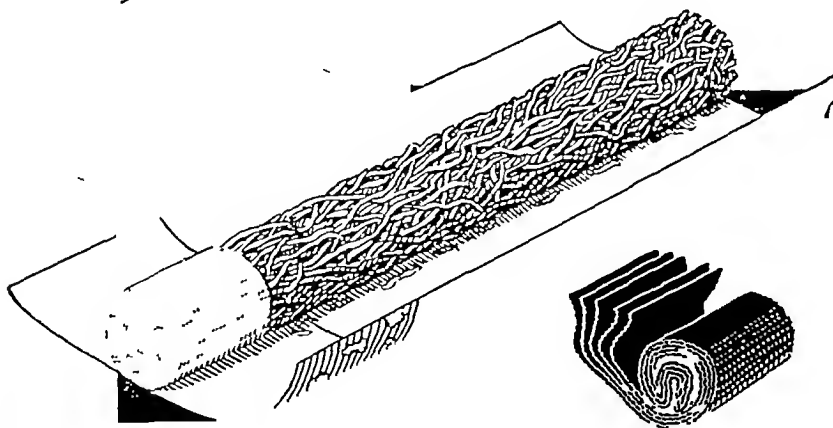
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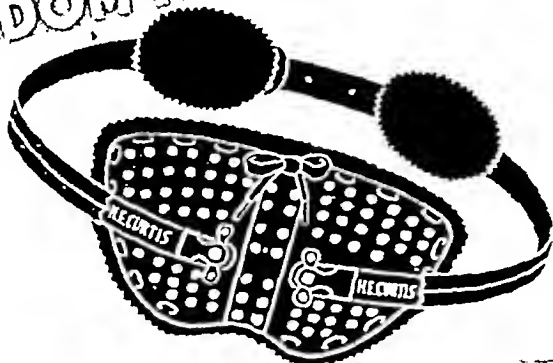
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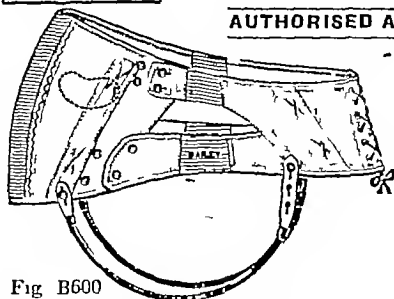


Fig B600

BELT (Bailey's Patent) FOR
FLOATING KIDNEY

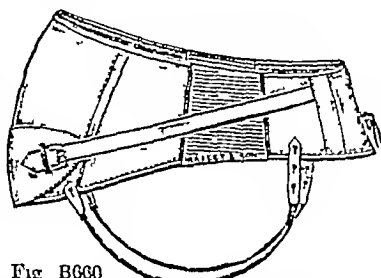


Fig B630

BELT FOR ENTEROPTOSIS

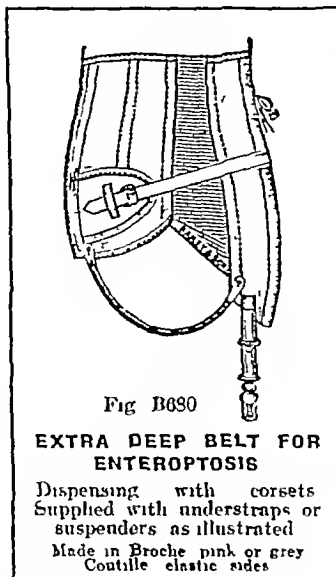


Fig B690

EXTRA DEEP BELT FOR
ENTEROPTOSIS

Dispensing with corsets
Supplied with understraps or
suspenders as illustrated

Made in Broche pink or grey
Coutille elastic sides

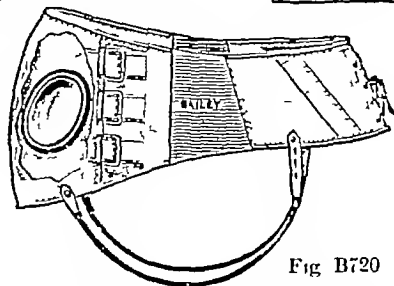


Fig B720

(Showing Interior of Cup)
SPECIAL BELT FOR AFTER
COLOSTOMY

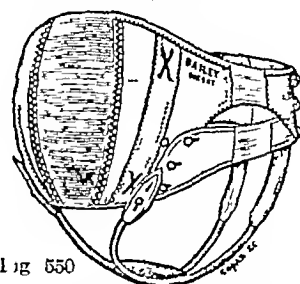
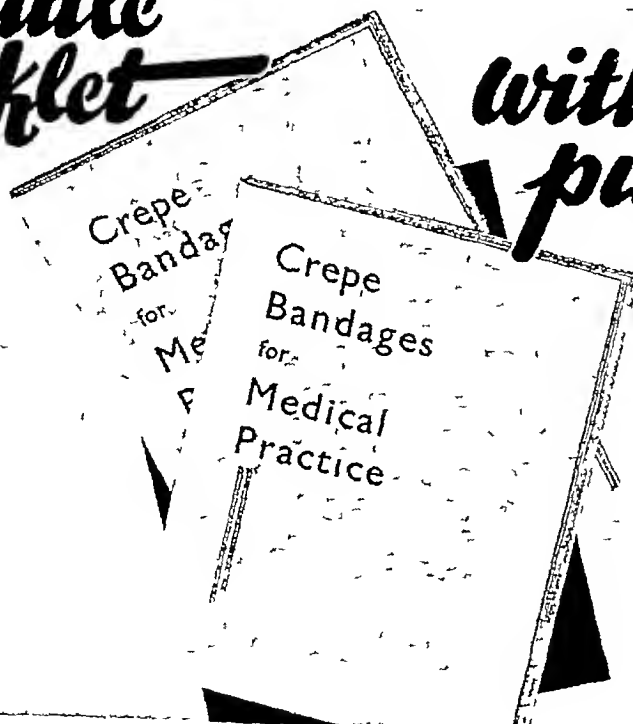


Fig B550

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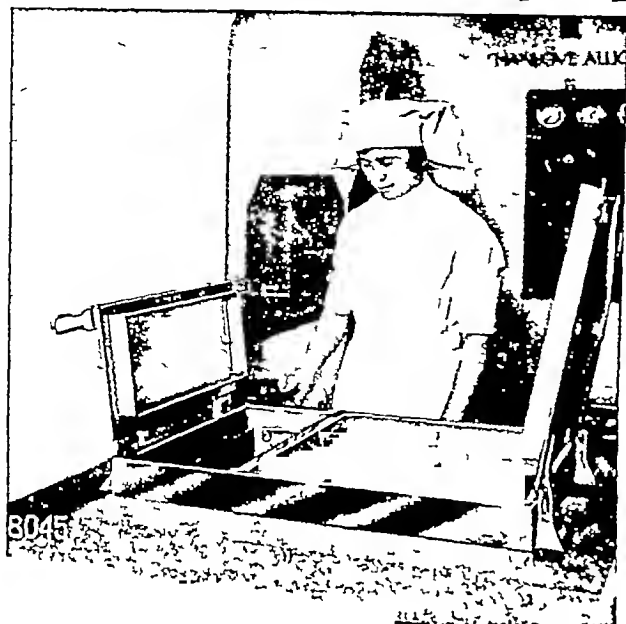


Fig 8045

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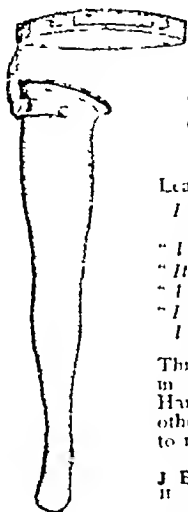
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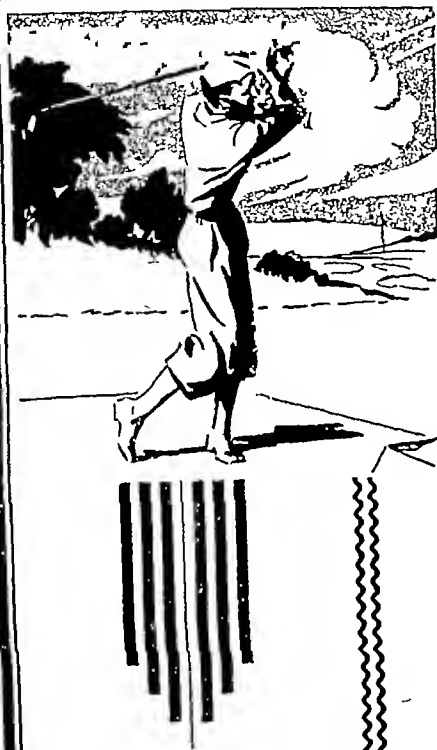
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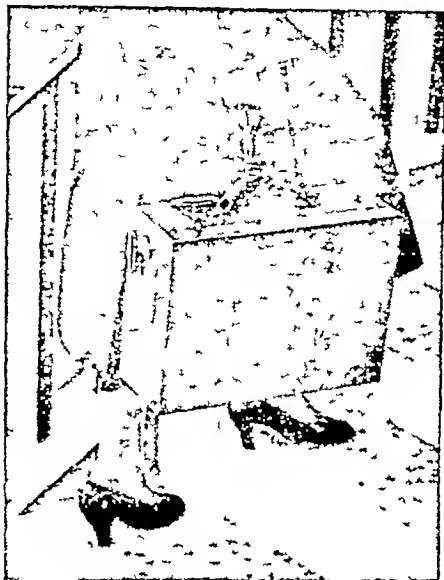


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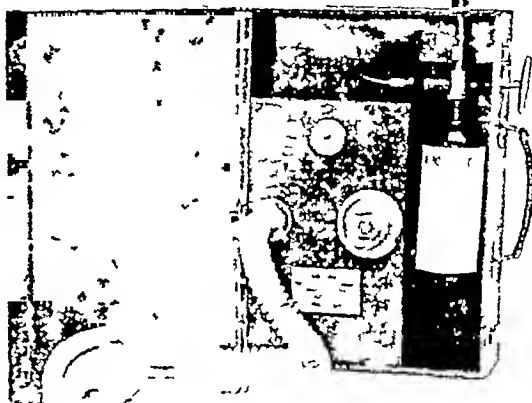
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- 3 Sterile urine is produced usually within a week, even in chronic infections

Descriptive literature on request

THE BRITISH DRUG HOUSES LTD LONDON N 1

Index/5/35

IN THE PAST 6 MONTHS 51 HOSPITALS HAVE TESTED
AND APPROVED OF THE **BAXTER "VACOLITER"**
THEY FIND THIS SERVICE
UNIFORM • SAFE • ECONOMICAL

PROVED

Before a single litre of Baxter's solutions was sold to the profession generally there was a history of five years of research plus two years of development, then three years of successful clinical use by a selected group of hospitals. We could not afford to guess — nor can you. Baxter's solutions in Vacoliters are always sterile, ready to use and instantly available. We have been able to prove to many hospitals that they bring the advantages of safety and improved service at reduced cost.

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Solutions in Vacoliter dispensers are prepared from a fractionated protein-free water. Their pH value is always consistent with their concentration. Baxter solutions are stable and sealed in vacuum and sterilized under recorded control. Each time a new solution is made up it is biologically tested. We ask you to give them a thorough clinical test. What you find out for yourself will be more eloquent than any claims we could possibly make.



Vacoliter
ONE LITRE (1000 C.C.) PACKED IN VACUUM

"HEPATAGEN"

(MIST HEPATICA CONC HEWLETT)

Composition—Ext Cascarae Ext Rhei Jalapin Podophyllin Cocalnao Hydrochlor 1-20th gr In each fluid drachm
This preparation does NOT come under the Dangerous Drugs Act

A popular remedy for Chronic Biliousness Catarrhal Jaundice, and the Jaundice of simple Hepatic Torpor In passive or habitual congestion of the Liver, it has been used with marked benefit

In the treatment of acute or temporary constipation in convalescents, and in pregnancy or in the constipation due to sedentary habits the mixture can be prescribed with wonderful effect

The Dose is from 10 to 60 minims, according to the age and condition of the patient One drachm is a direct aperient, and is not accompanied by griping or tenesmus

Packed for Dispensing only in 5-oz, 10-oz, 22-oz, 40-oz, and 90 oz Bottles

This preparation is also supplied "a/sine Cocalna" the dose and price remaining the same

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IT IS 'ALIVE' ITSELF**

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**POWERFUL CHOLERETIC
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OF ESTABLISHED VALUE**

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NON CALULOUS CHOLANGITIS,
FUNCTIONAL HEPATIC
INSUFFICIENCY Etc

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MISCIBILITY - ENSURES

The Nasal Compound
in which
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Menthol	0.2
Eucalyptol	0.5
Camphor	0.1
Chlorothymol	0.01
Azulen	0.2
Ephedrine	0.25
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OESTROFORM *A standardised preparation of the ovarian follicular or oestrogenic hormone*

Oestroform has been used with signal success in various metabolic derangements of ovarian origin, in menstrual disturbances of puberty, amenorrhoea, menopausal disorders and excessive vomiting of pregnancy, also for the induction of labour

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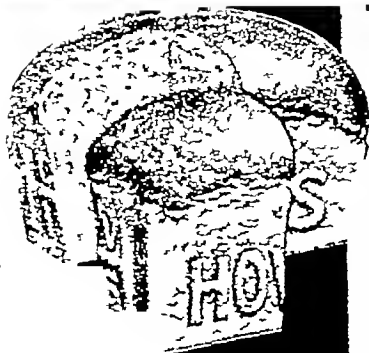
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Progestin B D H is responsible for the control of many of the phenomena of pregnancy and menstruation, and it is administered with success in habitual abortion, amenorrhoea, dysmenorrhoea and menorrhagia

Literature on request

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of the flour from which the
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Science advocates the use of germ-bread as a factor in promoting nutrition. That is why HOVIS figures so prominently upon the dietary when the question of food value must be studied. In white bread, the wheat-germ is practically non-existent. This vitalising source of protein, fats and phosphates abounds in HOVIS. In fact, twenty-five per cent of the flour from which the HOVIS loaf is produced, is WHEAT-GERM. Apart from its low starch-content, HOVIS is practically free from bran and indigestible cellulose. This factor makes HOVIS supreme for easy digestibility and assimilation.

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A Menstrual Regulator . . .

When the periods are irregular, due to constitutional causes, ERGOAPIOL (Smith) is a reliable prescription. Containing apiol (M.H.S. special) together with ergot, aloin and oil of savin of the highest quality, this preparation effectively stimulates uterine tone and controls menstrual and postpartum bleeding.

In cases of Amenorrhœa, Dysmenorrhœa, Menorrhagia and Metrorrhagia, Ergoapio serves

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Prescribe 1 to 2 capsules 3 or 4 times daily. Supplied only in packages of 20 capsules. Literature on request.

As a safeguard against imposition the letters M.H.S. are embossed on the inner surface of each capsule, visible only when the capsule is cut in half as shown.



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(diethyl ammonium-dithiocarbamate)

Contramine is particularly valuable in the treatment of the chronic complications of gonorrhœa and metallic intoxications following the administration of arsenic, bismuth or mercury. Gonococcal arthritis, chronic epididymitis, conjunctivitis, iritis, neuritis, teno-vaginitis and fibrositis, all of which conditions may complicate gonorrhœa, are indications for Contramine.

Chronic retrobulbar neuritis and amblyopias, as well as bismuth and mercurial stomatitis, yield to treatment with Contramine. Various dermatoses, such as acne (vulgaris and rosacea), seborrhœic eczema and dermatoses of varied or unknown origin, as well as such rheumatic conditions as gout and lumbago are considerably benefited also by treatment with Contramine.

Literature and sample on request

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in the treatment of gastro intestinal fermentation and intoxication

SO FREQUENT IN SUMMER

DIMOL SYRUP

With a Rideal-Walker co-efficient of 43—suitable for all ages

DOSAGE

	Infants	Children	Adults
	Half teaspoonful	1 to 2 teaspoonfuls	3 to 4 teaspoonfuls

NOTE—Always dilute with eight parts of milk or water. Doctors can readily prescribe with any additions they deem requisite.

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Since GENORA brand ORAL VACCINE for COLDS and INFLUENZA was introduced to the Medical Profession experience has shown that a course of this vaccine establishes a high degree of immunity. It is particularly suited for

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CFH.316

"LACTOGEN" as easy to Assimilate as Natural Milk

The special Lactogen process ensures a product so closely akin to the characteristics of natural milk that not only are the proportions of its food elements practically identical, but the physiological character is also similar in every important factor.

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*The proof of LACTOGEN is in
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Iron 'Jelloids' are an elegant and reliable means of administering the proto-carbonate of iron. The preparation has none of the disadvantages of Pyl Blaud. The iron content remains fresh and unoxidized indefinitely, and injury to the teeth is avoided.

The 'Jelloids' are highly effective in the treatment of achlorhydric anæmia and indeed in all the simple anæmias in which massive iron therapy is indicated.

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You are cordially invited to apply for samples for clinical test.
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KAYLENE

2 teaspoonsful in a few ounces of water hourly

Follow-up with Kaylene-ol as soon as diarrhoea ceases

KAYLENE brand of colloidal kaolin adsorbs the toxic principles of—

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Vide B.M.J. 1937 1 595

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THE WORLD RENOWNED

NATURAL MINERAL WATER

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NATURAL VICHY SALT for
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The VICHY WATERS, being almost devoid of Sulphates, are most agreeable to the taste, and are daily relied upon by Physicians the world over in the treatment of Gout and Rheumatism and for Affections of the Liver, Stomach, etc.

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prepared with Natural Vichy Salt.

CAUTION—Each bottle from the STATE SPRINGS bears a neck label with the word "VICHY ETAT" and the name of the SOLE AGENTS

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Samples free to Members of the Medical Profession

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IN PREGNANCY

THE physiological drain of calcium, phosphorus, vitamins and other important food elements calls for replacement during pregnancy. Composed of milk, eggs and malt 'Ovaltine' supplies these essentials in a delightful form which does not overtax the unstable maternal digestion. A cup of 'Ovaltine' on arising during the early months is often effective in controlling sickness and has a food value greater than three eggs.

IN LACTATION

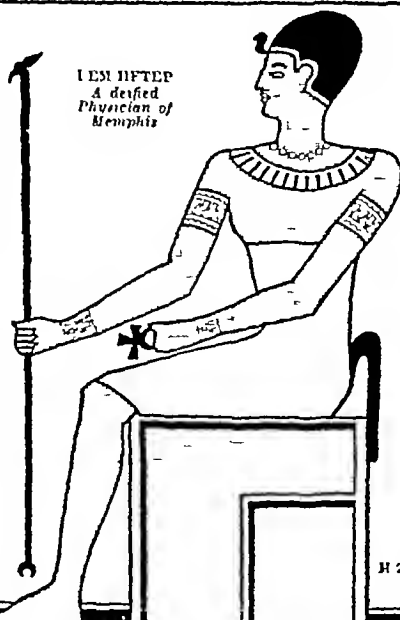
To maintain lactation to the eighth month is an ideal not often realized under modern conditions of life. Ample evidence is available to show that 'Ovaltine' has a definite action in increasing the flow and enriching the quality of the milk. It has moreover a beneficial effect on the health of mother and child. The flavour is so agreeable that it can be taken for prolonged periods without any distaste arising.

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Laboratories and Works KING'S LANGLEY HERTS

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A devoted
Physician of
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BY APPOINTMENT

Schweppes

SUGAR-FREE GINGER ALE

SUGAR-FREE TONIC WATER. . .

SUGAR-FREE SPARKLING LIME

Approved by the Institute of Hygiene and the Diabetic Association

These beverages have been analysed by the Institute of Hygiene and found "free from sugar and metallic contaminants" The analyses shown have been accepted by the Medical Advisory Council of The Diabetic Association and recommended for diabetic and obese subjects

ANALYSIS SHOWED THE FOLLOWING RESULTS

<i>Schweppes Sugar Free Dry Ginger Ale</i>	<i>Ordinary Dry Ginger Ale</i>	<i>Schweppes Sugar Free Tonic Water</i>	<i>Ordinary Tonic Water</i>	<i>Schweppes Sugar Free Sparkling Lime</i>	<i>Ordinary Sparkling Lime</i>
Carbohydrates absent	6.2%	Carbohydrates absent	9.1%	Carbohydrates absent	11.8%
Protein absent	absent	Protein absent	absent	Protein absent	absent
Fat absent	absent	Fat absent	absent	Fat absent	absent

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FORMULA

Thymidin A 11	0.10
Hexamethylenetetramine	
Anhydromethylsuccinate	0.50
Hexamethylenetetramine	2.50
Lysidine Tartrate	0.50
Lithium carbonate	1.00
Sodium Bicarbonate	1.00
Water	100.00

DIRECTIONS

One teaspoonful to be taken morning and night in a tumblerful of water

Uralysol, in addition to being a solvent and eliminator of pathological Uric Acid is a powerful urinary antiseptic.

Normally there exists in the body a certain quantity of uric acid which assists general metabolism and after it has played its part is eliminated together with the normal thyminic acid of the organism. When however uric acid is present in excess the body needs additional thyminic acid to supplement the resultant deficit of this normal solvent of uric acid.

Uralysol, by its thyminic acid content, supplies the agent necessary to dissolve excessive uric acid.

The next step is the elimination of this thyminic uric acid which being in excess of normal necessitates treatment by an agent capable of enhancing elimination.

Uralysol, by its content of hexamethylenetetramine and lysidin stimulates the organism to eliminate the pathological uric acid already dissolved by its thyminic acid content.

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SPRAINS, STRAINS and DISLOCATIONS

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Antiphlogistine

BRAND DRESSING

Its well-retained heat and obtundent, but tissue-stimulating, qualities, increase the comfort and shorten the convalescence of the impatient patient.

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A powerful
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Tablets of $1\frac{1}{2}$ Grains

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SEDATIVE and ANALGESIC

to produce sleep in cases of

SEVERE PAIN

Tablets of 5 Grains



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(MAY & BAKER) LIMITED, DAGENHAM**

CHRONIC PSORIASIS

Complete cure after local treatment with
Peat Ointment

This letter came to us from a doctor the other week
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I am very pleased to report that a young married woman patient has been completely cured of a very long-standing Chronic Psoriasis by the use of your Sphagnol Ointment.

I can state that this is very remarkable as this patient has been under treatment for years in private and Hospital and Sphagnol is the only preparation that has brought lasting relief. Her skin today is as soft and clear as in her childhood days. Now, to a 35-year-old extremely grateful patient, recovery has caused a great deal of pleasure.

Yours very truly,
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Though neither dangerous nor painful psoriasis is still a great annoyance. Usually correcting faults of clothing and diet will give relief but sometimes local assistance is necessary. Then regular applications of Sphagnol Ointment which contains the healing principles of peat will generally clear up the skin in a very short time.

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FOR THE TREATMENT OF URINARY INFECTIONS



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TRADE MARK

BRAND

ELIXIR OF AMMONIUM MANDELATE

An elixir in which the unpleasant taste of ammonium mandelate is covered by means of suitable flavouring agents. Ammonium mandelate is metabolised in the body into urea and Mandelic Acid. The Mandelic Acid produced, besides being bactericidal, renders the urine acid.

SUPPLIED IN BOTTLES OF
16 oz. and 8 oz.

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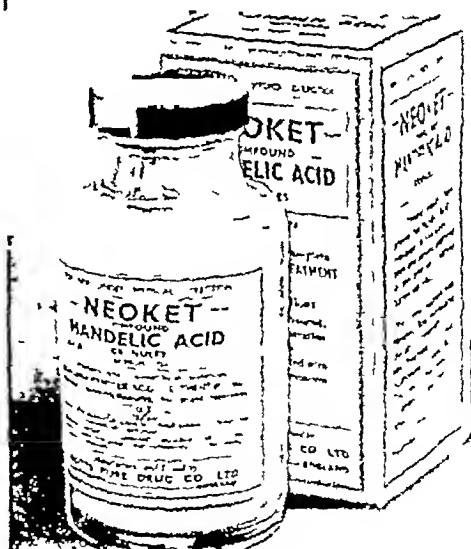
COMPOUND MANDELIC ACID GRANULES

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SUPPLIED IN BOTTLES OF 6 oz. (approx.)
(Sufficient for 7 to 8 days' treatment)

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MANDELIC ACID SODIUM MANDELATE
CACHETS OF AMMONIUM CHLORIDE
METHYL RED SOLUTION
are also available

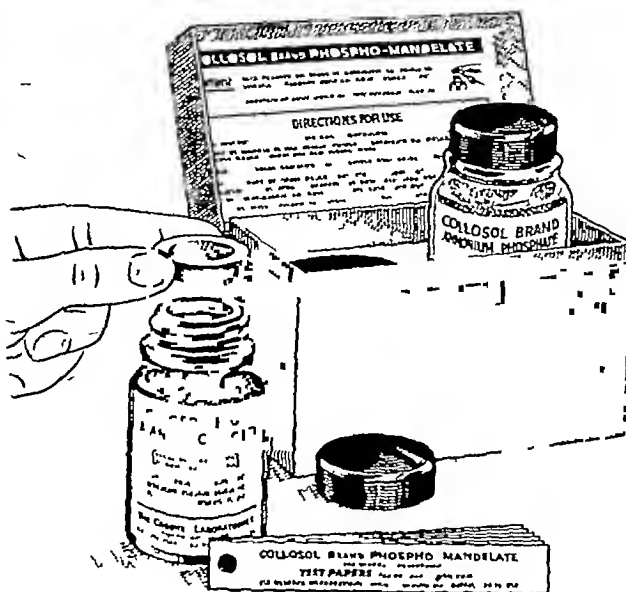


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COLLOSOL BRAND PHOSPHO-MANDELATE

(for Urinary Sterilisation)

IN A NEW PACKING

This new and simple treatment for urinary infections, embracing cystitis and allied disorders, completely supersedes the difficult and nauseating ketogenic diet and consists in first rendering the urine acid by the administration of ammonium phosphate and then giving mandelic acid, the fluid intake of the patient being restricted to maintain as high a concentration of the acid in the urine as possible. The cost of the 6-days treatment is 5/-.

Suitable test papers with comparison tints of different pH levels are also supplied.

Full particulars upon request.

THE CROOKES LABORATORIES
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Intestinal Toxaemia with Hypertension Gastric Fermentation and Distension

CHARKAOLIN adsorbs toxins and gases in the stomach and intestines. An index of its adsorptive activity is its complete deodorisation of the intestinal contents.

CHARKAOLIN has given remarkable results in some cases of hypertension with intestinal auto-intoxication.

CHARKAOLIN is the original preparation of activated charcoal with Osmo Kaolin.

CHARKAOLIN GRANULES

In bottles at 2/6

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In bottles at 1/6 and 2/6

Prepared in Great Britain and Northern Ireland.

*Descriptive literature and
clinical sample on request*



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Telephone Rothergate 3201 (12 Lines) Telegrams Gannoyas 24th London

Improved DUSTING POWDERS

Colloidal preparations embodying

MILK ALBUMIN *The soothing and healing principle of milk, imparted by sufficient dispersion with large active surface possesses marked antipruritic action*

FLUORO SILICA COLLOID *A synthetic silica preparation, an extremely voluminous powder with immense surface acting as a distributor for the protective and curative constituents*

DIATOMS *A natural silica in the form of minute hollow bodies, provides a base with excellent capacity for absorbing secretions*

Fissan Brand Dusting Powders are distinguished by their very fine texture, marked adhesive properties and spreading power. They are effective in remarkably small quantities.

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DUSTING POWDER
ABSORBENT POWDER
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SULPHUR POWDER
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SILVER POWDER

For general use

For dermatological purposes

Special packings for the Dispensary

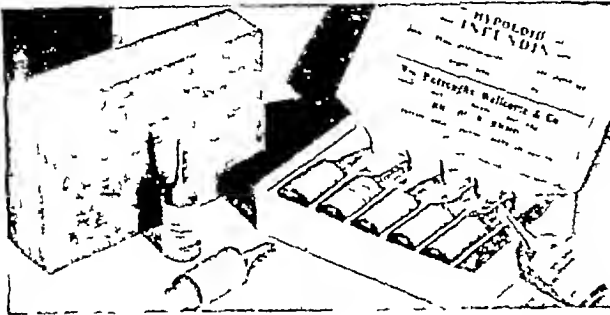
Literature with a section on the formation of prescriptions, and samples, will be gladly supplied on application to

GENATOSAN LTD, Fissan Dept, LOUGHBOROUGH, LEIC

RELIGIO-MEDICAL SERIES No 137—ROMAN

TRADE MARK 'INFUNDIN' BRAND

PITUITARY (POSTERIOR LOBE) EXTRACT



*Standardised,
Stable,
Unfailingly
Reliable*

'INFUNDIN' is prepared by Burroughs Wellcome & Co under conditions which ensure that it shall reach the user in the very highest state of purity and activity. Presented in precise quantities in ampoules as —

TRADE MARK 'HYPOLOID' BRAND 'INFUNDIN' BRAND TRADE MARK

10 International Units per c.c. (Original Strength)

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0.5 c.c. boxes of 6 ampoules 26 per box 25 ampoules 86 per box 0.5 c.c. boxes of 6 ampoules 23 per box
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10 International Units per c.c. (Original Strength) is identical with Pituitary (Posterior Lobe) Extract B.P.

London Price of the Medical Preparation



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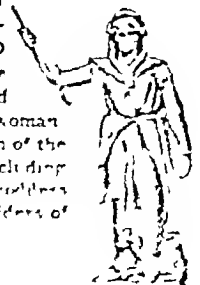
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DATE: In 13 c.c. from 1935 to 1937. In Rome from 1935 to 1937.
T. 13 c.c. 1935 to 1937





AGAROL allows measured and uniform dosage

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ABNORMALITIES OF GROWTH AND DEVELOPMENT THE CLINICAL AND PATHOLOGICAL ASPECTS*

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GROWTH AND DEVELOPMENT IN THE NORMAL

The curve of growth in normal children is far from uniform and a wide range of individual variation occurs. Many attempts have been made to formulate average standards, but such curves in relation to individuals must not be interpreted too strictly. The growth rate in a child at any particular instant is the resultant of a number of different factors. The influences of heredity, sex, and environment must be taken into consideration to mention only a few. Nevertheless, the construction of average growth curves has served a useful purpose and has shown that in the normal there are certain rhythms to be found. The study of an average growth curve shows faster and slower periods and these alternate in a quite consistent way. This would be generally accepted and the chief difference of opinion is as to the number of such waves which occur. Some authorities refer only to two, but it is usual to consider three. Robertson (1923) writes of three growth cycles, each composed of a period of gradual acceleration, peak, and retardation. The first is to be observed in the first year of post-natal life, the second with its peak at the sixth or seventh year, and the third the adolescent spurt. Stratz (1922) and Harris (1933) also speak of three springing-up periods, each followed by a filling-out period. Skeletal growth precedes muscular and visceral growth in each case; the chronological timing of the cycles in their curve corresponds to that of Robertson's. Rapid growth during the first year is followed by a slower and steadier period until the second peak between 5 and 7, which corresponds to the second dentition. Then the child becomes thinner and the limbs

That heredity exerts a profound influence on the growth of individuals is a matter of common observation, whilst all who deal with children are conscious of the variations sex induces too. A study of average growth curves brings out this point quite clearly. The fast growing period in girls starts sooner, finishes earlier, and is less intensive than in boys. Girls in fact grow more steadily until puberty, when growth is more likely to slow down. Boys on the other hand often grow rapidly throughout their teens, a fact to which no doubt can be attributed the greater average stature of man.

Differential Growth

The occurrence of different rates of growth in the various parts of the skeleton must be briefly considered for this accounts for the changing skeletal proportions found as growth proceeds. One of the characteristics of the infantile skeleton is a shortness of the limbs in comparison with the trunk. If in the normal child measurements are made from symphysis to vertex and symphysis to soles before the 6th or 7th year, it will be found that the lower measurement is less than the upper. At about the time of the second dentition, the second growing-up period, the limbs as has already been mentioned, begin to lengthen in relation to the trunk. In fact at this stage the infantile skeletal proportions merge into the adult type and from then onwards until puberty growth in the limbs is in excess of that in the trunk, with the result that the lower measurement after the age of about 7 or 8 exceeds the upper. The transformation can be accounted for in the following way:

confirms the clinical view that during the active growth period, activity in the limb bones is considerably in excess of that in the vertebral column and greater below than above the knee. This accounts for the observed fact that in normal children the bodily proportions change during this period from those of the infantile to the adult type.

The Growth Cartilages as the Site of Longitudinal Growth

In considering the development of the bony skeleton in its relation to longitudinal growth our chief interest lies in the growth cartilages of the long bones and in those of the vertebral column. It is now generally accepted that all growth in length takes place at the growth cartilages rather than interstitially. New bone is added to the ends of the diaphyses of the long bones and to the upper and lower surfaces of the vertebrae by successive additions at the growth cartilages. Hunter's (1837) classical experiment with lead shots in the tibia of a growing pig disproved the theory of interstitial growth, for when the bone had increased in length by the growth of the animal the two shots were found to be still the same distance apart. Harris has adduced further evidence to disprove the interstitial theory by following radiologically the progress in a growing child's long bones of individual lines of arrested growth. Transverse striations individually identified remain parallel and equidistant as they travel up the shaft.

Structure and Changes in Growth Cartilages During Growth

A brief consideration of the changes occurring in the growth cartilages during normal growth is essential to an understanding of the pathological variations found in the abnormal. The whole subject has recently been fully reviewed by Harris (1933b) to whom we are indebted for many original observations. Cartilage is essentially a vegetative tissue in which the cells are arranged in columns. They proliferate in a relatively avascular matrix. Their nutrition depends largely on tissue juice diffusion, for the vascular arrangements in the epiphysis and metaphysis are only relatively effective. The vessels, moreover of the epiphysis from the vascular circle around the joint and those of the metaphysis, from the main vessels of the shaft have no free communication. Proliferation of cartilage cells occurs by fission. In the actively proliferating cells mitosis has been demonstrated by Harris (1933c) by special staining methods. The arrangement of the cells undergoing mitosis is in the form of a ring at the head of the bone and from this ring, traced centripetally to the epiphysis and centrifugally to the diaphysis, three zones of gradually maturing cells can be found. In the zone next the ring the young cells are arranged in columns or palisades in the middle zone enlarged and degenerate cells with calcified matrix occur and in the zones furthest from the ring those next to the diaphysis and in the centre of the epiphysis osteogenesis is proceeding. Conditions of nutrition become gradually more and more difficult for the cells removed from the ring and this is heralded by calcification of the matrix. Subsequently the calcified matrix is removed by an irruption of blood vessels carrying osteogenic cells the function of which is to deposit bone. Osteogenesis can be compared to an acute inflammatory process whereby the senescent cartilage as a virtual foreign body is replaced by highly vascular bone. We thus arrive at the arrangement of an ossification centre in the epiphysis and an area of ossifying cells in the metaphysis replacing new bone laid down at the end of the shaft. In between and at the junction

are the young cartilage cells, which continue their activity throughout the period of active growth. On these, growth in length of the long bone depends.

An essentially similar process occurs in the vertebral column, and the bodies of the vertebrae grow by addition of bone to their superior and inferior surfaces. In one respect does this process differ from that in the growth cartilages of the long bones, in that the number of cells in the cartilage columns is fewer. Moreover, the secondary centres of ossification take the form of an annulus of bone, and it is only the periphery which is ossified. Thus annular epiphyses are formed which in due course unite with the bodies of the vertebrae and limit the growth in length of the vertebral column.

Factors Influencing Growth

It is difficult to enumerate the factors influencing growth for they are many and ill defined. In the first place the nature of the growth impulse inherent in living things is entirely unknown. Of all the phenomena in the realm of growth this inherent tendency of living organisms to grow is the most remarkable. Yet it has recently been demonstrated by experiment that if the anterior lobe of the pituitary is removed an animal may continue to live but not to grow, unless anterior pituitary implantation is performed or anterior pituitary feeding instituted.

Not only is the power of growth inherent in the living cell—and it has to be remembered that living cells will grow and multiply by division under appropriate conditions even if separated from the organism of which they are part—but they retain *in vitro* the power of growth and differentiation to produce form. Fell (1928-9) has successfully grown in a small tissue chamber the early limb buds of the chick. The isolated fragments from the proximal part of the limb grew and differentiated in the tissue chamber so that the various features were reproduced as in the living organism.

Heredity

Of the influences affecting growth some appear to be predetermined by inheritance and others to result from internal or external circumstance. In man the hereditary growth tendency has been linked up with the endocrine constitution of the individual. Racial gigantism and dwarfism for instance have been related to the activity of the pituitary. Though endocrine constitution is determined largely by heredity the recent work of experimental embryologists suggests that endocrine influences are not the main cause of racial peculiarities of this type. Harrison (1935) and others for instance, in their experimental work on the transplantation of limbs, have shown that under the same endocrine environment limbs and other structures from two species of different sizes will respond differently and according to their inherited growth capacity. The chief factor in the production of hereditary racial types seems to be genetic constitution.

Anterior Pituitary Growth Hormone

Of the hormones of the endocrine glands influencing growth that from the anterior lobe of the pituitary is all important. In fact its effect on general growth seems to predominate over that of the other endocrine secretions. Its discovery is due to Evans and Long (1921). Striking increase of growth has been reported from its injection into normal rats and the rate of growth in rats dwarfed by hypophysectomy has also been restored. It appears to

produce its growth stimulating effects specifically on the tissues, and also affects development through the intermediation of other glands—the thyroid, adrenals and sex glands which are under anterior pituitary control. This interaction of the endocrine glands well known but only partly understood is another complicating factor in our elucidation of their respective growth influences.

There is no definite information yet as to the mode of action of the anterior pituitary growth hormone, either on the tissues in general or on the growth cartilages, though Evans (1933) observes that the failure of the bones to increase in length after hypophysectomy is apparently due to failure of development of the cartilage cells in the epiphyseal disks. It would seem that the growth hormone has a stimulating effect on the growth of cartilage as on the other tissues of the body. Normal animals show a strikingly increased appetite and food consumption under its influence. The experiments of Lee and Schaffer (1934), using the paired feeding method of Mitchell (1929–30), have demonstrated that normal rats treated with growth hormone increase their body substance more than controls given the same food. Other experiments have shown that the results of growth hormone administration depend on at least two factors—dosage and "receptivity" of the tissues. The latter varies much in different species. Evans (1935) again, has demonstrated that whereas dogs—the dachshund and the shepherd-dog—give a marked acromegalic response to injections of growth hormone other species of animal—for example the rat and the rabbit—do not readily do so. Evans (1935a) has also pointed out that there is in responsive animals a maximum reaction which cannot be exceeded, and that when this has been arrived at multiplying the dose by two or ten times makes no difference. The limit of the body's capacity to grow has been reached and apparently the limit of the body's capacity to utilize the hormone. At no time has a rate of growth in excess of the most rapid growth known for post-natal life been induced, nor does a rapid rate continue indefinitely under growth hormone administration.

Thyroid

The thyroid gland is known to exert a considerable influence on growth and development, and recent experimental work has shown that it is under anterior pituitary control. This relationship makes it difficult to assess the importance of the thyroid itself in normal growth processes. The results however of thyroid extirpation and feeding in young animals make it clear that in the absence of the thyroid normal growth cannot continue. The chief action of thyroxine is as a metabolic stimulant, and under its influence all cells of the body are stimulated to increased activity. Aldrich (1936) has pointed out that this accounts for its stimulating effect on general growth for in young animals any process which tends to increase activity of cells must of necessity stimulate growth. Theoretically in immature organisms differentiation must be hastened as well. This is borne out by experimental observation for thyroid feeding in tadpoles produces premature metamorphosis. Although growth is temporarily stimulated, stature is limited and miniature frogs result. From a quantitative standpoint therefore the thyroid hormone stimulates growth only temporarily. From the qualitative point of view it is extremely important at all times. Without it normal development and function cannot be attained and this applies to the growth cartilages of the skeleton as to other tissues. Without thyroid function growth and development are retarded.

Thymus

Recent experimental work points also to the thymus as having an important influence on growth and development, for Hanson (1936) and his co-workers have shown that in rats thymus extract, when administered intraperitoneally and continuously through successive generations of parents, leads to striking acceleration of growth and development of successive generations of young. The young of the third and succeeding generations are said to grow and develop physically at a remarkable rate. They do not, however, become giant rats, as the rapid rate of growth decreases from the second month on. It is possible that the continuance of thymus injections through several generations may provide the key to these results. These experiments have been adequately controlled but further confirmation must be obtained before the influence of the thymus on growth and development can be accepted as proven.

Sex Hormones

The influence of the sex hormones on growth an apparently indirect effect by inducing maturity and controlling the time of fusion of the epiphyses will be considered in the next section. The part of the adrenals and pineal and their relation to sex precocity will be considered subsequently too.

External Factors

Of external factors influencing the growth process climate, season food and disease play important parts, and of these the last two are of most significance.

Vitamins

Our knowledge of vitamins and their influence on growth has been due to the work of Hopkins (1912) and Mellanby (1921) in this country and Hess (1930), McCollum (1927) and their co-workers in the United States. The presence of small amounts in the food of vitamins A, B, C, and D is essential for normal health and deprivation of any one of them results in complete cessation of growth. In addition to their influence on general growth they exert specific effects on certain tissues—vitamin A, for instance on epithelial structures, vitamin B on nervous tissue, vitamin C on the vascular system and vitamin D on cartilage and its calcification. Experiments have demonstrated that young rats fed on a satisfactory diet but deficient in vitamin A grow for a short time only and then cease to put on weight and gradually go downhill. They are especially liable to succumb to intercurrent infections. The presence of vitamin B is equally important, for young rats fed on a diet otherwise satisfactory but deficient in vitamin B also immediately stop growing and develop digestive and a number of other symptoms. Harris (1926) regards the functions of vitamins A and B in the general growth process as essentially different, the fat soluble A vitamin being chiefly concerned with differentiation—that is a specialized function (the differentiation of osteoblasts, for example)—the water-soluble vitamin B being concerned with vegetative function (growth promotion, for instance). Moreover he would employ the term "anti infective," introduced by Green and Mellanby (1928), in regard to vitamin A only in so far as the fully differentiated cell is less susceptible to disease than the poorly differentiated cell, whether it be in the conjunctiva of the eye or bone.

The influence of vitamins C and D is more apparent on specific growth processes. In the absence of vitamin C capillary haemorrhages occur, and in infantile scurvy may

be found at the diaphyseal capillary loops, the resulting extravasation of blood tending to disrupt the calcified cartilage and newly formed bone. Vitamin D, on the other hand, in the presence of a normal calcium-phosphorus ratio is essential for the calcification of cartilage, and in its absence the growing animal or child develops rickets.

Diet

Of the importance of diet in the production of normal growth there can be little doubt, and many observations could be cited in support of this view. To quote a recent illustration, the work of Corry Mann (1926) may be mentioned. He showed that an additional daily allowance of a pint of milk considerably increased the rate of growth of boys. By control experiments he proved that this enhanced rate of growth was not due to the correction of any absolute deficiency, either in the total energy value of the diet or in the magnitude of its protein, carbohydrate, or fat content. The Scottish Board of Health (1928, 1929) later repeated this work and obtained similar results. At the same time it showed that skimmed milk had almost the same stimulating effect on growth as whole milk, an observation which appeared to rule out the possibility that its fat-soluble vitamins were concerned. It would be interesting to speculate on the nature of the growth-promoting constituent of milk, but here perhaps it is sufficient to recall the work of Hopkins (1912) and his followers. They showed that certain proteins yielded on digestion essential amino acids without which growth could not take place. Animal protein, particularly in the form of whole milk, cheese, eggs, fish, and meat was necessary in the diet in order to provide the essential amino acids.

Factors Limiting Growth

It is a well-established fact that, in the normal, limitation of longitudinal growth is closely associated with activation of the reproductive system. With the advent of sexual maturity, closure of the epiphyseal junctions occurs and longitudinal growth ceases. The essential feature appears to be a maturation and senescent change in the growth cartilage, proliferation ceasing whilst ossification of the epiphyseal disks occurs. How the sex gland hormones produce these effects is not known at the present moment but the phenomenon would seem to be analogous with the changes of maturity which occur in the body as a whole as a result of their agency. As yet experimental evidence from the administration of gonad extracts has not been reported no doubt because active preparations of the sex hormones have only recently become available. Evans (1935b), however, mentions a significant result in his experiments with puppies. A preparation of growth extract contaminated with gonadotropic hormone and inadvertently given produced not only a growth effect but activation of the reproductive system in a hypophysectomized animal. Although the growth response was rapid epiphyseal ossification occurred shortly after the resulting oestrus and growth ceased. Though other experimental observations of this type are still lacking there is considerable evidence from castration in animals and in human beings of the relation between the sex hormone and epiphyseal fusion. Not only does the castration of cocks result in increased length of limbs with retarded ossification of the epiphyseal cartilages but similar results have been obtained in dogs, horses and cattle. Castration before maturity in man also results in excessive growth of the long bones with unossified epiphyseal cartilages as shown by the investigations of Launois and Roy (1904).

Tandler and Gross (1910), and many others. Clinical observations in eunuchoidism support these experimental results, whilst cases have been reported of the opposite condition of precocious puberty in which premature fusion of the epiphyseal junctions has occurred. There can be no question that activation of the reproductive system is of paramount influence in limiting normal growth, and now that the sex hormones have become available for experimental work it should not be long before their mode of action on the growth cartilages is revealed.

Though sex gland maturity plays the dominating part in epiphyseal fusion under normal conditions, there are other influences, notably infective and metabolic diseases, which have a similar and sometimes pronounced effect in limiting the growth of the skeleton. These influences have been suspected in the past, but recently Harris (1933d) has provided convincing histological and radiological proof of their mode of action. He finds that the growth cartilages are inordinately sensitive to illness, and that during the period of growth any serious interference with nutrition, from starvation, acute infection, or metabolic disease, may induce changes of premature senescence. The fact is registered in the structure of the bone by a transverse line of arrested growth. This is essentially a defensive mechanism in the bone, and when the child is ill or starved the growth cartilages cease to proliferate and become heavily calcified. When growth is resumed the line appears as a scar in the bone and can be demonstrated radiologically. Such lines, he finds, differ histologically only in extent from the lines of complete cessation of growth which appear as a result of the final calcification of the epiphyseal junction. Moreover, if the noxious stimulus, metabolic deficiency, or disease is sufficiently severe complete ossification of the growth cartilages may occur prematurely. Such a condition has been found not infrequently in children who during the second decade have suffered from a series of severe infections, particularly the exanthemata, in quick succession, and this has resulted in dwarfism.

It may be concluded, therefore, that the chief factor in limiting growth in the normal is activation of the reproductive system, which appears to produce its effect by some as yet unstudied process of maturation in the growth cartilages. The influence of disease may produce similar changes—senescence of cartilage cells, with ossification and premature epiphyseal fusion.

GIGANTISM

The condition of gigantism may be defined as a general symmetrical overgrowth of the body which differs only from physiological development in that the length of the body and size of the viscera exceed considerably the average measurements peculiar to the race. For many years clinicians have held the view that the explanation of this anomaly was an overproduction of growth hormone by the anterior lobe of the pituitary. The site of production of this hormone, moreover, was thought to be the eosinophil cells as many cases of gigantism were associated either with eosinophil adenomata or eosinophil hyperplasia of the anterior pituitary. The correctness of this hypothesis and the presence of growth hormone in the anterior lobe was not, however, demonstrated for certain until Evans and Long (1921) reported the experimental production of gigantic rats by long-continued intraperitoneal injections of anterior lobe extracts. The growth curves of the treated animals showed a steady continuance of growth as opposed to the customary slowing or "plateau" of growth in the untreated controls as they

reached adulthood. The weight of the treated animals as against their litter-mates was doubled. The giants were symmetrically proportioned. Radiological examination or preparations of the osseous system showed that proportions of one and a half times the normal were attained. Thus experimental confirmation of the relation between the anterior pituitary and gigantism in man was obtained. No source of growth hormone preparations other than anterior lobe tissue has yet been discovered, and it seems likely that for true pathological gigantism to occur an excessive activity of the anterior lobe eosinophil cells during the active growth period is necessary.

It is usual to classify gigantism into the simple hereditary and endocrine types and of the latter there are two groups—the acromegalic and the hypogonadal. The great majority of giants belong to the endocrine group, and their abnormal development is due to hormonal disturbance of growth.

Simple Hereditary Gigantism

Simple hereditary gigantism should not be regarded as a pathological condition for, apart from excessive stature and macrosomia, neither the skeleton nor other organs of the body show any evidence of disease. It is essentially an inherited characteristic and is dependent on chromosomal constitution. In many of the recorded instances of this form of gigantism hereditary influences on both sides of the family have been pronounced. It is attractive to speculate on the degree of pituitary eosinophilia in these individuals but the work of experimental embryologists (already mentioned) must be borne in mind. Harrison (1935) and others have shown that under the same endocrine environment limbs or other structures from two species of different sizes will respond differently and according to their inherited growth capacity. It would appear, therefore, that genetic constitution is the main influence in simple hereditary gigantism.

Acromegalic or Hyperpituitary Gigantism

The view has long been held that hyperfunction of the anterior pituitary before puberty leads to gigantism and afterwards to acromegaly, and it is now generally accepted that the skeletal changes in gigantism and acromegaly are expressions of a similar pathological influence occurring at different periods of life. Massalongo (1892) first suggested that acromegaly was delayed gigantism, and Brissaud and Meige (1895) emphasized that the diseases were essentially similar but of different periods—adolescence and adult life. Later Launois and Roy (1904) pointed out that gigantism was acromegaly in individuals with unossified epiphyses. The experience of clinicians since that time has certainly emphasized the close relation between the two conditions for it is a well-established fact that many giants sooner or later acquire acromegalic features whilst acromegalics sometimes show manifestations of gigantism. Pathological investigations too have shown the essential similarity of the pathological processes, for not only are gigantism and acromegaly associated with hyperplasia or more commonly, adenomatous tumefaction of the eosinophil cells of the anterior pituitary, but in both conditions a visceral splanchnomegaly occurs with hyperplasia or adenomatosis of the thyroid gland and adrenal cortex. In the light of recent experimental work this is what would be expected from hyperfunction of the anterior lobe for in addition to its growth hormone it also secretes thyrotropic and adrenotropic hormones.

Any insecurity in this clinico-pathological interpretation that gigantism and acromegaly were due to over activity

of the anterior pituitary may be said to have ended with the experimental production of gigantic rats and of acromegalic dogs. The experiments of Evans and Long (1921) in producing gigantic rats with growth hormone given parenterally have already been considered—Evans (1935c) has suggested that if one could learn to close prematurely the epiphyseal disks of rats one might hope to make them acromegalic, but the rat is an animal whose epiphyses never close. On the other hand, he has found that in the shepherd-dog by administration of the same growth extract which caused symmetrical gigantism in the rat, typical acromegalic features could be produced. He considers that while some animals notably the rat and the rabbit, do not become acromegalic, others such as the dog readily do—an instance of differing reactions of the body tissues of different strains to the same substance. Does it not seem probable that similar constitutional peculiarities may explain the differing reactions of human beings to excess of growth hormone—that is the varying combinations of acromegaly and gigantism found in man?

Although there have been many examples of gigantism recorded in the literature it must be regarded as a rare condition. Cushing (1927) points out that this is due to the fact that adenoma formation characterizes adult life and that pre-adolescent hyperpituitarism associated with an eosinophil adenoma is a rarity. In his series of sixty-five verified cases of acromegaly all showed an excess of this type of cell but true acromegalic giants were rare. In Bailey and Davidoff's (1925) analysis of a consecutive series of 100 cases of hyperpituitarism there was only one example of a true giant without acromegalic features, though in a few of the patients the disease had started early enough to produce increase in stature. This individual began to grow rapidly at the age of 13, and by the age of 21, when he was under observation, had attained a height of 6 ft 8 in. His bodily proportions were normal. This man had bodily features similar to those produced in experimental gigantism. The pituitary tumour was a typical eosinophil adenoma.

Judging by recorded instances it would seem that hyperpituitary gigantism usually starts at the time of puberty, and is characterized by very rapid skeletal growth during the next few years. Sooner or later the presence of the pituitary tumour causes headache and other neighbourhood symptoms. In most cases hyperpituitary giants have not been as strong as their size might indicate and, as Cushing says, some of them present hypopituitary symptoms before they die.

The stature of recorded cases has varied from 7 ft 6 in. to 8 ft 6 in. (the famous giant in Trinity College, Dublin). Rösle (1917) states that authentic instances of human giants of 9 ft cannot be established.

Hypogonadal or Eunuchoid Gigantism

A clinical relation between gigantism and sex gland deficiency has frequently been observed, and the latter is thought to be an important factor in the overgrowth of these cases. In some castrates considerable height is attained, but overgrowth when it is found in the eunuch is seldom sufficient to warrant the use of the term "gigantism". It can readily be appreciated that delayed fusion of the epiphyseal junctions such as is characteristic of eunuchoidism would favour the production of gigantism in the presence of anterior lobe eosinophil activity. In hypogonadal gigantism it is usually assumed that there are two factors present encouraging overgrowth: first, the lack of the restraining influence normally exerted by the sex glands, and, secondly, pituitary eosinophilia.

Although the clinical features of eunuchoid gigantism favour a primary hypogonadal aetiology, and in some instances the pathological findings a congenital gonadal hypoplasia, recently acquired knowledge that the sex glands are activated by the anterior pituitary gonadotropic hormones probably from the basophil cells, suggests that the gonadal deficiency in eunuchoid gigantism may have arisen primarily in the anterior pituitary too. It has, in fact, been suggested that the growth and sex hormones of the anterior pituitary are mutually inhibitory, but no direct proof of this has been obtained. A knowledge of the histology of the anterior pituitary in conditions in which the growth-sex relationship is disturbed is obviously important, but up to the present this information has not been forthcoming. Differential cell counts in the normal anterior pituitary have been studied under varying circumstances and at different periods of life. Roughly the eosinophil-basophil cell percentages correspond with functional demands. During active growth periods the eosinophil cells reach their maximum, whilst at the time of sexual maturation the basophils are increased. Nothing definite however is known of the eosinophil-basophil cell relation in hypogonadal gigantism.

Clinically the cases reported have had their onset in adolescence and been characterized by disproportionate length of the limbs as compared with the trunk, infantile genitalia, and an absence of the secondary sex characteristics and of the acromegalic accompaniments found in hyperpituitary gigantism. The stature attained by hypogonadal giants is not as a rule as great as in the hyperpituitary type.

In review, the outstanding features of pathological gigantism may be reconsidered. In the first place, the most important aetiological factor in the conditions described has been an anterior lobe pituitary eosinophilia with over-production of growth hormone. As yet no other endocrine secretion has been shown to have similar effects. Our knowledge is still lacking as to the possible effects of over nutrition and hypervitaminosis as factors in producing overgrowth.

In hyperpituitary gigantism the growth and differential growth curves are essentially an exaggeration of the normal. General symmetrical overgrowth is the characteristic feature though in some instances localized overgrowth in the form of acromegalic changes may be in evidence too. The clinical picture closely approaches that of experimental gigantism in animals produced by administration of growth hormone. In hypogonadal gigantism an additional feature favouring overgrowth is present—delayed closure of the epiphyses. In these individuals the growth curve in adolescence is prolonged beyond the normal and often far into adult life. Disproportion of the skeleton, unusual length of limb as compared with the trunk results from a failure of the growth cartilages to undergo the changes of maturity at the usual time.

At the present moment the mode of action of the sex hormones in producing changes of maturity in growth cartilages and of the anterior pituitary growth hormone in stimulating this tissue is not understood.

MACROSOMIA PRAECOX

Some insight into the factors concerned in growth and development can be obtained from a study of a comparatively rare group of conditions in childhood in which transitory overgrowth accompanies precocious development of the reproductive organs. These pathological states are usually included under the heading of macro-

somia praecox or macrogenitosomia praecox owing to their common and predominant features, somatic and genital precocity. It is important to recognize that, although such children appear remarkably overgrown when they come under observation, they do not in adult life exhibit gigantism. In fact in cases which survive to adult life the reverse is usually found—premature closure of the epiphyses, associated with early maturation of the reproductive system, has resulted in cessation of longitudinal growth long before the usual age, and they are dwarfed. More often, however, the pathological lesion is malignant and death occurs before adulthood is reached. In macrosomia praecox there is essentially a disturbance of the "time" factor of growth and development, and the somatic and sexual changes of puberty are projected into early life. The transitory macrosomia must not be regarded as clinical evidence of a longitudinal growth stimulating effect from the sex hormones comparable to that of the anterior pituitary growth hormone for the changes are essentially those of maturity occurring prematurely.

As causes of macrogenitosomia three different types of pathological lesion have been described—tumours of the sex glands, tumours of the pineal and tumours of the adrenal cortex. In the first two groups the precocious development seems to be essentially a true and actual functional sexual precocity. In the female menstruation occurs at an early age and in the male priapism and spermatogenesis. Tumours of the sex glands have been reported in both sexes, but tumours of the pineal occur almost exclusively in males. Tumours of the adrenal cortex on the other hand, do not produce a true functional sex precocity (Krabbe, 1921; Grollman 1936) for, in spite of the skeletal, somatic, and sex changes suggestive of this menstruation does not occur in the female nor spermatogenesis in the male. The condition is usually referred to as the juvenile adreno-genital syndrome, and is more commonly found in female children, in whom signs of masculinization appear. In the male, when affected premature over masculinization develops.

In all three syndromes—genital, pineal, and adrenal—the outstanding features are skeletal somatic and sex development inappropriate to the age of the individual and suggestive of adulthood. Bone development is advanced correspondingly ossification centres appear early, and epiphyseal fusion occurs prematurely.

True Precocious Puberty Associated with Tumours of the Sex Glands

The syndrome of true precocious puberty in the female with the characteristic somatic and sexual changes of the sex is found with granulosa-cell tumours of the ovary as reported originally by Novak and Long (1933). These tumours develop from granulosa cell rests arising from the early oophorogenic structures in the sex gland area. They are more common in later life but when they develop during childhood true sexual precocity occurs. The granulosa cell is a typically feminine cell and produces the female sex hormone. Granulosa-cell tumours secrete large quantities of oestrogenic substance which is responsible for the sex changes and over accentuation of the female sex characters. In children menstruation has been observed as early as the first year together with such secondary sex characters as mammary hypertrophy, the growth of genital and axillary hair, increased growth the typical post pubertal feminine contour and increased size of the uterus almost to pubertal size. Novak and Long consider that the majority of these tumours are adenomatous and when malignancy occurs it is usually of a low grade.

In the male sexual precocity from testicular tumours is even more rare, at least, reports of only three cases verified at operation appear in the literature. Perhaps the best known is that of Sacchi (1895), a boy of 9½ years who presented macrosomia and sexual and mental precocity. After excision of a testicular tumour the precocity gradually disappeared. The tumour was reported upon as an alveolar carcinoma, but Cushing (1912) who commented on the case suggested an interstitial-cell origin. This boy was 4 ft 8½ in in height and weighed 7 st. A case similar to Sacchi's was reported by Rowlands and Nicholson (1929)—an interstitial-cell tumour, and Stewart, Bell and Roehle (1936) recorded a similar case in a boy of 5 years of age with precocious puberty—also an interstitial-cell tumour. The boy's height was 4 ft 3 in and weight 4 st 4 lb. The occurrence of such cases confirms the view that the interstitial cells of the testis secrete the hormone which influences the development of the secondary sex characteristics of the male and which in these cases brought about the premature growth and skeletal and muscular development.

The Pineal Syndrome

A similar syndrome of macrogenitosomia praecox, overgrowth and sex precocity has been reported in a number of instances in connexion with pineal tumours in boys, but whether the associated sexual and somatic changes are due to disturbed function of the pineal body is still quite undecided. There is, in fact, as yet, no satisfactory evidence or agreement as to an endocrine function in this organ. The chief theory advanced to account for the relation between pineal tumour and sex precocity assumes that normally a secretion from the pineal inhibits puberty and that, in the abnormal, destruction of the pineal allows the sex changes to appear. Horrax and Bailey (1925), summing up the position, thought that the best that could be said at the moment was that pineal tumours, particularly teratomata in male children before puberty, might be associated with precocious puberty such precocity, if combined with signs of increased intracranial tension and evidence suggesting implication of structures in the neighbourhood of the pineal body, was strong evidence of a pineal tumour. This did not mean that they regarded the pineal body as an endocrine gland with sex-controlling functions. Haldeman (1927) reviewed 113 cases reported as pineal tumours. In only ten was there convincing evidence that the tumour was a pinealoma. In sixteen only of the 113 cases was precocious puberty noted, and nine of these tumours were teratomata. Not one verified pinealoma was associated with the pineal syndrome of macrogenitosomia praecox. Then Horrax and Bailey (1928) reported a typical case of macrogenitosomia praecox associated with an astrocytoma in the third ventricle the pineal body not being involved by the growth. Ford and Guild (1937) reported three cases in which inflammatory processes involving the nervous system were followed by precocious sexual development and reviewing the whole subject of the pineal syndrome, concluded that the pineal tumours found in cases of macrogenitosomia praecox had only one feature in common—that they arose in the general region of the pineal body or extended into this region. They were of the opinion that the pineal body played no significant part in the production of macrogenitosomia praecox and that the syndrome though it was impossible to venture a definite opinion as to the exact location of the lesion was most probably due directly or indirectly to a destructive process in the walls of the third ventricle. This seems to be the

view most generally acceptable at the present time as regards the aetiology of the pineal syndrome. The clinical picture, apart from the neurological signs, is similar to that of macrogenitosomia praecox due to interstitial-celled testicular tumours.

The Juvenile Adreno-genital Syndrome

The adreno genital syndrome in children is predominantly an affection of the female, though it has been reported in boys. It is produced by tumours of the adrenal cortex either benign or malignant. It has been attributed to hyperfunction of the adrenal cortical cells with the elaboration of an excess of their specific hormone. Grollman (1936) however, points out that this is not in accord with available facts. The adrenal cortical hormone has not been shown to have any effects on the reproductive system analogous to those observed in the adreno-genital syndrome, nor are cortical adrenal tumours proper, adenomata and carcinomata, associated with changes in the sex glands. He therefore has suggested that it is only a specific type of cortical hyperplasia which is associated with such disorders of the reproductive system, actually a hyperplasia of the juxtamedullary or, as he prefers to describe it androgenic zone. This he considers is anatomically and functionally distinct from the rest of the cortex and normally only of temporary existence disappearing in the first year of life. Grollman's thesis requires further proof, but he has brought forward evidence and pointed out that it is in accord with the known facts and permits a logical explanation of adreno-genital relationships which are otherwise inexplicable. In this connexion it should be mentioned that Broster and Vines (1933) working histologically on adrenals removed from cases of the adreno-genital syndrome, have found that the juxtamedullary tissue takes up a special fuchsinophil stain which differentiates it from normal cortical tissue.

The characteristic features of the juvenile adreno genital syndrome in young girls are overgrowth and the premature appearance of secondary sex characteristics of the male type, hypertrichosis hypertrophy of the labia, and enlargement of the clitoris, but menstruation does not occur. In male children there is overgrowth with hypertrichosis and enlargement of the external genitalia, but the testes remain immature and do not show spermatogenesis. In both sexes the patients acquire an adult appearance, and owing to their pronounced muscular development have been referred to as the infant Hercules' type. Bone development is much advanced for age ossification centres appear early and epiphyseal fusion takes place prematurely. Arrhenoblastomas of the ovary as has been reported by Novak and Long (1933) produce an almost identical condition. The masculinizing tendencies of these tumours are believed to be due to their origin from undifferentiated cells in the rete ovarii, the female homologue of the testis.

The special features of the group of conditions included under the general heading of macrosomia praecox may be summarized as follows. The essential abnormality is a disturbance of the time factor of growth and development, and changes which should occur in adolescence are projected into earlier life. An impression of overgrowth and overdevelopment is thus created, but it is only relative to the age of the individual. Premature senescent changes in the growth cartilages result in early fusion of the epiphyses and early cessation of growth. The general bodily skeletal and sex changes may be attributed to the action of the sex glands and their hormones either

primarily or secondarily involved. The sex changes represent a true precocity, in the case of the sex-gland tumours but a pseudo precocity only in the juvenile adreno genital syndrome. The growth curve in macrogenitosomia praecox is unduly precipitate in comparison with the normal, and the short-limbed, disproportioned skeleton which is found is due to premature fusion of the long bone epiphyses before the active limb lengthening and 'springing up' period of the second dentition.

[A full list of references will appear next week at the conclusion of the second lecture.]

AURICULAR FLUTTER CONTINUING FOR TWENTY-FOUR YEARS

BY

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In May, 1912, I saw a clergyman aged 53 who related that he had suffered from paroxysms of tachycardia since his boyhood, and that three years before I saw him his pulse had become persistently rapid, varying only between 140 and 160 beats per minute. He was under my observation for a month, during which I took many electrocardiograms from him. These showed auricular flutter, the auricular rate being usually between 280 and 300 occasionally falling a little lower or rising a little higher. Except while under digitalis, the ventricular was always half the auricular rate. Slowing could only be obtained by digitalis if the patient was nauseated, and by strophanthus only if the patient suffered purgation, both forms of drug treatment were consequently abandoned.

It is to be noted that the rates obtained electrocardiographically strikingly confirmed the patient's own statement of rates, he was an intelligent man and unusually accurate in observation. His case was reported in *Heart* 1912 4 179 (Case 3), and his curves are illustrated by Fig 28 of that paper (see Fig 1). He was anxious about

alert and vigorous for his age, presenting no other signs of heart affection but the old standing tachycardia. His auricles were still fluttering, though the rate in the curves was 210 to 214, the ventricles responding at half this rate (Fig 2). This change of rate and prolongation of

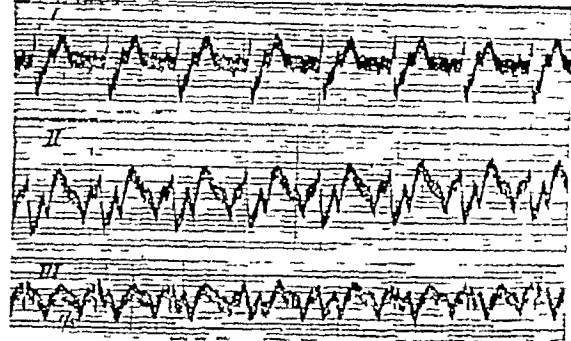


Fig 2

the initial phases of his ventricular curve were the only notable features of the electrocardiogram.

He writes in 1937 to say that his condition is unchanged and his health satisfactory.

Commentary

The case is of exceptional interest for three reasons. First, the auricles seem to have fluttered without cessation for twenty four (if not twenty seven) years. Secondly, although the ventricle during the greater part of this period has been driven at very excessive rates, the efficiency of the heart has not been impaired by its increased energy expenditure. Thirdly, the rate of auricular beating has fallen about 80 beats per minute. This fall might be attributed to lengthening of the circular path around which the wave travels, or more probably to its slower speed of movement. It would be interesting to know if lowering of rate is usual in auricular flutter as age greatly advances.

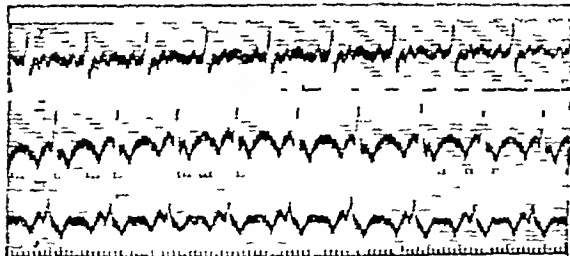


Fig 1

himself and suffered easily from fatigue but no signs of cardiac affection other than that of flutter could be found in him.

A few years after I first saw him he retired from work in a very busy parish but continued in lighter posts until shortly before he visited me in June 1933 when he was in his seventy fourth year. He then told me that his heart had continued to beat rapidly and regularly during the intervening twenty-one years but that he had enjoyed very fair health though unable to walk more than a mile without undue fatigue. He said that his heart still beat rapidly though not so rapidly as formerly the rhythm being usually 94 to 102 and regular. I found him very

P Duval and J-Ch Roux (*Presse méd* March 6 1937, p 353) draw attention to the different reactions of individuals to similar surgical interventions. The incessant breaking down and reconstruction of tissue frees certain toxic albuminoids in the blood and it is suggested that the varying degrees of susceptibility to the products of disintegration may account for the variations in resistance shown by certain individuals to different crises. This variability is particularly noticeable following surgical treatment or burns when such intoxication takes place. Two patients may undergo identical operations under exactly similar conditions, but whereas one will suffer a severe post operative reaction the other will show no such symptoms or signs. It is suggested that the reason for this is the autogenous susceptibility of the first patient and the lack of susceptibility in the second. It is also known that the reaction which follows a second operation is usually more severe than that which followed the first showing that the original operation brought about a condition of increased susceptibility in the patient. The same variability is noted in two similar cases of burns of equal severity: one patient died after four days from severe intoxication while the other survived this period of intoxication and only succumbed on the twelfth day to infection. Analysis showed that the biological reactions were much stronger in the first case than in the second. Similar conditions are seen in other lesions such as cerebral haemorrhage, haemorrhagic thorax or jaundice.

HYPO-ADRENALISM AND PELLAGRA

THE ROLE OF VITAMIN DEFICIENCY

BY

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Pellagra is commonly regarded as a disease due to deficiency of vitamin B, and the impression prevails that, confronted with this illness, we need merely add yeast to the patient's diet in order to effect a cure. That vitamin deficiency plays a very important part is indisputable, in this paper, however, it is suggested that B avitaminosis is not the sole causative factor. Moreover, Parfitt (1936) recently reported that after large doses of yeast a patient suffering from pellagra improved dramatically, only to collapse suddenly and die some days later. Pellagrous dermatitis may clear up after vitamin B₂ has been given but it seems clear that vitamin C may be equally effective (*vide infra*). Again, Biggam and Ghalioungui (1933) reported considerable success with massive doses of iron in an extensive series of cases of pellagra. In a child of 8 years whom I have at present under my care, a dermatitis coming on after exposure to strong sunlight, and very suggestive of pellagra, has cleared up more than once after vitamin B, but the patient's general condition mental and physical, is steadily deteriorating. It ought therefore to be realized, as Muir (1936) says that further investigation is necessary before we can pronounce as to the relation of vitamin B, to pellagra.

Leaving for the present the problem of the exact association of vitamins with pellagra, the undernoted case history is submitted. This shows once again what has been brought forward from time to time during the past thirty five years, that there exists a close connexion between pellagra and suprarenal hypofunction, and the purpose of this paper is to suggest that the fundamental aetiological factor in pellagra is hypo-adrenalism, avitaminosis acting only as an accessory cause.

Illustrative Case

The patient was a woman of 45 happily married and comfortably off. She had two sons 18 and 15 years of age. Her husband and children were in good health. She was born in Scotland and both her parents were of pure Scottish extraction. On December 5 1935 she was admitted to hospital complaining of weakness, lassitude, anxiety, nervousness, insomnia, anorexia, constipation, abdominal pain and discomfort, all of six months duration. She was however well nourished and had been taking a good mixed diet. Her height was 5 ft 3 in and her weight 9 st. 3 lb. Investigation failed to disclose any gross physical abnormality; the blood Wassermann reaction was negative.

The tentative diagnosis was one of hypochondriasis, with however this important reservation—that there might be present some undefinable endocrine disorder. The reasons for this reservation were as follows: (1) The patient had a history of hyperthyroidism in 1928 from which illness she was supposed to have made a good recovery under medical treatment. (2) Her appearance suggested a peculiar compound of hyperthyroidism and hypothyroidism. (3) She was distinctly Italian looking, her skin exhibiting a generalized amber pigmentation and her hair being very dark and of silky texture. Suprarenal hypofunction as a possible cause of her illness was considered. Nevertheless as her blood pressure was normal and as at times she jugged herself out of her ideas of weakness and lassitude especially when she had visitors at her bedside and as x-ray examination revealed no suggestive shadows either in the chest or in the suprarenal areas no confirmatory evidence could then be obtained.

On December 28 twenty-three days after admission she was allowed to go home. She had taken a well balanced diet there had been no evidence of gastro intestinal upset and aided by an occasional grain of luminal she had slept quite well. She was improved in bodily and mental health.

Two months later she had so far relapsed that she was referred back to hospital from the Public Health Department Out patient Psychiatric Clinic. Readmitted on March 5 1936 she again complained of abdominal and anxiety symptoms. Noteworthy points on physical investigation were: blood pressure 130/80 pulse 85, menstruation which had been absent for fifteen months until November 1935 was now regular but diminishing in quantity, exophthalmos was present, the face was puffy and the whites of the eyes pearly, the ocular fundi were normal, the skin of the forearms and hands was rough and very cold to the touch, a fractional test meal showed achlorhydria, the deep reflexes were exaggerated, there was a fine tremor of the hands, radiographs of the chest were negative and of the abdomen showed visceroptosis. Two points should be specially noted: (1) with regard to pigmentation, a slight deepening of the generalized amber colour had occurred, (2) the body weight had fallen to 7 st. 10 lb., a loss of 21 lb in about ten weeks. Mentally an element of depression had moved well into the foreground but there was no retardation and memory orientation, and perception were normal.

On April 25, 1936 the patient developed an acute tonsillitis (*Streptococcus viridans*) this completely cleared up within a fortnight with subsequent substantial mental and physical improvement. On June 16 she complained of headache and insomnia which persisted for over a week. On July 11 she developed marked diarrhoea which proved extremely difficult to overcome. Bacteriological examination of stools revealed no abnormality. About the middle of August a marked change took place in her mental condition, she became exceedingly dull and depressed. She presented the picture of an acute agitated melancholia and the power of ideation previously always well developed now became notably deficient. She then began to waste, and her weight quickly fell to 6 st 6 lb. She felt very weak. A deep-brownish pigmentation appeared symmetrically on the dorsum of the hand and wrist and a few spots on the neck. The blood pressure fell down to 90 mm Hg systolic and diarrhoea returned. A diagnosis of Addison's disease was made and vigorous treatment was started by the excess sodium chloride method including large doses of intravenous saline daily. Suprarenal and mixed gland extracts—desiccated suprarenal gland adrenal substance Parke Davis and Co. and mixed gland (female) tablets Evans Sons Lescher and Webb two tablets of each three times daily—were also given and generally all stimulating measures were adopted. Her appetite was poor but care was taken to see that she received a full, well balanced diet with plenty of vitamins. She showed immediate response to these efforts within five days her systolic blood pressure had gone up to 105 mm Hg, and by the end of August to 110/65 mm Hg. Her weight however continued to fall. Small doses of insulin were given but she complained of great nausea after the injections. Intensive salt and glandular treatment was continued until September 7. She persistently complained of abdominal discomfort, and diarrhoea proved very intractable. Stools were negative for occult blood and bacteriological examination revealed nothing of importance but examination on October 20 showed great increase of streptococcal content, with the presence of *B. pyocyaneus*. This is a frequent terminal finding in debilitated mental patients and is of no particular significance.

At the beginning of November it having been observed that Demole (1936) had made out a good case for vitamin C as an augmentor of suprarenal cortical function, a copious quantity of lemon juice was added to the diet. The result was striking almost at once the pigmentation on the backs of the hands began to clear. But the patient was wasting fast, her weight was now only 5 st. 12 lb. and the blood pressure 105 mm Hg. Meantime Dr Stewart the visiting psychiatrist had pointed out that the pigmentary changes of the hands suggested pellagra, and on November 17 Dr McLachlan the dermatologist

logist confirmed this diagnosis on the following grounds (1) atrophy of skin on back of hands and on the lower half of the face (2) distribution of the excess of cutaneous pigment, (3) presence of gastro-enteritis and of mental symptoms (4) history of attacks of redness of skin of face and hands. The patient had become difficult to feed, but nevertheless was still getting a good general diet. She complained of tingling and crampy pains on the soles of both feet and a feeling of great weakness. By November 20 her blood pressure had fallen to 90 mm Hg. Blood examination showed a secondary anaemia. Mentally she was less agitated. On November 23 without any warning she had a rigor and was afterwards in a state of semi-collapse. Recovering from this, she presented for the first time a state of acute confusional insanity. She was utterly incapable of apprehending the nature of her surroundings. She suffered from visual and auditory hallucinations, and showed extreme motor restlessness. Her blood pressure had fallen to 68 mm Hg. and there was a coarse tremor of hands and feet. On November 24 the blood pressure fell to 48 mm Hg. and death was ushered in with delirium and urgent dyspnoea.

The post mortem examination was conducted by Dr Marjorie Gillespie to whom I am indebted for the following relevant notes. The heart was small, the stomach and intestines showed patchy congestion of the wall, the condition being most marked in the caecum and ascending colon; microscopically the thyroid gland showed hyperplasia passing into hypoplasia, no gross lesion was present in the suprarenal glands. Microscopical examination of the skin by Dr McLachlan revealed marked hyperkeratosis, excess pigment present in superficial layer of epidermis, slight irregularity and elongation of the rete cones, no atrophy in the sections examined. Collagen fibres in the subepithelial layer had undergone a small degree of hyaline change, some of the papillae showed a certain amount of oedema. No changes of pathological importance were found in the conum. A very slight infiltration of the pars papillaris had occurred. Examination of the skin coincided with the clinical observation that pigmentation was disappearing after giving vitamin C.

Discussion

The first question arising in the present case is whether the diagnosis of Addison's disease was correct or whether the patient suffered primarily from pellagra. That no lesions were found in the suprarenal glands is of no help in arriving at an answer. Disease is a process concerned with living cells, and functional derangement is not necessarily associated with anatomical changes of so gross a character that they are demonstrable even with the aid of the microscope. Especially is this the case when the diseased tissue is obtained at post mortem examination of the human subject.

Another difficulty arises from the fact that textbook descriptions of the syndromes of suprarenal dysfunction and pellagra show a striking correspondence. In both we find very similar alimentary, nervous and integumentary symptoms. In the present case, however, whether the true diagnosis was Addison's disease or pellagra, certain features tend to place the primary disorder at the door of the suprarenals—namely (1) Hypotension becoming gradually worse (2) Favourable response to suprarenal therapy (3) Previous history of endocrine disorder (4) Generalized pigmentation present for many years before she came under care (5) The patient's age and disorder of menstruation (6) Her death was in the nature of an acute collapse and this has often been associated with adrenal failure. One need only mention such conditions as toxic diphtheria, malarial collapse and surgical shock (7) The histological appearances of the thyroid gland were those associated with hypothyroidism following upon hyperthyroidism. It is suggested that long standing cortical adrenal hypofunction

may have caused, first, a relatively overacting thyroid ("The cortex is the very antagonist of the thyroid—Goldzieher, 1929), with a final adreno thyroid exhaustion.

Furthermore it is interesting to note that although the patient finally developed pellagra, (i) there was no dietetic (either protein or vitamin) deficiency of intake, (ii) on the same diet as the forty other patients in the ward she was the only one to acquire the disease, (iii) being a bed patient she was not more exposed to the sun or other trauma than any of the others, (iv) no infective condition was present. Here, therefore, is a case of hypo adrenalism terminating in "pellagra" with no factor either of deficient nutritional intake or of infection to account for such a development.

Even if this adrenal-pellagra combination had never been previously noted, the case here described would have been of interest because of the uncertainty surrounding the aetiology of pellagra. Since, however, so many observers have called attention to this phenomenon there is evidently here a fruitful field for exploration.

RELATION BETWEEN ADDISON'S DISEASE AND PELLAGRA

Simpson (1935), when describing two cases of secondary pellagra, called attention to the connexion between Addison's disease and pellagra, and concluded that a definite relation exists. He also quoted from Harris (1919) eight cases of Addison's disease reported by Finotti and Tedeschi (1902) which had terminated as pellagra and which had shown severe post mortem adrenal changes, as well as other cases since that time which showed pellagra supervening upon Addison's disease. Parfitt (1936) does not mention the association between Addison's disease and pellagra, but the two cases described by him as pellagra could also be described as typical clinical examples of hypo-adrenalism, and Watson (1922) commenting on fourteen cases diagnosed as pellagra at Rainhill Asylum, made the following significant observations: (1) The age grouping was between 40 and 50 years, (2) the course of the disease measured only in weeks (except in the two youngest of the series), (3) the diet of the patients had been more varied and more generous than usual.

Examining more closely this association between the symptoms of hypo adrenalism and pellagra, it will at once be conceded that no substantial difference exists either in the alimentary or pigmentary phenomena (Rowntree, 1925, Goldzieher, 1929a, 1929b). Hypotension, however, demands careful scrutiny. Here we appear to be confronted with an exclusively Addisonian sign yet a careful search through the literature reveals that the question of blood pressure in pellagra is scarcely ever mentioned. Stannus and Gibson (1934) reviewed all the cases diagnosed as pellagra in Britain up to 1934 but no reference is made to blood pressure. Parfitt (1936) and Simpson (1935) each describe two cases in which the blood pressure was low. It is at least open to question whether in pellagra the arterial tension could possibly be maintained at a normal level in face of the array of debilitating symptoms. At post mortem examination the heart in pellagra is found to be small, just as it is in Addison's disease. Is it not probable that in the combination of low metabolism and diarrhoea (both common to Addison's disease and pellagra) there lies the common explanation of diminished tension and small size of heart?

SEX INCIDENCE

Combined figures of sex incidence in Addison's disease and pellagra show a preponderance of females over males. If, as seems at least suggestive, suprarenal hypofunction

is the common antecedent of both clinical syndromes, this is what one would expect, since fundamental glandular weaknesses are more likely to be exposed in females. Hutton and Steinberg (1936), commenting upon 176 clinic patients suffering from definite endocrinopathy, give the sex incidence as 146 female and thirty male. Stannus and Gibson (1934) give the sex incidence of 131 British cases diagnosed as pellagra from 1912 to 1931 as 111 female and twenty male—a remarkable similarity in ratio. It is difficult to imagine such a gross sex disparity arising entirely from a difference in vitamin intake. Assuming, however, a sex equality of vitamin intake and absorption, women might conceivably suffer more readily than men if certain vitamins were found to be essential elements in the maintenance of suprarenal and other endocrine functioning. Average vitamin absorption might then prove relatively insufficient because of increased endocrine demands, particularly at times of physiological stress. The large proportion of female cases of so-called pellagra occurring at the menopause is significant. In other words, one of perhaps many factors which bring to light endocrine discord and precipitate an apparent unilateral endocrinopathy may well be insufficient intake or absorption of certain vitamins, and especially so at the climacteric. Again, what appears to be a disease purely of vitamin insufficiency may, moreover, be the expression of a latent endocrine abnormality. Does any evidence exist of such an association as is here implied between vitamins and the suprarenal glands? The undemoted observations regarding vitamin C are of interest.

(i) The suprarenals are known to be particularly rich in ascorbic acid. (ii) Demole (1936) employing the test for vitamin C subnutrition devised by Harris and Ray (1935) found that the body of the Addisonian patient is impoverished of vitamin C. (iii) Wilkinson and Ashford (1936) describe three patients suffering from Addison's disease all showing vitamin C subnutrition the degree of subnutrition paralleling the severity of the illness. (iv) Demole (*loc cit*) quoted the following additional points of interest: (a) Striking demonstrations by Thaddeus have proved that resistance to experimental infection in adrenalectomized animals requires vitamin C as well as cortin. Thaddeus concludes that if vitamin C does not augment production of cortin its presence is useful for the proper functioning of the suprarenal cortex, probably acting as a powerful augmentor of the action of cortin. (b) Szent-Györgyi has shown that vitamin C diminishes Addisonian pigmentation and (c) to several Continental preparations of suprarenal extract ascorbic acid is now added. (v) Many observers have recorded diminution of pathological pigmentation with lemon juice and the case described in this paper is yet another example. (vi) Lockwood and Hartman (1933) mention delay of onset of symptoms of B and C avitaminosis with injections of suprarenal cortical extract.

Although much work remains to be done to establish the precise relations between vitamin C and the suprarenals the existence of some synergistic association is probable.

SECONDARY PELLAGRA

Since 1916 it has been maintained that there exists a separate clinical entity known as secondary pellagra. This has been defined by Simpson (1935) as "pellagra occurring secondary to an initial gastro-intestinal lesion or disorder the causation of which is entirely unconnected with pellagra." It is suggested that the grounds for this clinical distinction are inadequate. One may as well describe an Addisonian patient first seen with gastro-intestinal symptoms as a secondary Addison.

If it were proved that pellagra is merely a manifestation of hypo-adrenalism and if the need of the suprarenals for

adequate vitamin stimulation were established, a simple explanation would then suffice for the essential nature of both primary and secondary pellagra—namely, that the gastro-intestinal disorder prohibits adequate absorption of the vitamins requisite for suprarenal functioning. Such a thesis is supported by the fact that achlorhydria occurs both in hypo-adrenalism and in pellagra. Thus the aetiology as well as the symptomatology of functional hypo-adrenalism and pellagra could be brought under a common heading. In other words, the cause of pellagra could be described as hypo-adrenalism precipitated by avitaminosis.

It is hoped that the points raised in this paper may result in a closer scrutiny of all suspected cases with a view to furthering the knowledge of the hypo-adrenal-pellagra association. Certainly in cases of so-called pellagra there should be a routine investigation made of the blood pressure of the gastric juice, of the ascorbic acid excretion, and of the endocrine as well as of the dietetic factors.

Treatment

Until the question of hypo-adrenal-pellagra relations is definitely determined the suggestion is advanced that treatment of the patient should be directed on the following lines: (1) *Diet* should be generous and varied. (2) *Vitamin therapy*. Large doses of vitamins A, B, C, and D should be included in the diet. Lemon juice, egg-white and cod liver oil daily will probably cover all requirements. (3) *Cortin*. A commencing dose of 10 c.c. suprarenal cortical extract, intramuscularly, daily until the condition is stabilized. (4) *Sodium chloride*. 15 grammes a day intravenously and excess salt in the diet. (5) *Acid HCl and pepsin* with all meals. (6) *Pil. Blaud*. (7) *Adrenaline*. Small subcutaneous doses frequently until stabilization.

Summary

1. The specific value of vitamin B₂ in pellagra is called in question.
2. A case is described showing "pellagra" as a terminal manifestation of hypo-adrenalism.
3. Attention is called to a probable relation existing between vitamin C and the suprarenal cortex.
4. Many of the features characteristic of functional hypo-adrenalism, pellagra, and secondary pellagra strongly indicate that these conditions have aetiological factors in common.
5. It is suggested that two essential points in the aetiology of pellagra are (a) primary hypo-adrenalism and (b) inadequate vitamin augmentation of adrenal functioning.

I wish to thank Dr. William Martin, medical superintendent for permission to publish the notes of this case.

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EPITHELIAL OVERGROWTHS AND DIVERTICULA IN THE GUT OF RATS FED ON A HUMAN DIET

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Although diverticulosis and diverticulitis are by no means rare conditions in human pathology, yet the aetiology is far from clear. Probably no one factor is responsible for all cases. Thus the occurrence of diverticula in rats fed on a human diet seemed to warrant systematic investigation in the hope that the findings might be not without bearing on the pathological process in man.

A long-term experiment with rats on a human dietary was begun at the Rowett Institute in December, 1932, and was described in 1935 (Orr Thomson, and



Fig 1—Gut of rat affected with epithelial overgrowths.
S = Stomach C = Colon

Garry). In this experiment two groups of Lister hooded rats bred from the same stock have been reared for six generations under exactly similar environmental conditions except for diet. One group received a ration closely approximating to that eaten by a working-class community in Scotland as ascertained by a dietary survey (Davidson, *et al* 1933); this will be referred to as the 'experimental group'. The other group known as the 'supplemented group' received the same diet with an additional supply of milk and green food.

During the course of the experiment a spontaneous epidemic with an organism of the *Salmonella* class broke out in the colony and caused a high death rate from gastro-enteritis especially in the experimental group. During routine post-mortem examinations it was found that many animals showed nodular swellings or thickenings in the distal part of the small intestine and in the proximal and intermediate colon. These were found only in animals over 100 days old—that is, in adult animals

Macroscopic Appearance

In the small intestine the lesions were mostly in the distal ileum on the anti-mesenteric border. The size varied probably according to the age of the lesion, from that of a small pin head to that of a cherry, and was thus sometimes three or four times the diameter of the gut. In cases of long standing the large number of individual nodules gave the gut the appearance of a string of beads (Fig 1). In the large intestine the wall of the proximal and intermediate colon was usually thickened to form a stiff hard mass often studded with small sessile nodules. The distal part of the colon, the rectum, was free from such lesions. In the advanced stages there were adhesions to the omentum and to adjacent loops of bowel. On incision both small and large bowel lesions were found to have large loculi, in many instances filled with pus, and the growth often encroached on the gut lumen, reducing it to a small channel. Sometimes it was possible to see a small opening communicating between the loculi and the gut lumen. Thus there was a striking resemblance to the condition observed in man, both with respect to the macroscopic appearances and to the sites of the lesions.

Microscopical Appearance

Histologically the lesions were essentially the same in the small and in the large guts. The chief characteristic was extreme glandular proliferation with penetration of the muscular coats, in some cases this proliferation extended into the adherent omentum. In the majority an inflammatory reaction was present and there was often profuse round cell infiltration. In the later stages there was abscess formation. In certain regions caseation occurred, not



Fig 2—Transverse section through a nodule in the ileum.
GL = Gut lumen D = Diverticulum

unlike that seen in tuberculous foci. Attempt at repair could be seen, as instanced by the presence of fibrous tissue.

Fig 2 illustrates a transverse section through the middle of a lesion in the ileum showing direct communication with the gut lumen and consequent formation of a diverticulum. Fig 3 represents a section of the colon in the same rat showing extreme glandular proliferation on one side of the lumen and a sessile nodule under the serous coat. Fig 4 illustrates in one of the largest nodules the characteristic microscopical appearance: the epithelium retained its normal structure there was no satisfactory evidence of penetration of the basement membrane and in no case were metastases found. There was then no evidence for malignancy in the stages at which the lesions were examined.

Probably the natural history of a nodule is as follows. For some unknown reason the glandular epithelium proliferates and penetrates the muscular coats, tending all the

time to retain its acinous form the acini are prone to infection, and inflammation follows often with necrosis

A condition of somewhat similar nature was described by Leitch in 1924. He put such foreign bodies as human gall stones, pebbles and pitch pellets into the gall-bladder of guinea-pigs. As a result there was destruction of the lining membrane of the gall bladder and then repair by an epithelium which in the majority of cases proliferated to such an extent that it penetrated and destroyed the wall of the gall-bladder. Nevertheless the acinous arrangement of the epithelium persisted, and cytologically

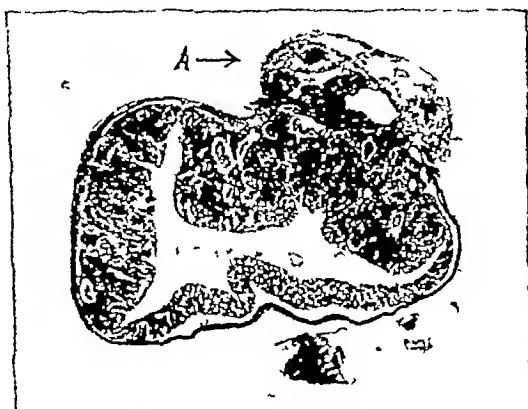


FIG. 3.—Transverse section through a lesion in the colon. A points to subserous nodule.



FIG. 4.—Section through a nodule. Note the dilated acini and round-cell infiltration.

there was no real evidence for malignancy. But, since these epithelial overgrowths invaded neighbouring organs such as the liver or penetrated tissue adherent to the gall bladder Leitch reported that the process was malignant. However in 1933 Burrows repeated and confirmed Leitch's results but definitely decided that the condition induced was not malignant in the true sense of the word. The microscopical appearances illustrated by these two workers are remarkably like those described here.

Incidence of Lesions

The gut lesions were first noted in the winter of 1933-4 when the experiment had been running for about one year. Since then until the end of the experiment this year a number of rats have continuously been found to be affected. Of seventy-six animals in which either the small or the large bowel or both were concerned fifty-four were

fed on the experimental diet and twenty-two on the supplemented diet. In those on the defective diet the lesions were usually more extensive. The number of rats with gut lesions in each generation on the experimental and supplemented diets have been compared with the total number of rats in each generation living beyond a hundred days, the age above which lesions have been observed. This is shown in the table.

Generation	Experimental Diet			Supplemented Diet		
	Number with lesions	Number surviving 100 days	Incidence	Number with lesions	Number surviving 100 days	Incidence
Parental	2	29	6.9	2	30	6.7
F1	14	234	6.0	3	205	1.5
F2	29	129	22.5	1	94	1.1
F3	7	53	13.2	8	107	7.5
F4	2	12	16.7	8	112	7.1
General Incidence	54	457	11.8	22	548	4.0

Since the environmental conditions of the two groups were identical apart from diet and these were bred from the same stock, this higher incidence would seem at least to indicate that the nutritional level of the diet is one factor in the aetiology. No more than this can be said at present. The original dietary experiment in which this outbreak occurred has now been concluded. Further similar dietary experiments, however, are being continued, and the rats in these experiments will be examined for these nodules.

It seems then that we have in these rats a pathological process which macroscopically has all the appearances of diverticulosis and diverticulitis in man. Microscopically apart from the inflammatory processes common to both the resemblance ceases. However, since the aetiology of diverticulitis in man is obscure, since relatively little work has been done on the histopathology of this condition in man, and since the lesions here described have appeared in rats especially in elderly rats and in rats on a human diet known to be far from perfect it does seem worth while putting this condition on record in the hope that it may stimulate interest in the essential pathological processes of diverticulosis and diverticulitis in man. Moreover we have been unable to find any reference in the literature to this condition in rats.

Summary

In rats fed on a low grade human diet an unusual kind of epithelial proliferation was observed in the small and large guts. This resulted in multiple diverticula, which penetrated the entire thickness of the bowel wall. Macroscopically there was a striking resemblance to diverticulitis as seen in man but microscopically we were forced to regard this change as an acquired heterotopia. Throughout the period of observation no evidence for malignancy was detected.

The authors are deeply indebted to Professor D. F. Cappell, University of St. Andrews, for advice in interpretation of the pathological changes and to Dr. J. T. Irving Rowell Institute for assistance in presenting the data.

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HYPOGLYCAEMIC THERAPY IN THE
PSYCHOSES

BY

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In 1935 Manfred Sakel of Vienna published a book describing his new insulin shock treatment of schizophrenia. Since then his method has been used in many parts of the world, and in this country reports have been published by Russell (1937), Larkin (1937), and James and co-workers (1937). Up to now I have administered this therapy to sixteen female psychotics, the majority of whom were cases of schizophrenia. Two of these cases are described later, as they present features that have not been fully recorded in the English literature. The first case showed status epilepticus in the course of treatment, and the other laryngeal spasm on two occasions. It happens that in the first case the series of convulsions was apparently responsible for a remarkable improvement in the mental condition, but it would be premature to draw conclusions from this, and my purpose is rather to point out certain of the dangers associated with this treatment. A complication which demands no description is the lessened resistance to infection that is sometimes seen in these patients. In my series there have been two cases of pyelitis, which quickly responded to mandelic acid.

Details of the technique will not be given here as they have been well presented in the recent article by James and his co-workers. Essentially the treatment consists in the daily injection of increasing amounts of insulin, until a dose is reached which causes hypoglycaemic coma. On succeeding days this dose is maintained until mental improvement occurs or there is a lack of response to the treatment. In practice, however, few patients receive the routine treatment. The variations are mainly concerned with the criteria for interruption of the hypoglycaemia, and constitute the most difficult part of the technique.

Case I

A woman aged 32 years was admitted as a temporary patient on May 28 1935 with a history of mental disorder of three weeks duration. She was in a state of acute confusion being completely disorientated and was restless, insomniac, resistive and impulsive, and had aural hallucinations. It was stated that she had suddenly developed this condition on the night of May 5. After about four weeks in hospital she showed some clearing of consciousness. However a silly fatuous element was then noticed in her speech and appearance. She began to have grotesque delusions of little depth and of a grandiose nature and the affective reaction was observed to be shallow and did not co-ordinate with her expressed thoughts. A diagnosis of paranoid schizophrenia was made. On May 7 1936 she was certified after two extensions of her temporary status.

The hypoglycaemic treatment was begun on February 13 1937 with the intramuscular injection of 24 units of insulin. The insulin used was Messrs. Boots quadruple strength—that is 80 units per c.c.m. The dose was increased by 8 units daily until on February 18 with 64 units she became comatose. This dose was continued daily except on Sundays until February 23 when she developed status epilepticus. At 7.25 a.m. on that day she had received 64 units of insulin. At 9 o'clock she was drowsy and at 9.15 a.s.c.s appeared on the face and chest. At 10.20 she became comatose and an oesophageal tube was passed by the nasal route. Further progress in the coma was uneventful and as usual her degree

of unconsciousness was light—that is, she was insensible to painful stimuli the conjunctival reflex was absent the corneal reflex on both sides and the knee and ankle reflexes could just be elicited, while the plantar responses were bilaterally extensor. She was fed at 12.10 p.m. with 150 grammes of glucose in half a pint of water and had regained normal consciousness by 12.35. At 12.40 she had a typical major epileptic fit with well marked tonic and clonic stages. By 12.44 she had recovered full consciousness and appeared none the worse. At 12.50 a second major convulsion occurred. From this she recovered in four minutes, and as she appeared well no intravenous glucose was given. She was occupied until 3.10 when she had a third major fit from which she did not regain consciousness. Identical convulsions occurred at twenty minute intervals until 5.40 making a total of ten convulsions that day. Treatment was as follows:

3.15 p.m.—30 c.c.m. of 25 per cent. glucose in saline given intravenously.

3.20 p.m.—Glucose 5 ounces, calcium lactate 20 grains, and prominal 1 grain in half a pint of water given per oesophageal tube.

3.40 p.m.—Soap and water enema given with fairly good result.

3.50 p.m.—Adrenaline 1/2 c.c.m. injected subcutaneously.

4.15 p.m.—Stomach washed out with normal saline solution and ammonium chloride 40 grains left in the stomach.

4.20 p.m.—Lumbar puncture was performed and 20 c.c.m. of cerebro-spinal fluid removed. It was under greatly increased pressure.

5.20 p.m.—1 c.c.m. of 20 per cent. luminal solution injected intramuscularly.

6.20 p.m.—Lumbar puncture was repeated and 20 c.c.m. of fluid removed. The pressure was less this time, although still raised.

There were no further fits after 5.40 p.m. and at 9 p.m. the coma lightened and she became restless. At that time morphine sulphate 1/4 grain was injected subcutaneously. At no period during the day did the cardiac condition give anxiety. The need for constant medical attention during the hypoglycaemic treatment is shown by the fact that her bedside was hardly quitted the whole of that day.

All the next day the patient was drowsy but on the morning of February 25 she was found to be pleasant and coherent in speech. As recovery might be hindered by a psychological investigation no questions were put to her but from her spontaneous utterances it was obvious that she had lost her psychotic signs and symptoms. She was no longer deluded or hallucinated and was coherent, relevant, rational and pleasant in conversation. In her affective conative and cognitive responses she appeared normal. On April 5 she was discharged on trial. On the 26th she reported back and appeared so well that she was discharged altogether.

On June 9 she reported again for a more complete mental investigation and showed entire disappearance of schizophrenic symptoms with normal affective relationship and ability to return to her normal sphere of work. It was felt however that she did not fully appreciate the serious nature of her illness and so her case had best be recorded as an incomplete remission according to the standards of Müller (1936).

Discussion

Typical major epileptic fits are common in this treatment and other convulsions may occur that show a preponderance of tonic or clonic stages but are still to be looked on as major epileptic fits. These fits may appear at any stage in the hypoglycaemia even when this has apparently been relieved by glucose. The latter occurrence may be due to the hydration of an already irritable cortex.

The epileptic fit is not now regarded as a catastrophe and it does not depend on the blood sugar level. It is of interest that Meduna (1936) by the use of various con-

vulsive agents, especially camphor and metrazol (cardiazol) has claimed to have had good results in the treatment of schizophrenia. He believes that the likelihood of cure with his treatment is proportional to the liability to convulsions. It is reasonable to suppose that in the case described above a similar therapeutic result would have been achieved by the use of cardiazol, and my experience in the use of this drug shows that it is simpler and safer than the hypoglycaemic treatment.*

For status epilepticus the treatment is the administration of glucose intravenously and by the oesophageal tube, along with repeated lumbar puncture. A soap and-water enema and the injection of 1/4 grain of morphine may also be indicated.

It may be added that in the case described the personal and family histories contained no reference to epilepsy or other nervous or mental disease. It was the patient's first psychotic attack, there were no apparent exciting factors, and there had been no evidence of remissions during her stay in hospital. It remains to be seen how long the present mental improvement will last.

Case II

A woman aged 27 years was admitted as a temporary patient on March 5 1935, and was certified on March 10, 1936. Throughout her stay she has shown mutism and apathy, but without katatonic features; hence benign stupor appeared to be the most appropriate diagnosis.

Hypoglycaemic treatment was begun on April 7 1937, with a dose of 24 units of insulin. By April 23 she was having 104 units, and on that day three hours after the injection and while still awake she suddenly showed inspiratory stridor and at once became cyanosed and unconscious. The pulse was 40 beats per minute and was intermittent. She was immediately given 1 ccm of coramine intramuscularly, 1 ccm of adrenaline intramuscularly and 5 ccm of 25 per cent. glucose in saline intravenously. By this time she had stopped breathing, was quite blue and was pulseless. Artificial respiration was also begun and simultaneously she received 150 grammes of glucose per the oesophageal tube. She recovered almost at once and gave no further anxiety that day.

The treatment was begun again after two days rest using smaller doses of insulin and on May 5 she was receiving 64 units. On that day she again showed laryngeal spasm three and three quarter hours after the injection and almost at once became pulseless cyanosed and unconscious. She was given the same treatment as before and quickly recovered. The treatment was permanently discontinued after this as it was felt to be unwise to risk a third occurrence of the complication. She was said to have suffered much from bronchitis in childhood and this may be associated with her laryngeal susceptibility.

Little more need be said about this complication. It is not very common, it is easily and quickly recognized and it responds quickly to the appropriate treatment. So soon as the first stridor is noticed treatment by adrenaline, repeated coramine, artificial respiration and the administration of glucose should be instituted. The intravenous route will probably be useless because of collapse of the veins. As recommended by James a cylinder of 95 per cent. oxygen and 5 per cent. carbon dioxide would be an advantage and this has been added to the equipment of my insulin ward.

Summary

Two cases are described which show at the same time the dangers and the potentialities of Sakel's hypoglycaemic treatment in the psychoses. The first case was that of a female psychotic who had suffered from a schizophrenic insanity for one and three quarter years. After developing

status epilepticus as a result of the insulin treatment she showed such improvement mentally that she was discharged.

The second case illustrates the occurrence of laryngeal spasm during the insulin treatment.

The treatment of both these complications is described and the necessity for constant medical attention is emphasized.

I am indebted to Dr J. Harvey Cuthbert, medical superintendent of West Ham Mental Hospital for permission to report these cases. My warmest thanks are due to Sister Mackenzie and the staff of Ward 6, West Ham Mental Hospital for their skilful nursing and continued enthusiasm. For a translation of Meduna's paper I am indebted to Knoll Ltd. of Welbeck Street.

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Clinical Memoranda

Marked Febrile Erythematosis During Treatment with Mandelic Acid

Since Rosenheim's articles dealing with the treatment of urinary infection by means of mandelic acid have appeared in medical papers many thousands of such cases have been successfully treated by this drug and very few complications have occurred. It is possible however, that with its use some practitioners may have noted results similar to those experienced recently in a patient of mine who was undergoing mandelic acid medication, and the following case record may therefore prove of interest.

CASE REPORT

A woman aged 42 who gave a long history of cystoeciae and associated urinary symptoms consulted me on account of urgent frequency of micturition. A bacteriological examination of her urine showed *Bacillus coli communis* and pus cells to be present in considerable quantities.

Treatment was begun with large doses of alkalis and when after a week this afforded no relief cystopurin two tablets four hourly was substituted. This likewise failed to relieve her discomfort and the bacteriological findings in the urine remained as before. As no albumin had been found in the urine the patient was considered to be a suitable case for mandelic acid therapy and this was instituted forthwith the urinary pH being kept at 5.3 by the coincident administration of ammonium chloride by mouth. Methyl red was used as the indicator. This treatment was started on February 10 and was continued uneventfully until February 24 when the patient complained of a generalized pruritus although there was no sign of a rash. As at this time the bacteriological findings were still positive the treatment was continued. On February 27 the suboccipital and submaxillary glands showed some enlargement and were slightly tender. On March 3 besides the pruritus and lymphadenitis the patient complained of a persistent acid taste in the mouth resembling that of the medicine. On March 6 the first negative bacteriological report was obtained but the mixture was continued.

On March 10 in addition to the previous symptoms there was soreness of the gums (the patient was edentulous) and these were found to be injected and swollen. The mixture was then stopped and large quantities of alkaline fluids and glucose were substituted. On March 14 the patient had a marked nocturnal sweat and on the morning of the 15th her temperature was found to be 102.2° F. and there were small red papules on her chin, neck, shoulders and the front of her chest. By

* It should be noted that cardiazol only produces convulsions when used in very large doses and according to a special technique in the case used ordinarily it acts only as a respiratory and circulatory stimulant.

this time the itching had become intolerable and by the evening her temperature was 103.6 F. Two tablets of veramon were given but afforded no relief. On the following day her temperature was 105 F at 8 a.m. and she presented a dismal spectacle. Her face and body were covered with a punctate erythema the rash being most marked on the face and on the extensor aspects of the limbs. The oral mucous membrane was swollen and injected, the eyelids were practically closed with oedema and what little of the conjunctivae could be seen was almost brick red in colour.

Some symptomatic relief was obtained at this stage by a sodium bicarbonate bath followed by the application of 10% calamine co. but the effects were only temporary and in one hour the patient was suffering as badly as she had been before the bath was taken. Fifteen minims of adrenaline hydrochloride 1 in 1000 were then injected subcutaneously and 2 c.cm. of colloidal calcium (Glaxo) were given intramuscularly and within half an hour marked relief was experienced. When the patient was seen the same evening (eight hours later) the temperature had fallen to 102.2 F., and she was more comfortable than she had been for several days. The following morning the temperature was still 102 F., and a further 2 c.cm. of calcium was given intramuscularly. The rash was then beginning to fade and the oedema was diminishing.

On March 18 her temperature was 100 F. and she expressed a desire for solid food. A further 2 c.cm. of calcium was given and this dose was repeated daily for the next two days by which time the temperature was normal and the oedema had almost disappeared although some mild irritation persisted for a while and small dusky petechiae were present in the skin at the sites where the rash had been most marked.

Hadleigh, Essex.

W. L. JAMES

Meningococcal Meningitis Complicated by *Streptococcus haemolyticus* Infection Recovery

The following case seems of sufficient interest to warrant being placed on record.

A youth aged 17 was admitted to the Miller General Hospital on Tuesday January 19. His mother gave the following story. On the previous Friday morning he had gone to work having a sore throat while at work he felt dazed and had collapsed, and was brought home by friends. He was then complaining of headache, backache and feeling feverish and it was thought that he had influenza. By the following Sunday however the headache had become intense and the parents noticed that his head was somewhat retracted.

On admission the patient, a youth of splendid physique had a temperature of 100.6 F., the pulse rate was 88 and the respiration rate 28. He was lying on his side with the knees drawn up and showed some degree of head retraction. There was a pronounced palatal weakness, with nasal regurgitation, but no other evidence of cranial nerve damage. Kernig's sign was positive. In addition he had a herpetic eruption on the back of the neck and showed a well marked "tache cérébrale." On lumbar puncture the fluid first obtained was almost pure pus, and under tension. Microscopical examination gave a polymorphonuclear cell count of 61,000, large numbers of meningococci were seen (shown after culture to be Type II).

The patient was treated by daily lumbar puncture and the administration of large amounts of Parke Davis antitoxin by the intravenous and intrathecal routes. Between January 19 and 26 some 16-80 c.cm. of cerebro-spinal fluid were drained daily and 20-30 c.cm. of antitoxin given intrathecally. Over the same period he also received daily 120 c.cm. of antitoxin intravenously.

On the day following admission he became more delirious and was incontinent of urine, the pulse rate rose to 120—thus marked tachycardia persisting until the end of the illness. After this there was a slight but progressive clinical improvement. By January 26 the cell count had fallen to 1,660 and the fluid withdrawn that day proved sterile on culture. Intra-

venous antitoxin was discontinued after January 29 but lumbar puncture and intrathecal injections of antitoxin were continued with a break every third day. A serum rash appeared on January 27 and lasted three days. There was a recrudescence of his symptoms and signs on January 30 and again on February 3 and a sparse growth of meningococci was obtained from the cerebro-spinal fluid. After February 3 his clinical improvement was maintained for a week. During that period he was having lumbar puncture every other day and antitoxin was being given intrathecally at the same time. By February 9 the cell count had fallen to 600 and the fluid had given two negative cultures. The temperature had then been normal for three days. Since admission he had received a total of 1,650 c.cm. of meningococcus antitoxin (550,000 units).

On February 10 a routine lumbar puncture was performed in the morning and 55 c.cm. of fluid were withdrawn. The same day the patient had vomited spontaneously and his head was again retracted. In the evening he had become suddenly unconscious, with fixed eyes, contracted pupils, and stertorous respiration. His temperature was 103 F. and the pulse rate 130. It was thought that these phenomena were associated with a rise in intracranial pressure due to a block between the third and fourth ventricles. Lumbar puncture was performed for a second time that day and the removal of 16 c.cm. of fluid was followed by a gradual return of consciousness. Next morning the laboratory report on both specimens of fluid withdrawn the previous day showed the presence of streptococci in the film and a rise in the cell count to 1,070. A culture of these specimens gave a profuse growth of *Streptococcus haemolyticus*. A throat swab taken the same day also showed on culture a profuse growth of *S. haemolyticus*. Concentrated streptococcus antitoxin (Burroughs Wellcome) was given on February 11 and 12 (14 c.cm. intrathecally and 70 c.cm. intravenously each day). At the same time 20 c.cm. of protosil were administered intramuscularly. During these two days the patient's temperature was raised, he was drowsy and his head was again retracted. On the 12th the cell count had risen to 8,500 but the fluid taken that day was sterile on culture, and by the same evening there was a definite clinical improvement in his condition.

Only a few cubic centimetres were obtained from lumbar puncture between February 12 and 16, and on the 16th lumbar puncture was "dry." It was thought that a local cord block had developed probably due to a haematoma. During these days the patient's condition again deteriorated and there was an exacerbation of meningeal signs, the discs showed very slight papilloedema. On February 18 cisternal puncture was performed by Dr Harold Pritchard, and 90 c.cm. of clear fluid under pressure were obtained. This was sterile on culture. Again on February 24 there was a sudden marked deterioration in the patient's condition, he complained of severe frontal headache and became drowsy. The pulse rate remained between 120 and 130 but the pulse became very feeble. Cisternal puncture was repeated the next day and 32 c.cm. of clear fluid at a pressure of 250 mm. of water were removed. Following this there was a gradual improvement in the pulse volume and in the patient's condition generally. Cisternal puncture was performed on March 1 for the last time, and at the same time a successful lumbar puncture was made.

The pulse rate now fell slowly to between 80 and 90 and the patient had an uneventful convalescence. There was considerable wasting, and although at first there was marked impairment of memory for recent events yet by the time of his discharge on April 5 his memory had apparently become normal and there was no evidence of any gross lasting damage to body or intellect.

During convalescence swabs taken from the throat and post nasal spaces respectively showed the continued presence of haemolytic streptococci and of meningococci.

I am indebted to Dr Maurice Davidson for permission to publish this case, which was under his care, also to Dr Wm. Smith for permission to publish the pathological reports.

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Reviews

THE FUNDUS OCULI

Internal Diseases of the Eye and Atlas of Ophthalmoscopy. By Manuel Uribe Troncoso M.D. (Pp 530 239 figures 15 dollars) Philadelphia F A Davis Co 1937

English works on the fundus are not numerous. The classical atlas by Adams Frost published in 1896 is still the outstanding contribution to the subject, though it 'dates' nowadays and is in any case unobtainable. Wilmer's atlas, published in 1934 in the United States, was a brave, but not altogether successful, attempt to replace it. Of the lesser monographs none have the width or scope which mark the permanent contribution. It is therefore a pleasure to welcome Troncoso's *Internal Diseases of the Eye and Atlas of Ophthalmoscopy*. The title of the book is not quite happy. A textbook on fundus lesions the book certainly is, but fundus lesions and internal diseases of the eye are not synonymous. Iritis, cyclitis and cataract deserve just as much the designation of internal disease as a fundus lesion, and these are not subjects discussed in this book.

As a survey of fundus lesions the book is a valuable exposition of the modern outlook on the subject. The author has been radical in his rejection of terms and points of view which have ceased to have any meaning, that this is no small praise will be obvious to anyone who turns over the relevant pages in even the most modern of ophthalmic textbooks. He has discarded the misleading term of retinitis given to that large group of retinal lesions where there is no evidence of an inflammatory basis and uses instead the more innocuous name of retinosis just as choroidosis replaces a good many conditions generally named choroiditis. It is, however, in other things than the nomenclature important though that is, that the author's modernity is apparent. Gone is that approach to fundus lesions which described the clinical picture in hybrid terms compounded of doubtful anatomy, fallacious pathology and linguistic barbarisms.

Macular degeneration and 'pigmentary disturbances' do not loom large in his attempt to describe and explain central fundus lesions. A thorough acquaintance with the literature has given the author the opportunity, of which he has made full use, to reduce the chaos of conflicting and overlapping nomenclature to a few underlying general principles, so that the different chapters do not degenerate into a catalogue of names. In a certain ophthalmic encyclopaedia twenty six varieties of choroiditis are described, that the majority of the names ever had any meaning to anyone, even to those who introduced them is more than doubtful. It is good to find a comprehensive book which has broken away from the tradition that it takes eternity to remove an exploded fallacy from textbooks. It must not be assumed that Dr Troncoso has written a revolutionary tract on fundus lesions. What he has done is to put in textbook form the actual practice of the expert ophthalmoscopist. His book is modern in the best sense of the word. He has had the courage to try the new and to hold fast to what is good in the old.

That a book of this kind should have flaws is regrettable but inevitable and it is in the hope that they will be removed in an early new edition that these flaws are stressed. In an exposition of modern ophthalmology to speak of disturbances of menstruation as a cause of papillitis is an act of ancestral piety, the mention of

chlorosis in the same context is an anachronism. "Oto-genous optic neuritis" is not a particularly clear picture. The use of diaphoretics and cathartics as a treatment of optic neuritis puts the wrong emphasis upon what should be a part of general treatment. Here and there teaching departs from orthodoxy, as when acute papillitis is given as a manifestation of disseminated sclerosis. Elsewhere lack of proportion is apparent, as in the pages giving uncalled for elementary exposition of general disturbances in pituitary diseases and a very full account of various pituitary tumours. An equal lack of balance is seen in the chapter devoted to nephritis. The statement that the histological findings in diabetic retinitis are similar to those in renal retinitis is unwarranted. The grouping together of Tay-Sachs disease with cerebro-macular degeneration, though a common view, is surely no longer tenable. On the histology of disciform degeneration of the macula no mention is made of the strong evidence that the underlying cause is not vascular, but thickening of the membrane of Bruch. A second edition might profitably be revised on many such matters of detail and a careful reading of the proofs would not be out of order. What is a more serious defect in a book of this kind is the lack of references. This should be remedied. Such few references as are given are distinctly invidious.

TREATMENT OF DELINQUENCY

New Light on Delinquency and its Treatment. Results of a Research Conducted for the Institute of Human Relations Yale University. By William Healy M.D. and Augusta F. Bronner Ph.D. (Pp 226 9s net) New Haven, Yale University Press. London H. Milford, Oxford University Press 1936.

In undertaking yet another study of delinquency Dr William Healy and Dr Augusta Bronner, from their long experience, approached delinquency as one form of human behaviour and not merely as a kind of behaviour which injures society. They concentrated on the family life of delinquents in the United States and compared a large number of delinquent children with an equal number of non-delinquent children in the same families. They have striven throughout to discover what a particular delinquency means to the delinquent in terms of the expression of his desires or urges. From this point of view they have made practical suggestions for treatment. Only those children were selected who were recognizable as potentially serious offenders or who had been repeatedly delinquent. The authors took one girl to three boys, the ordinary ratio of juvenile court cases, and ruled out the definitely feeble minded. They gave preference to families with a comparable non-delinquent sibling especially where the delinquent was one of twins.

The material was taken from several cities and tested and examined with great thoroughness. The authors discovered that delinquency was very largely determined by the subjective life of the delinquent rather than his environment and that the delinquent is a child with different emotional experiences and attitudes from those of others. His desires for satisfactory human relations, for recognition as a personality for social adequacy, independence, accomplishment, experience, and possessions have somehow been thwarted. He therefore tries to escape from the unpleasant situation to achieve compensatory satisfactions such as adventure and notoriety to bolster up the ego to take revenge and to satisfy instinctual urges and last but not least, to achieve punishment in response to a conscious or unconscious sense of guilt. The ideas of delinquency are always

present to every child, and if they fit the special needs of the individual he becomes delinquent

Treatment based on the discoveries here outlined was very encouraging, and the authors' most important contribution to the subject is a detailed treatment programme, the central idea of which is to provide satisfactory relationships and outlets. Naturally they plead for a reorganization of the whole social environment. It is not surprising that delinquency is a problem in a country where it is so persistently and emphatically represented, in the newspapers and the picture theatres, as an attractive mode of behaviour.

OPERATIVE SURGERY

Operative Surgery. By Alexander Miles M.D. I.L.D., F.R.C.Sd., and D. P. D. Wilkie M.D., F.R.C.Sd. and Eng. Second edition (Pp 631 329 figures 21s net) London H. Milford, Oxford University Press 1936

We welcome a second edition of this manual by Mr Alexander Miles and Sir David Wilkie. The first edition, which came to light in 1933, succeeded the companion volume to the well known textbook of general surgery by the late Alexis Thomson and Mr Alexander Miles. Like its predecessor, the work retains what was useful and attractive in the original companion volume, and omits much that was of academic interest only—for example, such operations as have been designated dissecting room exercises, it also brings up to date the account of surgical practice. Gynaecology is not dealt with. The present volume gives an account of the operations which are being practised to-day by the Edinburgh school of surgery, and both the authors and the publishers are to be congratulated on the clarity of the descriptions and the illustrations, and on the format of the work. In addition to the principal authors coadjutors number seventeen, and are members of the staff either of the Edinburgh Royal Infirmary or of the Edinburgh municipal hospitals.

This is essentially a textbook of operative surgery for the undergraduate and the young surgeon, and as such is one of the best we have read. We should like to have seen the Billroth I procedure shown in Figure 237 as an operation for gastric ulcer, and we think Figure 163 might have been omitted, since the trans sphenoidal operation for pituitary tumour is only of historical interest. The same might be said about Figure 268, which depicts the use of the Murphy button. These are minor criticisms, however, and the new edition should increase the appeal of this already popular work among medical students and their teachers.

CARDIOVASCULAR DISEASE

Die Herz- und Gefässkrankheiten. By Professor Walter Frey (Pp 342 67 figures RM 29 geb., RM 32 60) Berlin J. Springer 1936

This work deals with the subject of disease of the circulatory system from an unusual point of view and the author aims at treating it on a very wide basis. The book is divided into five sections, the first of which is introductory and indicates the general plan. The organs of mesodermal and mesenchymal origin are considered as a pathological unit, and this theme runs through the volume. In later sections the morbid processes which affect tissues with this embryological origin are described. To begin with there is a full description of the development of the heart and congenital defects, but the various types rather lack definition and the diagrams are somewhat out of date. Then follows a review of the changes produced in the heart throughout life by growth and

age, including observations on the relation of this organ to the shape and size of the body—an interesting section and a novel survey. The next part is devoted to indurative lesions—what the author calls the scleroses—such as aortic, valvular, and coronary sclerosis and peripheral arteriosclerosis. Under the second heading the whole subject of heart failure is considered. Atheroma of the aorta and its treatment receives rather an undue amount of space. The section that follows deals with lesions of bacterial and toxic origin, and discusses myocarditis, endocarditis, and pericarditis, as well as arteritis and phlebitis. Finally there is a section on endocrine disorders and neurosis.

By reason of its peculiar approach to the subject the book is hard to read, and there is in places undue emphasis on matters which are of no great clinical importance. The chief value of the work lies in the breadth of view displayed and the stimulating generalizations. A cardiologist will find here much out-of-the-way information, but others may tend to be confused. The bibliographies are not tabulated in the usual way, nor are the references conventionally given, and the index is scanty. There are minor mistakes in English and French. Only half a dozen electrocardiographs are reproduced, and these are small and indistinct.

NOSE AND THROAT DISEASES

Diseases of the Nose and Throat. A Textbook for Students and Practitioners. By Sir StClair Thomson M.D. F.R.C.P. F.R.C.S. LL.D., and V. E. Negus M.S., F.R.C.S. Fourth edition (Pp 976, 386 figures, 29 plates, 45s net) London Cassell and Co 1937

After the lapse of a decade Sir StClair Thomson has produced a fourth edition of his well known textbook on diseases of the nose and throat, this time with the assistance of Mr V. E. Negus. The author states in his preface that more changes have been made than in the second or third editions, but the book appeared to have reached its apogee in the third edition, and with the exception of a new and fuller description of endoscopy the changes mostly appear as variations in matters of detail rather than in essentials.

The principal alteration consists in the complete re-writing of the sections relating to endoscopy, and along with this a number of excellent fresh illustrations are included. This portion indicates very well what can be accomplished by endoscopy in the diagnosis and treatment of disease besides the extraction of foreign bodies. Tumours of the nose and accessory sinuses are now grouped in a chapter together. Although the achievements of Holmgren and Öhngren in Stockholm and of Gordon New at the Mayo Clinic are mentioned, a true perspective of the revolution which these surgeons have effected in the treatment of cancer of the upper jaw and ethmoid is hardly conveyed. Other short sections are devoted to agranulocytosis and to the Plummer-Vinson syndrome, which was first described by Donald Paterson and Brown Kelly. The difficult question of the syndromes arising from paralysis of the last four cranial nerves is clarified by adopting the classification advocated by Burger.

As might be expected, the discussion of tonsils has been revised, though no claim is made to solve the problem and some observations on the technique of their removal are also new. The authors now advocate the use of the Davis gag, a complicated apparatus which has become fashionable in recent years. The drawings illustrate it upside down according to the manner in which it is commonly used. Six pages are still devoted to a descrip-

tion of the properties and use of cocaine, whilst pantocaine, which has almost entirely replaced it on the Continent, receives one line. It must be noted with regret also that some of the more depressing woodcuts and photographs are still retained, and that the names of a number of the authors quoted are either wrongly spelt or are in some way inaccurate. This may not be of great importance, but it shows a slight decline in literary finish. These remarks, however, only serve to indicate the difficulties the authors have had to face in combining the old and the new, and they have succeeded well in their long and arduous task, which now completed will maintain the well-established position of the book for many years to come.

Notes on Books

Sir HENRY M W GRAY has brought together in small compass his views on *The Colon as a Health Regulator* (Macmillan, 10s 6d). The author sees in developmental anomalies of the colon, incomplete migration and fixation in embryonic life the cause of most of the symptoms presented by patients suffering from what is known as "the chronic abdomen," and the basis for many extra-abdominal conditions as widely separated as epilepsy and chronic arthritis. For their removal he advocates a general abdominal overhaul, what he describes as a spring-cleaning with division of adhesions, unravelling of kinks, and fixation of some portions of the colon such as the caecum and sigmoid. The details of the operative procedure are given. After a fairly prolonged abdominal operation the patients get out of bed on the fourth or fifth day and are often able to return to sedentary business at the end of a month. There were four deaths in a series of 205 cases; this does not accord with the statement on the same page that "complete failure to relieve has to be recorded occasionally, possibly in 1 per cent of cases." Other claims, unsupported by figures, may be even wider of the mark.

Medical Morals and Manners by Dr H. A. ROYSTER, is a collection of papers and addresses written and published during the last forty years (London: H. Milford, 11s 6d). The author is an American surgeon with a deep interest in literature, social relations and athletics. The thirty chapters of the book are grouped in five divisions, of which the largest is devoted to surgery, three of the remainder deal with the general aspects of medical practice with athletics and physical fitness, and with hospital staffs while the concluding pages comprise a miscellany including "James Marion Sims" and "The Medical Phrases of Victor Hugo." Dr Royster is a strong upholder of culture in medicine. Will it be considered very old-fashioned if we should suggest that the neglect of the languages and particularly the banishment of Greek may be responsible for our loose thinking and our lack of scholarship? He deplores modern inaccuracy. "We know a great deal but do we know anything very well?" One of the most interesting chapters is "From My Father's Notebook" which includes case reports of difficult obstetric experiences in the eighteen seventies. Also very entertaining and instructive are the short biographies of other old-time country practitioners.

A Manual of Operating Room Procedures is a loose leaf book written by ALMIRA W. HOPPE and LUCILE M. HALVERSON, assisted by the operating room nursing staff of the University of Minnesota Hospitals (London: H. Milford 9s). Dr O. W. Wangensteen in a foreword writes that "Order is Heaven's first law" and that this is also the first mandate of the operating room. It appears to be the theme also of this handbook which is a guide to the efficient conduct of surgical operations regarded from the standpoint of the theatre nursing staff. The book includes instruction in the preparation for and conduct of

operations, and, to add interest to what otherwise might be rather dull lists of the instruments required for particular operations, the purpose of each operation and a brief outline of the steps of its performance are given. We suggest that this interest might be further enhanced in future editions by the inclusion of line drawings showing the position of the patient and other points of special interest. All branches of surgery are considered in this work, which comprises 234 loose pages, an index, and some additional blank pages for making notes such as the requirements for individual variations in technique and the use of specially designed instruments used by certain surgeons. We note that craniotomy and ventricular tap come under general surgery. This should prove a valuable handbook for theatre nursing staffs, and the conception and arrangement are excellent.

Preparations and Appliances

INTERCEPTOR AND REGULATOR FOR CONTINUOUS INTRAVENOUS SALINE

Mr HAMILTON BAILEY, FRCS writes

The piece of apparatus illustrated in the accompanying figure is a valuable addition to the armamentarium for administering continuous intravenous saline. The rate of flow can be regulated with great precision. The large glass bulb



obviates the drip becoming obscured by an accumulation of solution—a constant source of trouble in other patterns of interceptors. The apparatus is made by the Genito-Urinary Manufacturing Co., Ltd. London.

"SEEDLAX"

"Seedlax" is composed chiefly of flax seed and wheat germ. It therefore contains substances which act as an intestinal lubricant and in addition contains vitamins—in particular members of the vitamin B complex. The purpose of the preparation is to act as a mild laxative in cases of chronic constipation; it also provides a supply of the vitamin B complex a lack of which is suspected of being a contributory cause of atonia of the bowel.

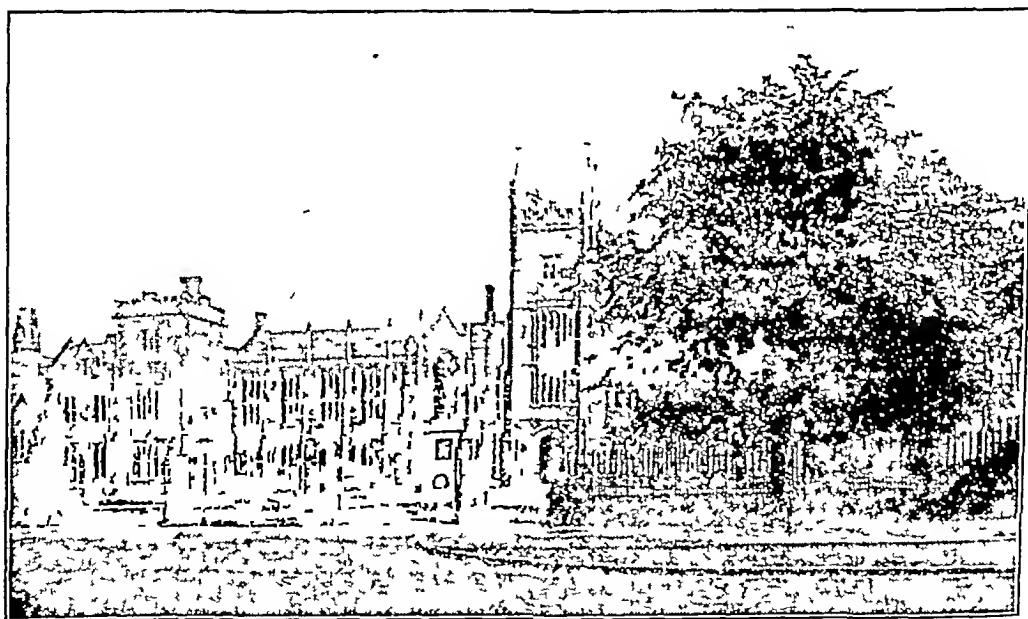
ONE HUNDRED AND FIFTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION BELFAST, 1937

THE one hundred and fifth Annual Meeting of the British Medical Association will be held in Belfast next summer, under the Presidency of Professor R J Johnstone BA MB, FRCS FCOG MP consulting surgeon, Royal Maternity Hospital gynaecologist to the Royal Victoria Hospital and professor of gynaecology, Queen's University, Belfast, he will deliver his address to the Association on the evening of Tuesday, July 20. The Sectional Meetings for scientific and clinical work will be held on Wednesday, Thursday, and Friday, July 21, 22, and 23, the morning sessions being given up to discussions and the reading of papers. The Annual Representative Meeting for the transaction of medico political business will begin on the previous Friday July 16. The full list of officers of the seventeen Scientific Sections the provisional programme and time-table information about accommodation and other details of the arrangements for the Annual Meeting were given in the *Supplement* of May 15. We publish below the third of a series of articles on Belfast and its medical and scientific institutions. The first article appeared on January 30 (p 233) and the second on April 10 (p 766).

THE QUEEN'S UNIVERSITY OF BELFAST AND BELFAST HOSPITALS

The Queen's University of Belfast is the centre of academic life in Northern Ireland. Its record of progress as it approaches its centenary is a reflex of the intellectual life and outlook of the community and of its interest in the arts and sciences. It is an interesting commentary on the relative importance of the towns of Ulster ninety years ago that serious consideration should have been given to the claims of Derry and Armagh as the home

Galway) the affiliated colleges constituted the Queen's University of Ireland. The formal opening took place in 1849, in which year Queen Victoria visited the institution which has since borne her name. From many stand points the times might have been regarded as unpropitious. The shadow of the Great Famine still hung over the country, and a feeling of political unrest brooded over Europe and manifested itself in the wave of revolution



The Queen's University of Belfast

of the projected seat of learning. It is a tribute to the discriminating foresight of that generation that the College which was later to develop into the University was established in what was destined to be the metropolis of Northern Ireland and the centre of its industrial activity.

Queen's College Belfast, was founded by Act of Parliament on the initiative of Sir Robert Peel in 1845. Together with the other Queen's Colleges (at Cork and

which spread over every country, yet the demands for better educational facilities took shape in the midst of these major troubles. For thirty years the Queen's University of Ireland supplied the higher academic requirements of Belfast and Ulster, and numbered among its scholars eminent lawyers, clergymen, doctors, scientists, and administrators. Sir Robert Hart, Sir William MacCormac and Sir Joseph Larmour being of that number. In 1882 the Queen's University of Ireland was

dissolved to give place to the Royal University of Ireland. This was modelled upon the then constitution of London University, being purely an examining body and not responsible for teaching. Arising from various causes a period of acrimonious discussion extending over some thirty years followed, until in 1908, the Irish Universities Act was passed making provision for the establishment of the National University of Ireland (in Dublin) and the Queen's University of Belfast. Thus has evolved the present centre of academic culture and learning in the capital city of Northern Ireland.

The University is situated on University Road about a mile from the city centre with the Botanic Gardens Park (Belfast's most beautiful park) as its next door neighbour. To the original building opened in 1849, many additions have been made, and the staff has been constantly increased. The west front with its massive buttresses and stone facings forms a noble façade and presents an excellent example of architecture in brick. Age has imparted a mellowing touch to the rich Belfast brick which converted the plans of Sir Charles Lanyon the architect, into a reposeful building. Fronted by trim and ample lawns its harmonies of perspective in any combination of light and shade, are a never failing pleasure to the eye, bathed in the glow of the setting sun or in the glamour of moonlight the charm is indescribably deepened.

Growth of Faculties in the University

In 1901 a Better Equipment Fund was inaugurated by the then President of the College (Dr Hamilton). In 1908 under the Universities Act additional grants were made to the funds. These welcome accessions stimulated a development which had been all too slow in providing adequate equipment worthy of the teachers who had been carrying on amidst great difficulties in respect of accommodation and teaching facilities. The intimate contact between university life and the main current of national life which is being increasingly recognized by communities everywhere to-day as of inestimable value had not then been established. Happily Queen's University is now in close relationship with the primary and secondary schools throughout Northern Ireland and the

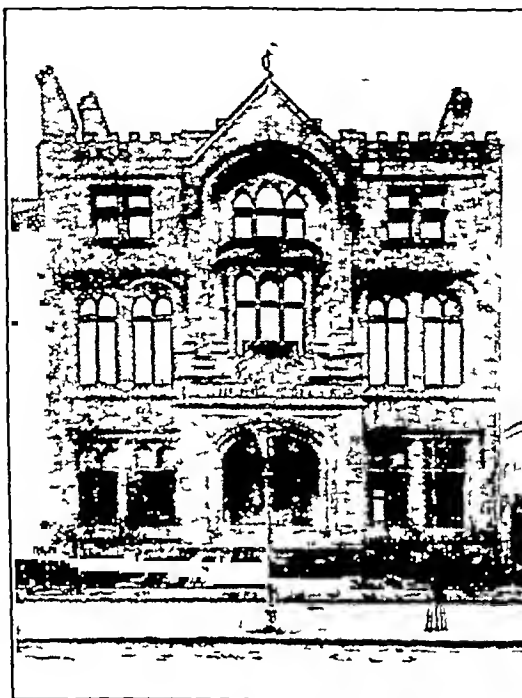
various county borough and county councils have evinced additional interest in the University by providing scholarships and by making grants to University funds. Some years ago the Senate identified the University with the commercial and industrial life of Belfast by recognizing the Municipal College of Technology as a college in which

students might pursue their studies in the appropriate faculty of applied science and technology. In 1924 a faculty of agriculture was established as an evidence of the close relationship between the University and the Ministry of Agriculture and of their common interest in the farming community and their desire to further agricultural training and research work.

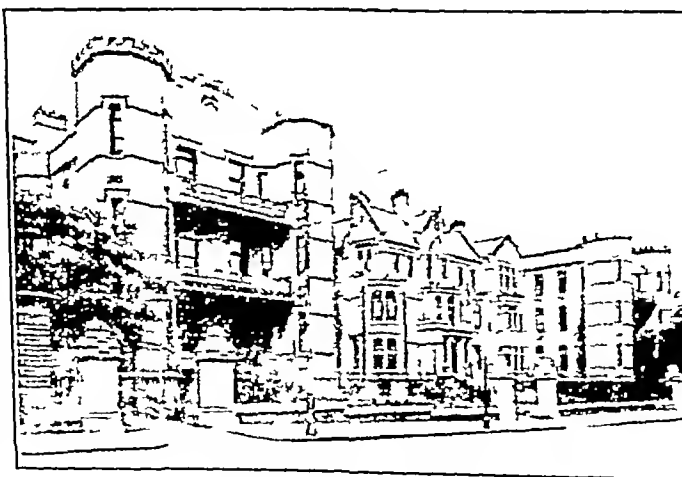
With the establishment of the University in 1908 faculties of arts science medicine, law and commerce were formed. In recent years other faculties have been instituted that of applied science (1921) agriculture (1924) and theology (1926). During the past forty years laboratories have been built additional lecture theatres provided and modern equipment supplied, but the need for larger and more numerous buildings to meet the demands imposed by the increasing number of students is clamant. In 1909 there were some 600 students to-day the number is 1,568 of whom 653 are medical. The

Students Union was built in 1897, and extended in 1908 and again in 1933. The Better Equipment Fund amounted to over £100,000 and provided the sum necessary for the erection of chemistry pathology and physiology laboratories. The grants made on the founding of the University in 1908 made possible further extensions and the creation of the physics laboratories. Sir Richard Livingstone during his ten years as Vice-Chancellor (1923-33) made numerous appeals to the

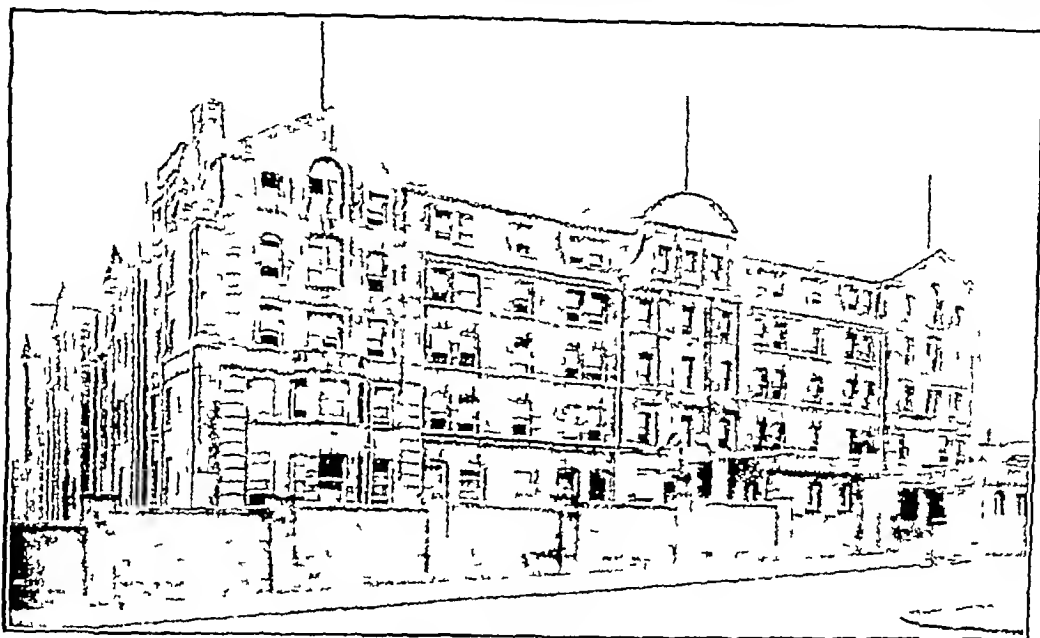
citizens and was untiring in calling public attention to the urgent needs of the University. During his tenure of office the faculty of agriculture was instituted and the admirable agricultural building in Elmwood Avenue erected. Unfortunately in the eyes of the community the University has been regarded in the light of a Government institution bountifully supported by Sir grants. The frequent appeals of the Vice-Chancellor called for to remove this misapprehension and to



The Whitla Medical Institute Belfast



The Mater Infirmorum Hospital Belfast



Royal Victoria Hospital Belfast

attention to the inadequacy of the annual income and paucity of benefactions. In 1930 a University Guild was formed, composed of prominent citizens who are encouraged to interest themselves in the University and its needs. The present Vice Chancellor, Mr F W Ogilvie is carrying on the work so ably initiated by Sir Richard Livingstone, in the hope that the years to come may bring to harvest the seeds which have been sown, and thus help to sustain the development of this centre of learning and research.

The University Buildings

Immediately to the right of the main entrance hall which is contained in the main tower of the west façade, is the Great Hall with its lofty roof and mullioned windows. On the walls is a collection of portraits of past presidents, teachers, and benefactors as well as a reproduction of the famous "St Peter the Martyr" (Titan), the original of which was destroyed by fire in Venice.

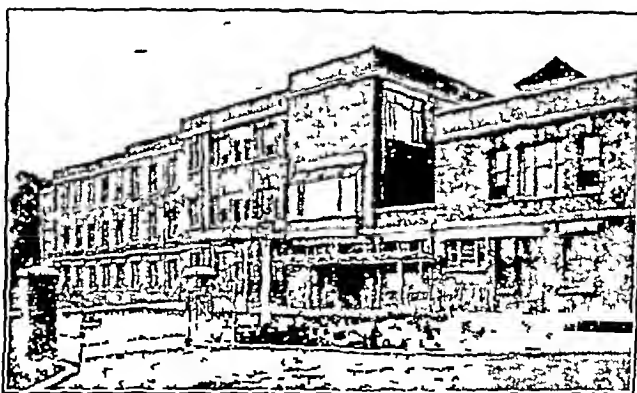
From the entrance hall admission to the quadrangle is gained. Around this are grouped the various buildings, containing lecture theatres, laboratories, museums, etc., of the respective departments.

The medical building, one of the oldest, is at the eastern side, and contains two excellent museums. The anatomical museum houses many valuable specimens prepared by Johnson Symington, in the medical museum are numerous pathological exhibits in addition to a unique collection of specimens illustrating various fractures of bones and development of the human skeleton—a further memorial to the in-

dustry of Symington. On the southern wing is the most recent addition to the University, combining in an architectural masterpiece, two buildings of entirely distinct periods in a scheme which enhances all three. Here is the Senate room, a handsome chamber panelled in natural oak and furnished accordingly.

The library is a detached building on the north side of the University proper, it was erected in 1867 and enlarged in 1914. It contains some 135,000 volumes and manuscripts, including many valuable personal collections presented by interested benefactors. The Students Union is another separate building occupying the north-east corner of the grounds. Built in 1897 it has admirably fulfilled its intended purpose as a social and educational centre.

The increasing number of students necessitated the provision of a dining room the accommodation of which had in recent years been unduly taxed. The Pilgrim Trust came to the rescue, and a handsome new dining hall, built in the Tudor style, was added to the western aspect as a gift from the Trust at a cost of £10,000. The gift was most opportune and the opening in 1933 was the occasion for a characteristic address breathing



The Royal Maternity Hospital

high ideals and lofty purpose by Mr Stanley Baldwin. The Queen's University Contingent of the OTC was formed in 1908, and is provided with a suitable drill hall and parade ground.

Recently the University converted the terrace of houses on the opposite side of University Road, known as Queens Elms, into a hostel for men students. This is but a gesture towards fulfilling what has been a clamant

need for many years, and is the first step in providing men students with a residential hostel similar to that provided for women by the munificence of the Misses Riddell at Riddell Hall

The Medical Faculty

The Belfast Medical School dates from 1818, when lectures were given in the Academical Institution in anatomy, physiology, and chemistry. The school, begun so modestly and unpretentiously, became firmly established largely as a result of the enthusiasm of James McDonnell (a native of the Glens of Antrim). In 1835 chairs of surgery, midwifery and materia medica were added, and in the following year chairs of medicine and botany were created to form the Belfast medical faculty, in connexion with the Academical Institution and the General Hospital. With the establishment of the Queen's College the faculty was recognized by the Queen's University of Ireland, and since then a succession of famous teachers has held the attention of a multitude of students, many of whom were destined in their turn to become famous. James McDonnell, Henry MacCormac (the father of Sir William), Peter Redfern, Alexander Gordon, James Cumming (president of the B.M.A. in 1884), Lorrain Smith, T. H. Milroy, Johnson Symington, Sir William Whitla (president in 1909) and Andrew Fullerton are names not readily forgotten in the realms of medical science and teaching. They are engraved on the records of the Belfast Medical School upon whose roll appear the names of men who played a magnificent part in expounding the tenets of practical medicine and who were conspicuous for the originality of their outlook upon the problems with which they were confronted in their generation.

The medical faculty has always played a predominant part in the undergraduate life of the University. Out of 1,568 students no fewer than 650 belong to this faculty. Of the number who qualify annually only a small proportion practise in Northern Ireland; the majority establishing themselves in England, in the Colonies, and the Services, so that medical Queensmen are found in prominent positions in the Crown Colonies, the Indian Medical Service, the Army and Naval Medical Services, as administrators in State and municipal services, and as heads of departments in the War Office, the Admiralty, and the Air Force.

The Belfast Hospitals

The clinical teaching of students is amply catered for in the various city hospitals. The visitor will be impressed by the facilities available and will perhaps be envious that his days as clinical clerk or surgical dresser are but a memory.

The Royal Victoria Hospital is the largest centre of clinical teaching in Ireland. It owes its origin in 1792 to a dispensary to the enthusiasm of James McDonnell, the debt to whose memory can never be repaid. A few years later a fever hospital was built, and in 1817 the General Hospital was opened in Frederick Street during a terrible epidemic of typhus fever (the victims were carried into the new buildings whose freshly plastered walls were still dripping with moisture and whose stairways had been rendered secure by the overworked carpenters and masons). Many of the older members of the profession in Belfast speak with reverent thoughts of the days in the old hospital in Frederick Street, but the building has recently been demolished and this link with former medical teaching has now disappeared for ever. This General Hospital was enlarged to 180 beds and became the Royal Hospital in 1875. Towards the end of the century it was recognized as being totally inadequate in its capacity and out of date as a hospital for modern needs. The story of the present magnificent institution opened in 1903 by King Edward VII is the record of the enthusiasm and personality of the late Viscountess Pirrie (wife of the former head of the famous shipbuilding firm of Harland and Wolff Ltd.).

The hospital is built upon a site granted by the city corporation. Much discussion took place as to the best situation, but the choice has proved more fortunate than was contemplated by the far-seeing citizens of thirty-seven years ago, because the Royal Victoria Hospital is now the centre of a colony of hospitals which includes the Royal Maternity Hospital, the Belfast Hospital for Sick Children, the Queen's University Institute of Pathology, a Private Patients' Pavilion, and a new Nurses' Home. Work will soon start on further extensions as a memorial to the late King George V. These are all accommodated on an estate of twenty-five acres, formerly occupied by the Lunatic Asylum.

All the wards of the main hospital are on one floor and branch off the southern side of a corridor almost 600 feet long. Each pair of wards is a 'unit' under the control of a physician or surgeon, complete with its own ward kitchen, clinical room, lecture theatre, and operating theatre (in the surgical units), heating and ventilation are by the plenum system. It is difficult to keep pace with the developments of the hospital, but the visitor will be impressed by the progressive outlook of those responsible for the care of the sick and by the onward march of scientific research and treatment. The institution at present has 436 beds, with complete radiological, electrotherapeutic and massage departments, as well as a complete floor in the Queen's University Institute of Pathology close by, where clinical pathology and bacteriology are housed.

The Royal Maternity Hospital

The Royal Maternity Hospital is one of the oldest Belfast charities, having been founded in 1794. The old Belfast Maternity Hospital in Townsend Street carried on for many years under serious disabilities of cramped accommodation and inadequate equipment. It became unsuitable as a teaching hospital for midwifery. Amalgamation with the Royal Victoria Hospital was the dream of the progressive element of the Board of Governors. Fortunately this has come to pass, and now the hospital, while autonomous, shelters under the wing of its stronger partner. The new hospital, opened some four years ago, has attracted widespread interest as a practical conception of a modern maternity hospital, and those interested in hospital building, equipment, and administration will find ample material for study and imitation. The hospital has accommodation for 100 patients, including antenatal wards and a private department for paying patients.

The Institute of Pathology

Adjacent to these buildings and connected with the Royal Victoria Hospital by an overhead corridor is the Queen's University Institute of Pathology. Successful negotiations between University and hospital authorities resulted in the transfer of the department of pathology from the University to the hospital, with the result that the present arrangement typifies the proper relationship and common interest that exist between the two bodies. The building was erected in 1930 on three floors, one for bacteriology, one for pathology, and the top floor for hospital bacteriological and biochemical departments. Each department is generously provided with suites for research workers, and within the building are contained teaching laboratories, lecture theatre, museum for the display of selected specimens (each furnished with a complete clinical file) and a pathology library.

The Belfast Hospital for Sick Children

The Belfast Hospital for Sick Children remains an independent unit, but its close proximity within the grounds gifted by the city corporation entitles it to be included in the description of the hospital colony. It was founded in 1873 as a dispensary with six beds, and was enlarged to a small hospital in Queen Street built in 1879. It is unique in that it is the only hospital in Ireland which devotes itself solely to the care of sick

children Various extensions were made from time to time, but its situation within a very short distance from the city centre limited its development and determined its removal to a more suitable site on the Falls Road The present hospital, built in 1931, has accommodation for eighty four children, and possesses a large out patient department with ample room for future development A recent gift of £15,000 for the provision of a private patients department is an index of the interest with which the hospital is regarded by the beneficent

The Mater Infirmorum Hospital

This is the only other general hospital besides the Royal Victoria under the voluntary system It consisted originally of a house gifted by a former Roman Catholic Bishop of Down In a few years the house was demolished and a handsome hospital was built upon the site In contrast to the sister hospital it is constructed on the pavilion system in a very attractive style The extern department has recently been rebuilt to meet the increasing demands upon its services There is a modern radiological department and laboratory so that the 'Mater' contributes its quota to the clinical teaching supplied by the Belfast hospitals A recent addition is Beechmount Hospice for chronic cases which has brought the total number of beds up to 300 The nursing is carried out under the supervision of Sisters of Mercy, but patients of any religious creed are freely admitted

The Ulster Hospital for Children and Women

This is the only hospital on the County Down side of Belfast It was established in Fisherwick Place in 1873, but was moved in 1891 to Templemore Avenue in the populous working-class district of Ballymacarrett The nucleus of the present hospital built in 1912 at a cost of £10,000, soon proved unequal to the many demands made upon its services Intelligent extensions according to a preconceived plan have been made at intervals until to-day it is one of the most modern institutions It has a large out-patient department for children and women, and the extensions recently opened make available eighty cots for children and twenty beds for gynaecology It is closely associated with the Institute of Pathology and the other teaching hospitals

The Belfast Fever and Mental Hospitals

Those who are interested in fever and mental hospitals should make an effort to visit either or both of these institutions They are established on a 450 acre estate at Purdysburn, two miles from the Malone and Ormeau tram termini and about six miles from the city centre The fever hospital consists of six pavilions under the modern system of construction and administration The Belfast Mental Hospital occupies the larger portion of the estate, the villa system having been adopted with great success from the points of view of treatment and organization

The Ophthalmic Hospitals

There are two ophthalmic hospitals for the treatment of eye, ear, and throat conditions (in addition to the appropriate departments in the general and children's hospitals) The Belfast Ophthalmic Hospital founded in 1867, in Great Victoria Street, like all the Belfast hospitals, has been enlarged in recent years and now has modern theatres, up-to-date equipment, and a clinic for the treatment of squint The Benn Ulster Eye, Ear, and Throat Hospital in Clifton Street was built in 1874 It carries on a valuable service on modern lines, being one of the first of the Belfast hospitals to provide facilities for paying patients

Other Hospitals

The Samaritan Hospital for Women (Lisburn Road) was the first Belfast hospital to undertake extensions after the war It was established in 1874 being a further manifestation of the interest and generosity of the Benn family The Forster Green Hospital for Diseases of the Chest and Tuberculosis is beautifully situated at Fort-breda just beyond the Ormeau Road tram terminus The present institution was provided by the late Mr Forster Green in an estate of forty five acres Additional beds have been provided from time to time to meet the demands for modern treatment A nurses home to accommodate increased staff has been added within recent years and the equipment has been supplemented by the addition of modern aids to diagnosis and treatment

The Municipal Sanatorium at Whiteabbey and the Hospital for Surgical Tuberculosis at Graymount occupy a sheltered site beneath the rugged mass of the Cave Hill They are situated on a gentle elevation with a splendid view of Belfast Lough, and provide facilities for the most modern treatment of tuberculosis which can be available convenient to an urban area

The Belfast Union Infirmary

The Belfast Union Infirmary, controlled by the Board of Guardians, is utilized for auxiliary clinical teaching The children's department has been reorganized so that the new buildings provide every modern aid towards diagnosis and treatment The Jubilee Maternity Hospital opened in 1935, is a further tribute to the progressive spirit of the Board in providing a modern maternity hospital which compares very favourably with its counterpart the Royal Maternity Hospital

The Whitley Medical Institute

The story of the Belfast Medical School would be sadly incomplete without mention of the name of Whitley Members of the Association who visited Belfast in 1909 will recall the memorable year marked by the presidency of the late Sir William Whitley, but the school will ever remember his name for his contributions to medical literature and for the munificence of his gifts The Whitley Hall, recently built at the Methodist College and a still larger hall to be placed in the grounds of the University are but further expressions of the already magnificent generosity displayed in providing the Ulster Medical Society with its Medical Institute On Sir William's death, three years ago, the designation of the Institute was changed to bear his name, and it has now become familiar to many visitors (by correspondence) as the headquarters of the local executive committee for the forthcoming annual meeting It is the home of the Ulster Medical Society, who very generously placed the building at the disposal of the committee Its handsome library has been the centre of the activities of the past weeks and has proved an ideal venue for the work and meetings of the various committees

The Ulster Medical Society dates from 1862, having been formed by the amalgamation of the Belfast Medical Society (founded in 1806) and the Clinico-Pathological Society (founded in 1853) It numbers many famous names among its presidents and fellows, past and present The Institute was the gift of Sir William on the occasion of the annual dinner of the society in 1901 It contains a library committee rooms lecture theatre, billiard room, and steward's quarters The lecture room seats 200 and here the annual dinner is held as well as meetings of the Ulster Medical Society the Branch and Division of the British Medical Association and other medical bodies

One of the features of the Institute is the stained glass panel erected over the fireplace in the library It is a

memorial to the late Dr William Smyth of Burtonport (Co Donegal) The Countess of Dudley (Vicereine of Ireland at the time), in unveiling the window, paid a glowing tribute to the man who, when all others refused to help, carried food and medicine to the people of the typhus stricken island of Arranmore, and who eventually died of the fever contracted from the patients he had succoured. Helping him was Dr Brendon McCarthy, both of whom, Lady Dudley said, were everyday heroes, totally unconscious of having performed any unusual act of heroism.

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THE TUBERCULOSIS ASSOCIATION

PROVINCIAL MEETING AT MANCHESTER

The annual provincial meeting of the Tuberculosis Association was held in Manchester from June 10 to 12 under the presidency of Dr S ROODHOUSE GLOVE. The meeting had been arranged jointly with the North Western Tuberculosis Society. Papers were read in the lecture hall of the Central Library, and a visit to the Manchester Sanatorium at Baguley, where members were entertained by Dr H Trayer, the medical superintendent, took place on Friday afternoon. In the evening the annual dinner was held at the Midland Hotel. The Lord Mayor and Lady Mayoress of Manchester, and Professor J S B Stopford, Vice Chancellor of the University of Manchester, and Mrs Stopford, were among the many distinguished guests of the association.

Collapse Therapy

The first subject for discussion was how long should collapse therapy be delayed. In opening Dr GEOFFREY MARSHALL said that the production of an artificial pneumothorax was only contraindicated in cases in which the lung volume was very deficient, as in emphysema, and when there was a large superficial cavity with adherent walls. Infiltration of the opposite lung might not be a contraindication, but it should at least cause some delay. Extrapulmonary complications such as tuberculosis of the larynx or intestines were indications rather for the acceleration of artificial pneumothorax treatment.

Phrenic interruption by crushing or by evulsion rarely caused a serious reaction, and was applicable either with an artificial pneumothorax or in those cases in which it was impossible to induce a pneumothorax. Apicolysis and plombage he described as having waxed and waned in the approval of chest surgeons. He believed that this operation was still practised mainly because it produced pretty x-ray pictures—which bore no relation at all to the patient's clinical condition. Thoracoplasty was often delayed until all the less drastic methods had been tried and had failed. Patients regarded it as a last line of defence—a view which was probably correct. It was a severe operation which should never be performed while there was any active or increasing disease process in the lung. It should be undertaken only after prolonged medical treatment had raised the patient's resistance to infection. A well timed intervention made it possible for Nature to heal cases in which the damage might otherwise have been considered irreparable.

Mr H MORRISON DAVIS discussed the same problem from the surgical point of view. He said that when thoracoplasty proved successful in obliterating lung cavities then the case was little doubt as to the permanence of the cure. But after partial thoracoplasty recurrence in a lower lobe was possible and did occur. The relief of symptoms afforded by any form of collapse therapy—though giving a false sense of security which would lead the

patient to take unjustifiable risks. That rest in bed was the basis of all treatment, and that there was no definite order in which to apply the various medical and surgical methods of treatment, were, he believed, axiomatic. The surgeon should insist upon pre-operative rest in bed for at least six weeks. But it was dangerous to wait too long, for there might be an extension of the disease to the other lung which would completely contraindicate any immediate thoracoplasty. On the other hand, in the period of waiting spontaneous healing might, in rare instances, take place. He believed that in any case in which an artificial pneumothorax was shown to be inefficient, and in which adhesiolysis was not feasible, thoracoplasty should be undertaken as soon as possible.

In an interesting discussion on these two papers Mr J E H ROBERTS said that he and his colleagues at the Brompton Hospital in the past had done eighty-four consecutive thoracoplasties in favourable cases and all were discharged well. In a more recent year, when many unfavourable cases were operated on, their mortality was 14 per cent. He believed that the only real test of the efficiency of surgical collapse was the increased expectation of life which could be offered to patients who would otherwise die. In the course of further general discussion Dr MAURICE DAVIDSON, Dr GILMOUR, Dr JAMES WATT, Dr G T HERBERT and Dr P J L DE BLOEME took part. The value of repeated sedimentation tests and of the Schilling test were considered at some length, as was the possibility of gastric complications following left-sided phrenic evulsion.

Bronchiectasis in Pulmonary Tuberculosis

With Dr G JESSEL in the chair Mr J E H ROBERTS read, and illustrated with lantern slides, a short and provocative paper on bronchiectasis in pulmonary tuberculosis. Mr Roberts said that all patients who were classed as cases of chronic fibroid phthisis and who were producing each day three ounces or more of sputum were really suffering from the effects of bronchiectasis. Massive collapse due to obstruction of a bronchus by a blood clot might abruptly follow a severe haemorrhage. The patient might even feel his heart being displaced. Unless there was a rapid re-expansion bronchiectasis would develop. Haemoptysis was more common in bronchiectasis than in tuberculosis, and tended to be more severe. Bronchiectasis was best diagnosed by injecting lipiodol into the trachea and taking a bronchogram. He had never seen any ill effects follow injection into a tuberculous lung, and in at least one American sanatorium bronchograms of tuberculous patients were taken as a routine.

Pleural Effusions after Thoracoscopy

Dr O M MISTAL of Montana, Switzerland, in an interesting paper on this subject, said that pleural effusions were very rare after a simple thoracoscopy, but if they occurred they might be sero-fibrinous, haemorrhagic, or purulent, and appear early or late. Thoracoscopy with adhesiolysis improved the prospects of artificial pneumothorax therapy. Effusions were usually small after thoracoscopy alone but were often large after the division of adhesions. Their appearance might be due to defective sterilization, trauma to pleural tubercles or the freeing of bacilli after cauterization of an encapsulated adhesion containing the prolongation of a cavity in 30 per cent of cases they were said to be due to haemorrhage caused by the anaesthetic. Haemorrhagic effusions usually resolved but occasionally went on to form an empyema. The more rapidly an empyema appeared after the operation the worse was the prognosis. It was important to free all the adhesions because the complication was much commoner after incomplete pleurolysis. In the treatment of empyema he advised repeated aspiration and if necessary wash-outs. Up to four pints of oil might be injected into the pleural cavity in order to create an artificial pneumothorax. For second

infected purulent effusions he described and demonstrated a method of direct ultra violet irradiation by means of a small electrode introduced into the pleural cavity. This instrument which he had devised had a bactericidal effect, and seemed to assist the healing of the tissues. He thought that the complications of adhesiolysis could generally be avoided by good technique and a suitable selection of cases. Their occurrence did not in any way diminish the value of thoracoscopy and pleurolysis which had he believed, improved considerably the results of artificial pneumothorax therapy.

Dr S RODDIOUS GLOYN suggested that the parietal pleura perhaps played a greater part in the formation of exudates than did the visceral pleura. Pleural symphysis in the absence of pleural effusion was commoner in the pneumoconioses than in other conditions. Dr JAMES CROCKET believed that pleural effusions were best treated by injecting air every fourteen days to maintain pressure and prevent adhesions. After aspiration he thought it important to wash out the pleural cavity with acriflavine, 1 in 2,000 to 1 in 5,000 solution.

In reply, Dr MISTAL explained that though he had devoted his lecture to the complications of thoracoscopy they were actually infrequent. He gave a series of statistics showing this and indicating how the majority of thorascopies were effected without incident.

Unilateral Pulmonary Tuberculosis

On June 11 Dr DE BLOEME of Laren, Holland, gave a paper on the treatment of unilateral pulmonary tuberculosis. He said that of 1,260 patients whose records he had analysed 12.6 per cent were admitted to his sanatorium for recent pleurisy with effusion, 52 per cent for bilateral pulmonary tuberculosis, 4.6 per cent for extrapulmonary conditions, and 22.1 per cent for unilateral pulmonary tuberculosis. Tubercle bacilli were found in the sputum in 59.5 per cent of these cases of unilateral pulmonary tuberculosis. All his patients were kept in bed until sputum tests had remained negative for a full three months. In the last five years he had seen 166 cases of unilateral pulmonary tuberculosis, of these, 101 were treated with collapse therapy. Sputum which had been positive changed to negative in 75 per cent of patients treated conservatively, and in 74 per cent of patients treated by collapse therapy. He believed that it should be possible to diagnose some 25 per cent of all cases of pulmonary tuberculosis in the unilateral stage of the disease. Dr De Bloeme showed some interesting analyses of the effects of varying forms of treatment. In all his cases the duration of treatment before working capacity was fully restored was as a rule from eighteen to twenty eight months. He then discussed a series of lantern slides of tables indicating the average periods of stay in hospital in cases with or without cavities, and treated either conservatively or by collapse therapy.

Dr FREDERICK HEAF, Dr EDWARDS and Dr FLETCHER took part in the discussion. Dr Edwards said that an experience of 1,300 phrenic evulsions had convinced him that this operation alone had no advantage over artificial pneumothorax, but when combined with pneumothorax it was of great value. Figures taken from 1,900 cases showed that of those who had had a complete artificial pneumothorax, 60 per cent were alive at the time of the follow-up study, whereas of those who had had in addition a phrenic evulsion 90 per cent were alive. Dr DE BLOEME replied briefly to the discussion, and in answer to a question said that there were at present 37,000 sanatorium beds in Holland.

The Tuberculosis Problem

Five speakers opened a most interesting debate on difficulties in dealing with the tuberculosis problem. Professor A RAMSBOTTOM speaking as a consulting physician, pointed out the importance of certain vague symptoms,

such as undue tiredness, anorexia and loss of weight. Dyspeptic symptoms might mask the real diagnosis. In the case of a patient who complained of spitting blood but had no definite signs, he made it a routine to ask if the blood was intimately mixed with the sputum, and if the patient had coughed and spat blood, this indicating a pulmonary origin, or if he had felt something welling up, in which case the nasopharynx was the probable source. The diagnosis once made, it was not difficult as a rule to persuade the patient to go to a sanatorium. He thought that acute lesions in the young always demanded sanatorium treatment whereas chronic lesions in the middle aged might often be treated effectively at home, by rest in bed. Another problem was presented by the patient who had just returned from a sanatorium and needed advice as to when he should start work. There was always a danger of converting a sick worker into a healthy loafer. Prognosis he thought, should always be influenced as much by the family history, the patient's temperament and habits and the conditions under which the disease was contracted as by the purely clinical findings.

Dr W F JACKSON said that he was a general practitioner working in an industrial region which was classed among the special areas. His main difficulties were those arising from the economic circumstances of his patients. One of his difficulties lay in persuading young people to go to a sanatorium for observation when they were in what might be described as the pre-clinical stage of tuberculosis. Another difficulty was that patients still disliked being notified as cases of tuberculosis. Many firms closed their doors to tuberculosis suspects, and patients knew that if they were notified as tuberculous their livelihood might be endangered. He thought it was still true to say that the working classes could not afford to be ill. The public did not realize how greatly the treatment and prognosis of tuberculosis had improved in recent years, and a great deal of educational work remained to be done. The majority of patients returned from sanatoria with their disease quiescent and they were often anxious to return to work. Unfortunately a too early return to the environment which had helped to produce their condition often resulted in prolonged invalidism. The dietary that these patients needed was often not available simply because they could not afford it.

He was often questioned by tuberculous patients as to whether they might marry, and if so whether they might procreate. The question was always difficult, because the answer to it was never appreciated by the patients, and no amount of advice seemed to diminish 'the second urge of those who live in already overcrowded and squalid areas'. He knew that the tuberculosis death rate was falling, but he was certain that the rate of invalidism was rising. A drastic rise in the standard of living of the poorer patients was necessary before tuberculosis could possibly be brought under control.

Dr A DOVE CORMAC, medical superintendent of a mental hospital, said that in the five years before the war the average tuberculosis fatality rate among his patients was 9.5 per 1,000. In the last five years it was 1.2 per 1,000, which compared favourably with the figure for the general population of 0.8 per 1,000. Mental patients either could not or would not co-operate, and so diagnosis was only possible by keeping regular records of weight and temperature and if any appreciable variation was noted examining the patients by x-rays and perhaps investigating the faeces for tubercle bacilli. Dr Dove Cormac then went on to give certain figures which bore out the criticisms he made of mental hospitals generally with regard to the poor dietary given to patients and the lack of laboratory facilities and of accommodation for the segregation and treatment of tuberculous mental patients.

Dr R E LANE spoke as medical officer to an industry which included both large and small factories. He said that the chief difficulties in dealing with tuberculosis were economic and environmental conditions which made patients reluctant to go for treatment, and perhaps even

more reluctant to complete it. The patient feared the possibility of losing his job, the sanatorium stigma and the sanatorium routine. Propaganda and education were much needed. When the patient had returned to work he must be given a real job and not a specially created one if a healthy independence and satisfaction with the work done was to be maintained. In the case of those patients who had returned from sanatoria there should be no shift work, no night work, and no overtime. A tuberculous patient needed subsidizing until he was completely rehabilitated. He thought that there should be a closer liaison between the tuberculosis services and industry. In this country it was the smaller firms who employed more than half the people engaged in industry, and since they had no medical officers, propaganda and the education of both employers and employees must come from the tuberculosis services.

Dr D. P. SUTHERLAND, speaking as a tuberculosis officer, said that a close knit organization, with one person in charge of all patients from the stage at which the diagnosis was made up to their return to work, was necessary. He believed that much of the fear of tuberculosis was due to a half knowledge fostered by the lay press. Increased institutional accommodation was vitally necessary in order to reduce the waiting lists. Knowledge that treatment would promptly follow would reduce appreciably delays in diagnosis and notification.

In the discussion on this subject Dr H. TRAYER, Dr DAY and Dr O. M. MISTAL took part.

The Tomograph

Dr J. B. McDougall pointed out that the bony structures of the thoracic cage had always made visualization of the lung difficult. Stereoscopic radiology had helped to resolve this difficulty but only to a limited degree. Tomography revealed with clarity lesions which even stereoscopically were difficult to define. The theory of tomography was simple. Both tube and film were moved about a fixed point. This movement blurred and effaced the layers above and below the fixed point and gave as it were a sectional radiograph. Unfortunately this simple technique was applicable only to small fields. For larger fields movement must be in two axes and therefore a complicated apparatus was necessary. The number of tomographs which might be taken was limited only by the depth of the patient's chest, but in actual practice three were usually sufficient. A ventral one was taken at a depth of 7 cm. from the front of the chest, a median one at the level of the hilum of the lung and a dorsal one at a depth of 7 cm. from the back of the chest. If additional ones were necessary then they were spaced at intervals of 2 cm. because the depth of the layer represented in the tomographs was about 2 cm. An exposure of one second gave optimum results with as a rule a 6 kW tube for frontal tomographs and a 10 kW tube for lateral tomographs. The thickness of the section represented varied inversely with the size of the arc of movement. Dr McDougall then showed a series of tomographs which revealed cavities and processes not shown on the straight antero-posterior radiograph and gave a very exact picture of the size and extent of systems of cavities. Dr McDougall concluded by saying that clinical experience of tomography was as yet very limited but at the moment tomography was of most value in cases of pulmonary tuberculosis. In reply to a brief discussion he explained that up to the present he had taken only some 400 tomographs of just over 100 patients. In 20 to 30 per cent of these cases the tomographic findings had made the surgeon hold his hand while otherwise he would have operated.

cases which might otherwise be regarded as hopeless. In mild cases a sanatorium regime often produced good results but where there was a cavity on one side, with pyrexia, an artificial pneumothorax should be induced. He thought that the time element was much more important in children since their powers of resistance were so much less than those of adults. Artificial pneumothorax should always be considered in epituberculous cases, though they usually did quite well without it. In cases with more extensive adhesions, however, a pneumothorax should be induced as soon as possible, delay of even a month might be disastrous. Most of the symptoms of pulmonary tuberculosis in children were due to toxæmia, and measures which would reduce that toxæmia were always justified. He usually treated the side with the most marked signs and often found that the opposite lung cleared up very quickly. It was essential to gain the child's confidence to carry out the operation in a familiar room rather than in a theatre, and to tell the child the truth and not delude him into thinking that the operation would not hurt at all. In from 30 to 40 per cent of the children he had treated an effusion developed. It was left alone unless it became very large. Experience seemed to show that a partial collapse and small refills were just as effective as a complete collapse maintained by large refills. He concluded by suggesting that in any case of pulmonary tuberculosis in a child artificial pneumothorax therapy should at least be considered. A lengthy discussion to which he replied, followed Dr Agassiz's paper. Finally, an enjoyable meeting concluded with the discussion of a series of problem cases which were described by Dr E. H. A. PASK and Dr G. JESSEL.

E. Karpelis (*Münch. med. Wschr.* April 2, 1937, p. 529) states that an increasing number of patients come to the Institute of Medical Cosmetics to have tattoo markings removed. These are deeply embedded in the skin. On microscopical examination the epidermis is seen to be free of particles of colour, which are visible in the deeper layers of the corium in the cellular tissue beneath the skin and in the neighbouring lymph glands. Superficial methods of treatment such as irritant plasters and ointments, re-tattooing with white enamel powder, ultra violet rays and decortication of the superficial skin layers are never successful. Agents in which dosage cannot be regulated such as carbon dioxide snow, electrolysis, scalding with steam, and chemical decorticants, are too variable in their action to be efficient and often do more harm than good. The author advocates excision as the method of choice. Small markings may be removed under local anaesthesia at one sitting, larger areas may be dealt with at several sittings, leaving a fine scar the origin of which cannot be suspected. In cases in which excision alone is impossible for cosmetic reasons it may be combined with one of the following methods. (1) With the help of the galvano-cautery the epidermis is removed, after which the colouring particles can be dealt with. It is advisable to go from 1 to 2 mm. beyond the actual outline of the picture in order to ensure success. (2) A rasp may be used to remove the superficial layers to the cutis propria. A sharp spoon similar to that used for chalazions or a small lancet can then dig out the pigment nodules enmeshed in the underlying cellular tissue. (3) Wederhake's method of undercutting the skin and pinning the flaps to a sterilized board and needling the pigment deposits through to the epithelial side is often advantageous. (4) The skin may be scarified and powdered potassium permanganate rubbed in. Both scarification and rubbing must be energetic and hæmorrhage must be dealt with. A dry dressing is applied and in ten to fourteen days the scab falls off. (5) Vario's method is useful in similar areas. A petroleum layer is made round the tattoo markings. The area is moistened with concentrated watery tannin solution and needled. A silver nitrate pencil is then used and the area covered with powdered tannin which finally goes black.

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THE SECOND-BEST

Sir Kingsley Wood has earned and established a reputation as an energetic and efficient administrator. He can be relied upon always to stimulate and enlarge the activities of whatever Department of Government he may be in charge, and to secure for it a degree of public attention and appreciation which other Departments may either envy or desire to escape. In the extensive general review of the work of the Ministry of Health which he gave to the House of Commons last week—a report of this speech appears in our Parliamentary Notes—he almost overwhelmed his audience with a mass of facts and figures relative to the varied work of the Ministry, and undoubtedly produced an impression of progress in most directions which, though not escaping some shrewd criticisms, pleased the House as a whole. The Minister's sincere interest in the problems of his Department and his enthusiasm towards the accomplishment of its aims fully deserve the recognition they have received, but some disquieting features of recent health administration should not go unnoticed amidst the general applause. There is a proverb which tells us that "the good is the enemy of the best," and though, like most proverbs, it may have only a limited application, the truth it embodies may be of the most vital moment and is nowhere more likely to be so than in the sphere of health.

In regard to housing the figures given by Sir Kingsley Wood may be impressive, and they will be quoted with effect from political platforms to uncritical audiences, but it can scarcely be denied that the quality, in respect of both structure and arrangement of large numbers of the houses delivered is unsatisfactory: that far too few of them are available for letting to working-class families at rents within their means and that the amenities and even conveniences of life are lacking from most of the new building estates, which present but a drab prospect to inhabitants and onlookers alike. Slum clearance and mitigation of overcrowding may progress, but it is most disappointing that the Minister should have to say that "when the present programme has been carried out I hope we shall be able to improve the present overcrowding standard." This can only mean that he is at present content, or compelled to accept a standard which is in great need of improvement.

In other departments of the Ministry's work there have recently been clear indications of a self-congratulatory acquiescence in the second best, and this in matters in which the medical profession has very direct interest and has an abundant claim to express an authoritative opinion. In regard to maternity, piecemeal legislation and administrative action are still allowed to hold the field and methods which should be national and centrally directed are left to the discretion of a variety of local authorities, many of which may be unable or unwilling to implement them or may do so in undesirable fashion. A suggestion for the establishment of local lists of practitioners who may be called upon by midwives, on principles which will be resented and combated by the medical profession and which can produce only meagre effects, is apparently still being preferred to one offered by the profession itself which the experience of that profession shows will be much more efficient in providing the best service. In regard to ophthalmic benefit for insured persons, the Minister dis regarding the opinion of a Royal Commission and two Departmental Committees, has now officially established a method of recognizing medically unqualified persons as fit to deal with eye conditions, involving at least a 35 per cent risk of the most serious consequences to insured persons as a body whereas there was a professional machinery at his disposal free from that risk. With regard to national health insurance practice in general he has presented, by both written and verbal evidence, a picture of what he ostensibly regards as a high standard of practice to be accepted under that system, which the general body of practitioners can describe only as greatly understated, both in nature and in scope. Once more, if this ideal of the second-best is to be accepted as that which is expected and paid for, it is to be feared that in many cases it is what may be given, in spite of the fact that most medical practitioners are happily content to fulfil something more than their strict obligations.

In the course of his survey Sir Kingsley Wood said that "although we have the finest social services in the world they are not yet fully utilized," and announced a coming propaganda campaign directed towards their extended usage. The medical profession is not unsympathetic towards such a campaign—with some provisos. May it not be that among the reasons for this lack of full appreciation of what certain publicly provided clinics offer is the fact that these clinics sometimes give only the second best, and that, since as at present conducted some of them tend to cover a field alternatively provided for through the general practice—a discerning and independent "ic" "at matters prefer this

least as satisfactory? At all events it is to be hoped that in the coming campaign it will not be forgotten that in pursuit of the national health it is not less efficacious to urge the public to seek early and skilled advice through the practising doctor than to urge them to do this through the municipal or county clinic. The profession will agree with the Minister that "the fight for good health cannot be successfully conducted with a limited choice of weapons on a narrow front." The sentence with which he concluded his speech is not without significance in this direction to-day. "If possible," he said, "we must broaden our front and deal not only with the specific diseases of the individual, but with the wider conditions of environment and occupation of the people." It has long been supposed that if these two activities are to be contrasted it is the latter which is the primary and principal concern of the central government department and of the local authorities. To have it now presented to us as a sphere to which attention should be directed "if possible" is more than a little astonishing. A well arranged display of the second best may make a good show. It may even be worth while, and Sir Kingsley Wood can be relied upon to make it as good as possible, but it is a poor substitute for the best, especially when that best is now in many directions attainable and it is only too likely to hinder the early attainment of that best.

OVERDOSAGE WITH VITAMIN D

A recent paper by Steck and others from Chicago¹ throws further light on the effects of vitamin D overdosage. In it are summarized the effects of massive doses on sixty five dogs and 773 patients. The authors have been particularly interested in the use of massive doses of vitamin D in such conditions as hay fever and asthma and are at pains to answer the criticism that such doses are harmful. There is now no question that at a certain dosage even pure crystalline vitamin D is lethal to man and to animals. There seem to be differences between various species, the rat being highly resistant and the rabbit very susceptible to the toxic effects. It is suggested that man shows about the same degree of susceptibility as the dog. Between individual dogs there appeared to be wide variation in resistance to the toxic effects, but all the dogs apparently survived doses of 20,000 units per kilogramme indefinitely without recognizable intoxication. The death of a man is recorded which was undoubtedly the result of overdosage of a concentrated solution of purified ergosterol, a doctor administered to him 2,000,000 units daily for

eighteen days—that is, 18,000 units per kilogramme, or ten times what he had intended to take. Among the 773 subjects treated with massive doses twenty had received over 15,000 units per kilogramme, and in four of these there were some manifestations of toxicity. Of the large series treated with doses between 3,000 and 5,000 units per kilogramme 4.5 per cent showed symptoms of toxicity. Five cases are recorded in which symptoms followed doses of between 1,500 and 3,000 units per kilogramme, but the authors do not regard these five as true examples of vitamin D toxicity.

The commonest symptoms of overdosage in adults are polyuria, nausea, vomiting and loss of weight. Pathologically there is cell injury followed by deposition of calcium, the organ most seriously affected being the kidney. Although they recognize the severity of the toxic effects, Steck and his fellow-workers feel that, provided the patient is under observation and the vitamin is withdrawn or the dose reduced as soon as symptoms appear, the continuation of this treatment is justifiable. They contend that "the burden of proof now rests on those who maintain the undesirability of the use of this form of therapy." To those who believe that the first essential of any treatment is that it should do no harm this reasoning looks rather naïve. The evidence that massive doses of vitamin D are of any value in arthritis, asthma, or hay fever is so flimsy that the burden of proof would seem to rest on those who advocate so unphysiological a method of treatment. The occurrence of toxic symptoms with massive doses is, of course, no argument against the legitimate use of vitamin D along physiological lines. Unfortunately the margin between the therapeutic and the toxic dose in some infants is not very wide. This subject was discussed by L. J. Harris² a few years ago. He recommended as a prophylactic dose 250 to 500 units, increasing up to 1,500 units at 1 year, and thereafter 1,500 units a day. Since then two interesting cases have been reported, one by Thatcher³ in which the death of a child aged 11 months was thought to result from overdosage of vitamin D, and one by Moncrieff⁴ in which florid rickets developed in a child of 17 months who was presumed to have had an adequate intake of vitamin D. In neither instance, however, is it possible to assess from the data given just how many units of the vitamin had been administered. In Thatcher's case the maximum dose would appear to have been 600 units a day, but this had been administered throughout the summer and in addition to two treatments with a mercury vapour lamp. In

Monierieff's case, if the particulars given were correct, the child had been having close on 4,000 units daily. That both these cases are due to some unusual abnormality is indicated by the experience of Shelling and Hopper¹ in the treatment of several hundred patients over a period of six years. During this time they found that 1,125 international units of vitamin D daily in the form of viosterol was effective as a prophylactic dose for all full term infants. The only exceptions were premature, rapidly growing infants, to whom they considered it was advisable to give up to 4,500 units for the first four months of life, subsequently reducing the dose to 1,125 units. In the treatment of rickets they found that the optimum curative dose was 4,500 units per day, and that doses above this did not increase the rate of healing. Although in many cases they had prescribed up to 13,500 units daily they observed no cases of toxicity. Thatcher lays stress upon the fact that his patient had received vitamin D throughout the summer and had had two treatments with a mercury vapour lamp. There is no way of assessing the amount of vitamin D formed under the influence of sunlight, but the frequency of rickets in the sunny climate of Baltimore, where Shelling and Hopper did their work, suggests that it is not considerable. Their work would seem to go a long way towards establishing the optimum dose for children which should be at least 1,125 units and never more than 4,500 units. It is most desirable that all vitamin D preparations should be labelled and prescribed in terms of international units.

SURGICAL TREATMENT OF SCLERODERMIA

Within two years two new periodicals devoted to surgery have appeared: first, the *Journal of the International Society of Surgery* published in Brussels and now an American monthly with the title of *Surgery*. This journal is published at St. Louis and in a preface Dr W. J. Mayo states that in the great tract of country between the Rockies and the Alleghenies *Surgery* will become to some extent at least, the organ of clinical surgery of the Middle West and yet it will not be local in any respect, but an organ of the world's surgical thought. He believes that it will fulfil a useful purpose by stimulating the younger men to work. With these new journals two more conduits have been provided for the great flood of contributions to the science and art of surgery and while these will add to an outflow which already causes some concern to those who fish the reservoir or the channels which lead from it, time will show what kind of fish select these new channels and whether the channels themselves will open up and develop or become choked with weeds.

The first paper in the first (January) number of *Surgery* opens as follows: "The ideal and trend of modern surgery may be characterized by the continuous search for a more ratiocinative comprehension of the less obvious alterations in physiologic functions consequent to the more apparent anatomicopathologic processes." This is a formidable opening but it introduces an interesting paper from the clinic of Professor René Leriche at Strasbourg. The subject is the surgical treatment of scleroderma. Scleroderma is defined as a condition of sclerosis, induration and pigmentation of the skin which may be either localized or generalized, and may be associated with asthma, digestive disturbances, arthritis, muscle atrophy, or other symptoms. Because of the resemblance of certain cases in their initial stages to Raynaud's disease and the belief that vasomotor disturbances are important as an aetiological factor, sympathectomy has been tried for the condition. Since 1924 Leriche and his associates have operated upon thirteen cases which they report in detail. They consider that some degree of improvement followed the operation in approximately two thirds of their patients. The most suitable cases for sympathectomy are those which show pronounced vasospastic phenomena especially when these precede the cutaneous manifestations. In generalized advanced cases sympathectomy is of little or no avail. Leriche and his co-workers comment on a hypercalcaemia which they find in some cases and believe that parathyroid dysfunction is sometimes present. Scleroderma they believe, should be looked upon as a chronic disturbance of parathyroid function evolving over a long period of time so that when the patient is finally observed manifestations of hypercalcaemia may be absent. They claim that cutaneous changes clinically and histologically like those of scleroderma have been experimentally produced in rats by injections of parathyroid extract, and that in man osteoporosis is present in some cases, the hypotonia and asthma occasionally observed are also suggestive of disturbance in calcium metabolism and of hyperparathyroidism. Since 1931 thirteen cases of scleroderma have been submitted to parathyroidectomy by Leriche and his colleagues. They claim improvement in over 90 per cent. In certain cases sympathectomy and parathyroidectomy were combined. M. G. Jeanrenay² has reported to the Medical and Surgical Society of Bordeaux two cases of scleroderma in which he performed partial parathyroidectomy in January and August 1936 respectively. The first case showed only slight if any improvement but it was thought probable that it had been rendered stationary. Considerable improvement was claimed for the second case. Leriche and his co-workers conclude their paper by stating that the aetiology and pathogenesis of scleroderma are unknown but that up to the present non-surgical treatment has been of little or no avail. They regard it as unjustifiable to state definitely that scleroderma is caused by hyperparathyroidism but they believe that the evidence supports their contention that a chronic hyperparathyroidism is present in scleroderma and that parathyroidectomy ameliorates the condition. Sympathectomy may be combined with parathyroidectomy.

¹ *Johns' Hosp. Hosp. Bull.* 1936 58 137

² *Ga., Hebd. Sci. méd.* March 21 1937 p. 178

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 19 1937

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SPECIAL NOTICE TO MEMBERS

Every Member is requested to preserve this "Supplement," which contains matters specially referred to Divisions, until the subjects have been discussed by the Division to which he or she belongs

MATTERS REFERRED TO DIVISIONS

British Medical Association SUPPLEMENTARY REPORT OF COUNCIL, 1936-7

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PRELIMINARY

Nomination of Dr S Watson Smith as a Vice-President

162 The Council recommends:

RESOLUTION That S Watson Smith M.D. F.R.C.P.(Ed.) (Bournemouth) be elected a Vice President of the Association under Article 46 and By Law 72 in recognition of the exceptional services rendered by him to the Association in the World Tour

Annual Meeting 1940

The Council has accepted the invitation of the British Medical Association to hold its Annual Meeting in London in 1940

The Medical Secretary's Visit to India

The Medical Secretary went to India in 1936 to study the medical practice and to report on the health of the Indian people. He found that the medical services in India were in a state of transition and that the Government were anxious to improve them.

development of the medical services of India. On his return he made a report to the Council which has been referred to a special committee for consideration. The Council is highly appreciative of the services rendered by Dr Anderson on its behalf both as regards his work in India and the report which he submitted on his return.

Association Office Arrangements

(Continuation of para 14 of Annual Report)

165 In view of the rapid increase in the volume of work of the Medical Department, and the still further expansion of that work arising from the action which will be necessitated in the recruitment of medical practitioners in the event of national emergency, to which reference is made in para 169 of this report the Council has decided that a layman of high educational standing be appointed to the staff of the Medical Department.

Consequent upon the reorganization of the Finance Department it has become necessary to create a new appointment in that department the duties of which will be mainly confined to the management of the Association's finances and the supervision of matters dealing with the Association's properties etc. The Council has therefore appointed a chief cashier.

Society for Cultural Relations between the Peoples of the British Commonwealth and the USSR

166 The Council has asked Dr N E Waterfield to represent the Association at a tour of the medical institutions of the U.S.S.R. which is being organized by the above Society

Obituary

167 The following is a supplementary list of Members whose deaths the Association has to deplore

Dr ERNEST BLAIR, Chairman and Representative, South Shields Division

Dr CECILE BOOYSEN, Representative St Paneras Division
Dr SARAH AILEEN FLORINCE, Boyd-Mackay Member of Executive Committee Hendon Division

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Dr JOHN McDONALD, Chairman Stratford Division

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Dr GEORGE PARKER, Member of Central Council Public Health and Hospitals Committees Representative Bristol Division

Dr HUGH THORNTON RYMER, President Natal Inland Branch

Dr WM HENRY SARRA, Chairman South Essex Division

Professor DAVID ALEXANDER STEWART, Vice President Section of Tuberculosis 1930

Colonel RUSSELL TRACY INGHIS, Chairman Auckland Division

Dr RICHARD WHITTINGTON, Chairman and Representative Brighton Division Vice President Section of Climatology and Balneology 1913

Dr Robert Anderson Dr Alfred Herbert Tresham Andrew Dr Raymond Balls Dr Patrick Bennett Dr Stephen Bruce Burge Dr Arthur Savell Burgess Dr James Carruthers Professor Charles Coley Choyce Dr Basil Wiseman Conway Dr Henry Gerald Frederick Cubitt Dr Alexander Dyce Davidson Dr John Reginald Davis Dr John Galletly Dr Alexander Bruce Giles Dr Walter Leigh Mackinnon Goldie, Dr James Burnell Great Rex Dr Thomas Grimson Dr Francis Murray Haig Dr Herbert Victor Horsfall Dr Alfred Tennyson Howie Dr Alfred Herbert James, Dr John Arnold Jones Dr Wm Fulton Kivlahan Dr Jacob Iozinga Kuit Dr Amelia Matland Le Pelley Dr Robert McElroy Dr David Wm Hartnell Mackie Dr Wm Ian Mackintosh Dr V Milanes Dr Guruprasad Mitra Dr Frank Burnand Mudd Dr Thomas Henry Osler Dr Wm Paterson Dr Norman Colum Patrick Dr Wallace Pomeroy Dr Albert Harding Porter Dr Clifford Durham Pullan Dr Henry Charles Roberts Dr Frederick Sanger Dr Malcolm Somerville Dr George Herbert Spencer Dr Michael Wilson Symington Dr John Taylor Dr Thomas Trench Thompson, Captain Hugh Prideaux Turnbull Dr Triloki Nath Varma Dr Wm Wilson Dr David James Wood Dr Robert Tait Wood Dr Richard Wyse Dr Yang Lin

Honours

168 The Council has pleasure in announcing that since the publication of its Annual Report honours have been conferred upon the following and that the congratulations of the Association have been sent to the several recipients

BARONET

Sir Cuthbert Sidney Wallace, K.C.M.G., C.B., F.R.C.S., London

K.C.B.

Edward Mellanby, F.R.S., London

K.C.V.O.

Sir John Atkins K.C.M.G. London
George Frederic Still, London

K.B.E.

Air Vice Marshal Alfred William Iredell, C.B., K.H.P., London

KNIGHT BACHELOR

Arthur Edwin Horn, C.M.G., Oxted

Arthur Frederick Hurst, Ascol

Professor Harold Beckwith Whitehouse, Birmingham

C.B.

Surgeon Rear-Admiral Guy Leslie Buckeridge, O.B.E., K.H.S., Haslar

Major-General William Haywood Hamilton, C.I.E., C.B.E., D.S.O. K.H.P., Rawalpindi

Major General Osburne Ievers, D.S.O., K.H.S., Salisbury

Major-General Henry Marrian Joseph Perry, O.B.E., K.H.S., London

Air Commodore Albert Victor John Richardson, O.B.E., K.H.S., Uxbridge

C.M.G.

Robert Henry Hogg, O.B.E., Paraparaumu, New Zealand

C.I.E.

Lieut Colonel Ronald Herbert Candy, I.M.S., Poona

Ernest Muir, London

Lieut-Colonel Clive Newcomb I.M.S. Madras

Colonel John Taylor, D.S.O., V.H.S., I.M.S., Kasauli

C.B.E.

Surgeon Captain William Bradbury, D.S.O., R.N., London

George Carter-Cossar M.C., Glasgow

Colonel John Heatty-Spencer, O.B.E., London

Peter Sinclair Hunter Singapore

James Lochhead Gibraltar

James Perrins Major, Melbourne

O.B.E.

Charles Ralph Cooke Taylor, London

Major David Fettes, R.A.M.C., Aldershot

John Daniel Harmer, Lusaka Rhodesia

Major Frank Holmes, R.A.M.C., Quetta, Baluchistan

David Hynd, Swaziland

Major George Mayne Moffatt I.M.S., Lashio, Northern Shan States

Captain Trevor Edward Palmer, I.M.S., Bombay

Lieut Colonel John Rodger, M.C., I.M.S., Quetta, Baluchistan

Wing Commander Alan Filmer Rook, R.A.F.M.S., London

George Waugh Scott, Malvern Links

Lieut Colonel Paul Herbert Shelley Smith, J.M.S., London

Surgeon Commander John Thomas Wylie, R.N., London

I.S.O.

Herbert Rendell, St John's, Newfoundland

M.B.E.

Percy William Barnden, Nigeria

Thomas Bertram Butcher Mussoorie

Atul Chandra Dutta, Malacca, Straits Settlements

Brendra Nath Ghosh Calcutta

Burjor Framji Khambatta, Karachi

Captain Alistair Gordon Donald Whyte R.A.M.C., Aberdeen

Recruitment of Medical Practitioners in the Event of National Emergency

169 With the approval of the Committee of Imperial Defence the Council has given authority for the use of the machinery of the Association for the purpose of establishing in the area of each Home Division registers of those practitioners who, in the event of emergency arising,

would be willing either (a) to accept commissioned medical service with the Forces abroad or at home, or (b) to offer their services for the treatment of air raid casualties either in their own areas or on a short term contract in any part of the country. The method by which these registers shall be instituted is under consideration.

Protection of Practices of Members Joining His Majesty's Forces

(Continuation of para 10 of Annual Report)

170 The Council has appointed a special Committee to prepare a memorandum on the principles which should guide practitioners in dealing with the patients of absentees and a communication on the subject will be issued in due course to Honorary Secretaries of Home Divisions.

ORGANIZATION

Visits to Divisions and Branches by Medical Secretaries

171 Excluding the tour of the Indian Branches made by the Medical Secretary during the past session forty eight visits to Divisions and Branches have been paid by the Medical Secretaries. Divisions and Branches are reminded that the Council is pleased to arrange for a member of the Medical Secretariat to visit a Division or Branch upon request.

MEDICAL ETHICS

Association Disciplinary Procedure

(Continuation of para 77 of Annual Report)

172 After careful consideration the Council has come to the conclusion that in the present circumstances it would be unwise to recommend any alteration of Articles 9 and 10 of the Association which permit of the expulsion of a member only upon the representation of a Division or Branch. The Council has decided however that systematic action should be taken to remind Divisions of their powers in every case where a member has either applied for or accepted an appointment the terms and conditions of which are contrary to the Memorandum of Recommendations and especially of their power to refer cases to the Central Ethical Committee without prior detailed consideration irrespective of whether the Division has adopted a binding resolution.

Furthermore when an Important Notice in relation to a public health appointment is published in the *British Medical Journal* the Division concerned will be immediately notified and reminded of its power to inquire into the conduct of any member of the Division who may apply for the appointment.

Non Medical Radiologists

173 The Council has considered the ethical aspect of the employment by medical practitioners of non medical radiologists and has expressed its general sympathy with the views of the Council on the subject. It has also expressed its sympathy with the views of the Council on the subject of the employment of non medical radiologists. The Council has decided to establish an ethical committee to consider the employment of non medical radiologists.

SUBSCRIPTIONS

whose schemes have been approved by the Council for the inclusion of subscribers whose income exceeds £250 p.a.

and has prepared a model scheme for the provision of medical attendance and treatment upon persons of moderate incomes above the National Health Insurance limits. This model scheme is reprinted in Appendix V.

The scheme embodies the essential principles contained in the Association's model scheme for a Public Medical Service but the Council draws particular attention (i) to Rules 22 and 23 which define the content of medical service to be provided under this scheme and (ii) to the footnote to Rule 18 dealing with the question of subscriptions.

Fees for Medical Witnesses in Criminal Cases

175 The Council submits in Appendix VI a statement which it has forwarded to the Home Secretary for a general increase in the fees payable to medical witnesses in criminal cases.

Medical Examination in Compensation Cases

176 The Council's attention has been drawn to the action of certain firms of solicitors in engaging to represent the patient at medical examination for compensation purposes by a practitioner other than the patient's own doctor.

The Council has approached the Accident Offices Association in the matter and has suggested that it is in the interests both of the patient and of the insurance company that the patient's own doctor should be present with the insurance company's doctor when the latter conducts his examination.

Investigation of Deaths from Cancer

(Continuation of para 86 of Annual Report)

177 A reply has now been received from the Ministry of Health stating (i) that experience has shown that practitioners have willingly co-operated with medical officers of health in the collection of the information desired and consequently that it did not appear that the Minister was called upon to take any action on the question of payment of fees by local authorities and (ii) that the form in use for the purposes of the scheme was worded in such a way that the patient's name need not be divulged if the practitioner thought it undesirable and further that the question of whether or not the patient's relatives might object to the information being given was one for the practitioner concerned rather than for the medical officer of health.

Land Settlement Association

178 The Council is discussing with the central office of the Land Settlement Association the fees to be paid for contract medical attendance on settlers and their families.

Public Medical Services

(Continuation of para 80 of Annual Report)

179 The Council has made certain amendments to the Model Rules for Public Medical Services and has revised the Association's Memorandum on the Establishment and Development of Public Medical Services. These two documents have now been embodied in an Association Green Book copies of which may be obtained from the Medical Secretary.

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CB

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CMG

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CIE

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173 The Council has considered the ethical aspect of the employment by medical practitioners of non medical radiologists and while it is in general sympathy with the view that for radiological purposes medical practitioners should consult medically qualified radiologists the Council does not consider it possible at present to establish an ethical standard which would prohibit the employment by medical practitioners of non medical radiologists.

MEDICO POLITICAL

Scheme for the Provision of Medical Attendance and Treatment upon Persons of Moderate Incomes above the National Health Insurance Limits

174 The Council has considered the following Minute 84 of the A.R.M., 1936

Minute 84—Resolved That (with reference to para 74 of Annual Report of Council) the Council be instructed to consider the advisability of revising its Model Scheme for Public Medical Services so as to provide in areas

whose schemes have been approved by the Council for the inclusion of subscribers whose income exceeds £250 p.a.

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Provident Schemes and Payment to General Practitioners for Treatment

180 The Council has considered the following Minutes 145, 146 and 147 of the A.R.M. 1936 and has obtained

information from insurance companies and other bodies interested in schemes of this nature

Minute 145—Proposed by Torquay (E Ward) That (with reference to Sections 5, 6 and 7 of para 127 of Annual Report of Council) in the opinion of the Representative Body the need for a scheme of insurance against the expense of medical and nursing services during illness has now become urgent. Such a scheme should be of uniform application throughout the country, and should be organized and developed by a competent business authority with full knowledge of insurance finance who alone will be concerned with the method of introducing it to the public. Believing that the medical profession should not be involved in financial negotiations with provident associations it is suggested that such schemes should be in the form of a contract between patient and insurance company only. The aim of this resolution is to organize and develop a scheme for persons of the middle and professional classes on a mutual insurance basis and in return for a definite premium to offer financial assistance in respect of (a) the costs of institutional accommodation in private beds attached to voluntary or council hospitals or in beds in nursing homes the cost of all nursing use of operation theatre x-ray plant, laboratory and other ordinary institutional equipment and (b) the cost of general practitioner and associated professional services. In view of the urgency of the matter steps be taken to implement this resolution forthwith.

Minute 146—Whereupon an amendment by F. A. Roper (Exeter) seconded by N. E. Watersfield (Kingston on Thames)

That (with reference to para 127 of Annual Report of Council) it be an instruction to the Council to explore further the problem of insurance of this economic class in respect of all illnesses whether treated institutionally or at home with the object of producing if possible a scheme whereby such a service may become available as a benefit additional to those provided by the existing Provident Schemes for middle-class patients.

Minute 147—After discussion it was

Resolved That the matter be referred to the Council for consideration.

It appears that an insurance scheme which will allow of payments to general practitioners may be practicable, and the Council is investigating the matter further.

Parliamentary Agent to the Association

181 While a careful scrutiny is at present conducted of all those Bills introduced into both Houses of Parliament which may affect the profession, the Council has come to the conclusion that it will be more effective if this work is placed in the hands of an Agent who specializes in such work.

The Council has therefore decided to employ a Parliamentary Agent to examine all Bills, public and private, Provisional Orders, etc., introduced into Parliament, and to bring to the Association's notice any proposals affecting or likely to affect, the interests of the medical profession.

HOSPITALS

Voluntary Hospitals Commission

182 The Council has considered the Report of the Voluntary Hospitals Commission appointed by the British Hospitals Association in June 1935. The most important recommendations of the report are designed to remedy the defects of the existing system in relation to co-operation and co-ordination. For this purpose the division of the country into hospital regions and the formation in each region of a voluntary hospitals regional council to correlate the hospital work and needs in the area is urged, followed by the establishment of a central council to co-ordinate the work of the regional councils. The grading of hospitals into central, district, and cottage hospitals is recommended and the relationship between voluntary and council hospitals is discussed. The section of the

report which deals with the scope and conduct of the out-patient department is an almost complete endorsement of the Association's policy, the only exception concerns the provision of treatment for dependants of the lower waged insured persons. The principle of payment of the visiting medical staff is approved subject to certain reservations and it is urged that the advice of appropriate experts should be available in making appointments to the visiting medical staff. Contributory schemes and provident schemes are welcomed, and the provision of pay beds for patients of all classes is recommended. Other sections of the report deal with finance, publicity methods, accommodation, administration, nursing, ambulance, and auxiliary services, patients' records, and the special position of teaching hospitals.

The Council is glad to note that the report of the Commission embodies a fairly general endorsement of the Association's Hospital Policy.

Payment of Medical Staffs of Voluntary Hospitals

183 In its Hospital Policy the Association urges that in respect to the treatment given to contributing patients, "medical staffs of voluntary hospitals shall receive from the hospital managers remuneration for such service either by salary by payment for definite services and responsibility by honorarium or by agreed payments to a staff fund placed at their disposal. This policy was endorsed in 1932 by the Joint Committee of the British Hospitals Association and the British Medical Association presided over by Lord Linlithgow. It has again been endorsed in the recently published report of the Voluntary Hospitals Commission which states: 'We are of opinion that the general principle of the payment of medical and surgical staffs of voluntary hospitals should be approved and that its application should be considered without delay by hospitals Boards of Management.'

In view of this position, the Council has taken steps to urge the committees of management of voluntary hospitals to give early consideration to the application of the recommendation of the Joint Committee of the British Hospitals Association and of the British Medical Association presided over by Lord Linlithgow "that the time has come to recognize the claim of the visiting medical staffs to some share in the moneys raised for the treatment of patients in hospital other than those provided by voluntary subscription or donation for the treatment of free patients" as endorsed in Chapter XI (paras 146-51) of the Report of the Voluntary Hospitals Commission.

Ophthalmic Examinations at Hospital Out-patient Departments

184 The Council has considered the desirability of some action being taken to secure the diversion from the out-patient departments of eye hospitals and general hospitals of insured persons entitled to ophthalmic benefit under the National Health Insurance Acts, whether members of contributory schemes or otherwise. In the first instance the co-operation of the British Hospitals Association and the appropriate ophthalmological societies has been invited with a view to the subsequent issue of a communication on this subject to governing bodies and medical staffs of hospitals.

PUBLIC HEALTH

1923 Agreement between Association and Society of Medical Officers of Health

185 A conference has been held between representatives of the Association and the Society of Medical Officers of Health to consider the terms of the 1923 agreement for co-operation between the two bodies, in the light of experience gained during the past few years. Consideration has been given to the desirability of improving the

existing machinery with regard to matters which necessitate prompt action by either the Association or the Society. The discussions with the Society are still proceeding.

Ministry of Health Circular 1550 Children under School Age (Continuation of paragraph 105 of Annual Report)

186 The Council has considered an inquiry as to whether the Association is in general agreement with the recommendation of the Ministry in Circular 1550 that children between 2 and 5 years of age should be admissible to minor ailment clinics provided by local education authorities. The Council sees no objection to this proposal provided the Association's existing policy is observed with regard to the conduct and scope of such clinics but the provision of minor ailment clinics should be unnecessary in areas where there is a Public Medical Service.

Senior Assistant Medical Officers

187 The Council has considered the question as to whether advertisements for senior assistant medical officers should be accepted for publication in the *B.M.J.* at the salary scale prescribed for officers employed in departments by Section II of the Memorandum of Recommendations (namely, £500 to £700 per annum). The Council has decided that advertisements for medical officers employed in departments in which the posts are described as those of senior assistant medical officers be not accepted unless the commencing salary is above the minimum of the scale.

Maternal Mortality

(Continuation of Addendum to Annual Report of Council *B.M.J.* Supplement May 8 1937)

188 On May 7 the Minister issued Circular 1622 to maternity and child welfare authorities requesting each authority to give early consideration to the Maternal Mortality Report and its recommendations and to inform him of the action they proposed to take. The Council has arranged for Divisions and Branches to be circularized (1) drawing attention to the Association's policy on the question of a selected panel of practitioners to answer midwives calls—namely that selection by any method other than that of self selection is not approved by the Association (2) urging active opposition to any proposal which does not conform with this policy and (3) pointing out that effect cannot be given to Recommendation 2 of the Report on Maternal Mortality until the rules of the Central Midwives Board have been altered.

Fees for Medical Practitioners Called in by Midwives

(Continuation of paragraph 106 of Annual Report)

189 A reply has been received from the Ministry of Health stating that the modifications suggested by the Association to the scale of fees for medical practitioners called in by midwives have been forwarded to the County Councils Association, the Association of Municipal Corporations and the London County Council for their observations.

With regard to the question of the effect of nomination of a practitioner upon the liability of the local supervising authority to pay fees the Ministry state

“under the rules of the Central Midwives Board a midwife is required in the case of any emergency as defined in the rules to call in when possible the doctor desired by the patient or by the responsible representative of the family. The Minister is advised that if that rule is observed the fact that the doctor called in has examined the patient ante-natally and has intimated to the midwife that he is willing to attend the patient should some complication make it necessary would not preclude the payment by the local supervising authority of a fee to the doctor in accordance with the scale prescribed by the Medical Practitioners (Fees) Regulations 1936.”

The Association's modifications to the scale were framed before the Report on Maternal Mortality was published.

The attention of the Ministry has been drawn to this and also to the fact that revision of the Association's scale of fees may be necessary in the light of any change which may be made in the method of utilizing the services of medical practitioners in midwives emergencies.

Public Health Appointments

190 From June 14 1936, to June 12 1937, 436 appointments, under the Memorandum of Recommendations (and Scottish Scale) as to Salaries of Whole-time Public Health Medical Officers were dealt with. In 422 of these instances the appropriate salary was either offered in the first instance or secured after negotiation.

Superannuation

191 The Council has considered the Local Government Superannuation Bill, the principal object of which is to ensure that provision should be made by all local authorities for the superannuation of their whole time officers. In the opinion of Council Clause 16 of the Bill, which provides for the compulsory retirement of female nurses, midwives, and health visitors at 60 years of age affords a suitable opportunity for urging the principles of ‘added years’ and interchangeability of superannuation service as between voluntary and council hospitals, and appropriate steps are being taken. If the principle of ‘added years’ is secured for nurses it will be a step towards its application to the medical profession.

Supervision of Midwives

192 The Midwives (Qualifications of Supervisors) Regulations, 1937 were issued by the Ministry of Health in May 1937. Article 3 of the Regulations requires *inter alia* that a medical supervisor shall be a registered medical practitioner who has had at least three years experience in the practice of his profession and who is registered in the *Medical Register* as the holder of a diploma in sanitary science, public health or State medicine. The Council has informed the Ministry (1) that the Association regrets that its opinion was not sought on the Midwives (Qualifications of Supervisors) Regulations, 1937, (2) that the qualifications prescribed by Article 3 of the Regulations will in effect prevent a local authority from appointing a highly qualified obstetrician as medical supervisor as it is unlikely that a specialist in this branch of medical practice will hold a diploma in public health.

Maternity Services (Scotland) Act, 1937

193 The principal object of this Act is to improve the standard of domiciliary midwifery by the provision of adequate medical and nursing services for women confined in their own homes. It differs from the Midwives Act in England inasmuch as every local authority is required subject to the approval of the Department of Health for Scotland to ensure that there shall be available not only an adequate domiciliary midwifery service but facilities for medical examination and treatment before during and after childbirth, together with the services of an anaesthetist and an obstetrician when required by the medical practitioner in attendance. The Act also provides for compensation to midwives ceasing or required to cease practice by reason of age or infirmity, the prohibition of unqualified persons acting as maternity nurses for gain, the attendance of midwives at post-certificate courses of instruction and the recovery or remission of fees in respect of the services provided.

HEALTH SERVICES

Interim Report upon Report of Scottish Departmental Committee on Health Services

194 The Council has considered three important and associated matters.

- (1) The Report of the Departmental Committee on Scottish Health Services and its reactions on Association policy.
- (2) The taking of more active steps towards implementing

the Association's proposals for a General Medical Service for the Nation

- (3) The making of representations to the Ministry of Health on the subject of the utilization of private practitioners rather than of salaried medical officers in all public clinical work.

Not unexpectedly, the Council has found itself unable to complete its reference in time to report for the Annual Representative Meeting, 1937, but it has carefully considered each chapter of the Scottish Report with the relevant recommendations and submits a memorandum (Appendix VII) commenting in detail on the most important of the findings in reference to the matters with which the Association is particularly concerned.

The Council has had the advantage of receiving the views of the Scottish Committee of the Association on the Departmental Report, but the point of view from which the Council has approached the consideration of the matter is not identical with that of the Scottish Committee. It has not been so much concerned with the suitability of the Departmental Committee's proposals to Scotland or the method of implementing them in conditions which are peculiar to Scotland as with their relationship to the general health policy of the Association—as to how far for example, they support or are contrary to, or differ from that policy, or whether they should lead to any reconsideration or modification of that policy. The memorandum which the Council submits indicates such points as these in reference to the several sections of the Departmental Report, but, lest they should be insufficiently appreciated in the consideration of these detailed comments the Council desires to emphasize two things which it considers of the greatest importance.

The first of these is that the Departmental Report as a whole is a most thorough and authoritative endorsement of the Association's health policy. There is nothing in the Report which contradicts that policy; there is little that falls short of that policy, and the arguments supporting the several recommendations are set forth in such a manner as to constitute a very powerful reinforcement of that policy by a specially selected body of experts, both lay and medical.

The second matter to which the Council wishes to draw special attention is that the Report raises in a very direct form the question of the future position of consultants and specialists and their relationship on the one hand to the general practitioners and on the other hand to clinics or treatment centres established by local health authorities in any organized medical service. There is no clear pronouncement on this question in the Association's policy, and in the opinion of the Council it constitutes one of the major matters on which it is necessary that the Council should formulate and recommend a policy to the Representative Body at its meeting in 1938.

MEDICAL BENEVOLENCE

195 The following statement shows the amounts collected and distributed through the Association's Charities Trust Fund during 1936

	Specially Earmarked	Allocated by Council
	£ s. d.	£ s. d.
Royal Medical Benevolent Fund	2,148 19 4	1,679 15 4 (£106 being earmarked for R M B F Guild)
Epsom College	1,038 13 11	793 15 4 (£78 being earmarked for Sherman Bigg Fund)
R M B F Society of Ireland	36 0 9	—
Sir Charles Hastings Fund	—	—
	<u>3,223 14 0</u>	<u>2,473 10 8</u>

The comparative figures for 1935 are

	£ s. d.	£ s. d.
R M B F	2,059 17 6	1,596 14 6
Epsom College	1,074 7 6	798 7 4
R M B F Society of Ireland	31 18 0	—
Sir Charles Hastings Fund	—	145 13 2
	<u>3,166 3 0</u>	<u>2,540 15 0</u>

The Council has had prepared a summary of the contributions to medical charities during 1936, and this is being issued to Representatives and to the Divisions. This document discloses the following facts:

	1934	1935	1936
Total number of practitioners in England, Scotland and Wales	40,384	41,360	41,971
Total subscribing to medical charities in their individual capacities (excluding those subscribing through Panel Committees)	9,013	10,348	9,992
	<u>22.31%</u>	<u>25.01%</u>	<u>23.81%</u>

The following areas are deserving of special mention for their contributions to medical charities:

Ashton under Lyne	Holland
Barnet	Huddersfield
Bedfordshire	Inverness
Blyth	Isle of Ely
Bolton	Isle of Man
Bournemouth	Kesteven
Bradford	Leicester and Rutland
Bristol	Marylebone
Buckinghamshire	Morpeth
Buxton	Northamptonshire
Cambes and Hunts	N. Glam. and Brecknock
Cardiff	Norwich
Chester	Oxford
Chesterfield	Preston
Cleveland	Reading
Coventry	Rugby
Derby	Salisbury
Dundee	Southampton
Eastbourne	Southport
East Kent	South Staffs
East Norfolk	South Suffolk
Fife	Stockton
Folkestone and Dover	Trowbridge
Furness	West Dorset
Gloucestershire	West Norfolk
Hartlepool	West Suffolk
Hereford	Worcester and Bromsgrove

During the year 1936 the Association collected on behalf of the Charities £9 less than in 1935. The deficit may appear small, but it is disappointing not to be able to record an increase, especially in view of the fact that 1935 itself showed a fall compared with 1934. Both the R M B F and Epsom College have during the year made some progress with the adoption by their subscribers of the seven year covenant plan, but there is still only a small minority in the profession who take advantage of the concessions granted by the Finance Act of 1922. The advantages offered ought to be much more widely known than seems to be the case. Briefly, the State undertakes that whenever anyone covenants with a recognized charity to subscribe for seven years (or until his death, whichever is the shorter period), it will forgo income tax from the gross sum that is involved. To take a concrete case, let it be assumed that a subscriber earns a sum of 28s, that the State has already taken 7s of this as income tax at 5s in the pound, and that the remaining 21s is given to a charity under a deed of covenant. In these circumstances the State then refunds to the charity the 7s which it has received, so that the latter benefits in all by the whole 28s originally earned by the subscriber. Not only so, but the whole 28s.

is exempt from supertax, should the subscriber be liable to it. It should be added that such a covenant does not bind the executors of the subscriber, if he dies during the seven-year period. The covenant is, nominally, enforceable at law, but obviously no charity benefiting by such an arrangement would dream of enforcing its legal rights if the covenant should fall into arrears with his subscription.

196 During the year the Council received a request that it should found and endow at some approved Roman Catholic school a scholarship for medical orphans whose parents were members of the Roman Catholic Church. The Council did not accede to the proposal.

197 Much attention has been given to suggestions for arresting the fall in the amounts which the Association is able to collect annually. It would seem that there is still a large section of the profession which does not recognize any duty to subscribe regularly to the Medical Charities. Experience has shown that usually the best results are obtained when an enthusiastic member of a Division or Branch undertakes the responsibility of collecting subscriptions from his local colleagues, and the Council would, once again emphasize the desirability of appointing annually suitable members to the post of Charities Secretary.

198 A legacy of £50 to the Association on behalf of its charities was intimated during the year by the executors of Dr I. M. M. Aitken, whose name has been inscribed among the benefactors of the Association. The Council has directed that this legacy, when received, shall be invested to augment the capital of the Sir Charles Hastings Fund. It appeals to the profession for further benevolences of the like nature.

OVERSEA BRANCHES

Work of the Branches of the Association Over-seas

199 The reports of the Federal Council and the Overseas Branches and Divisions show that the interests of members in the Dominions and Colonies continue to be carefully watched. Some illustrative notes on the important and extensive work, scientific, medico-political, and social, of the Association over seas are given below.

AUSTRALIA

200 The Federal Council of the B.M.A. in Australia met in August 1936, and January 1937. The questions of organization discussed at the meetings included the formation of special groups within the Association for members having distinctive professional interests. The secretariat has been rearranged in order to allow Dr Hunter, who is Medical Secretary to the New South Wales Branch as well as General Secretary to the Federal Council, to devote more time to organization work for Australia as a whole.

The Commonwealth Government has established a National Health and Medical Research Council. While the Federal Council considers that the Medical Research Council should be a separate body, it has expressed to the Government its willingness to co-operate with the new organization and has accepted the invitation to nominate a representative on it. National Health Insurance is occupying a considerable amount of the attention of the profession in Australia and New Zealand and the Federal Council of Australia has deemed it advisable to enunciate certain general principles in anticipation of a State or Commonwealth Medical Service. These principles, which were adopted on the motion of the Queensland Branch, include the establishment of an income limit, the representation of the profession in the administration of the scheme, free choice of doctor, payment of general practitioners by capitation fees, and the disciplinary control by the organized medical profession of the doctors taking part in the scheme. The recommendations have been sent to the Prime Minister and the Premiers of the different States. Amongst other questions which the Council has considered during the year are the desirability of uniform medical registration throughout the Commonwealth, reci-

procity between State hospitals in the different States, and precautionary measures against gas attacks in warfare.

The fifth Australasian Medical Congress is to be held at Adelaide in August, 1937, and on that occasion the Federal Council will present the Gold Medal of the Association in Australia to Sir Henry Newland in recognition of his many years of devoted service.

The New South Wales Branch places on record its appreciation of the valuable services rendered to the Association by Dr J. A. Dick, who retired from the Council in March, 1936. Dr Dick, who was elected a Vice-President at the last Annual Meeting, was President in 1910-11, a member of the Council for thirty-four years, Honorary Librarian for thirty years, and representative on the Federal Council for fifteen years. The Branch has been very active in its medico-political work during the year. The representations which were made to the Minister for Health in support of the proposal of the Director-General for Health for the immunization of children against diphtheria have resulted in the establishment of a State wide scheme, in which the Department of Health, local authorities, and the members of the medical profession are co-operating. In view of the increasing interest in National Health Insurance the Branch sent its secretary, Dr Hunter, to Great Britain to study the subject there and it is hoped that the information he has obtained will be of great assistance to the profession throughout Australia when National Health Insurance becomes a matter of practical politics. The Branch has also had the advantage of an interview with Sir Walter Kinnear of the Ministry of Health for England and Wales during his visit to the Commonwealth Government. The Annual Meeting of delegates of the local associations affiliated with the New South Wales Branch was held in October 1936. Friendly society lodge practice occupied a prominent place in the proceedings, the questions discussed including income limits, choice of doctor, special medical services, fees for immunization against diphtheria and the sale and transfer of lodge practices. The recent establishment of base hospitals was discussed in its relation to the classification of hospital staffs and its effect on medical practice. Various questions concerning Workmen's Compensation were also on the agenda.

Lodge practice is an important feature in the work of all the Australian Branches and the Victorian Branch has just established a standing Consultative Committee of representatives of friendly societies and of the Branch. All matters affecting lodge practice in the area of the Branch will be referred to this Committee. The Branch has given approval to the Articles of Association of the Medical Eye Service of Victoria, which was started on July 1, 1936. It is hoped that the new facilities will enable many patients who have hitherto attended public hospitals to make provision for themselves instead of depending upon charity. At the request of the Public Medical Officers Association the Branch has prepared a classification and schedule of salaries for public medical-officers and it proposes to submit its suggestions to the Government. Hospital organization has presented many problems, and some of them such as the exploitation of out-patient departments and the treatment in charitable institutions of patients for whom the Government should be financially responsible show an interesting similarity to the hospital problems in Great Britain. The Branch has made arrangements to erect in its House of Honours boards bearing the names of past presidents and during the year it has dedicated a brass tablet to the memory of George Bass, surgeon to H.M.S. *Reliance*. An effort to promote still further the usefulness of the Branch library has been made by the preparation of a catalogue which is being printed and issued to members and the result is already noticeable in the increased number of books borrowed and in the attendances.

The Queensland Branch records its appreciation of the services of Dr W. N. Robertson, who has recently retired.

from active membership of the Branch Council Dr Robertson has been President of the Branch on four occasions and the Honorary Secretary's report states that 'it is impossible to estimate what the Branch really owes to him'. The work of the Branch during the year has been extensive and very varied. Further steps have been taken to promote the Branch's policy for a general medical service in Queensland. Approval has been given to the principle of making the aims and objects of the Branch known through the public press and of educating the public on health matters, and certain rules have been prepared for the guidance of the Publicity Subcommittee. In pursuance of this policy a statement on diphtheria immunization was published last year in the Press throughout Queensland, and it was also broadcast. In January, 1937, a Nutrition Research Committee was appointed. This Committee has prepared and published in the *Courier Mail* a special nutrition supplement and it has issued to members for distribution to their patients a circular on nutrition during pregnancy and nursing. The Branch is represented on a committee appointed to investigate the question of ophthalmia neonatorum in Queensland and it has offered its assistance in circularizing members and in urging the necessity of the wider use of preventive measures.

NEW ZEALAND

201 The subject of National Health Insurance appears to have overshadowed all others in New Zealand during the past year. The chairman of the Health Insurance Committee, Dr J. P. S. Jamieson has visited and addressed almost all the Divisions and has also met individual medical men who are practising in isolated parts of the country, and have therefore little opportunity for discussion with their colleagues. The Branch is looking forward to the visit of Sir Henry Brackenbury, the representative of the parent Association, who will be able to give it the benefit of his experience of National Health Insurance in Great Britain. At the conclusion of the work of preparation the representatives of the Committee will give oral evidence before the Parliamentary Committee. The Branch will have the satisfaction of knowing that its evidence will be truly representative of the profession in New Zealand, for of the 1,012 medical men in active practice more than 900 are members of the Association. The Branch Council has under consideration the rebuilding of its headquarters. It hopes eventually to have a building worthy of the profession and of the Association, with adequate office accommodation, a lecture theatre, and a library.

Fiji

202 In addition to two clinical meetings the Fiji Branch organized a meeting attended by local medical and dental practitioners, native medical practitioners, students of the Central Native Medical School at Suva, and the nursing staff of the College War Memorial Hospital, Suva. The occasion was the visit of Lieut.-Colonel J. Hardie Neil of Auckland, New Zealand. After his address to the Branch meeting Lieut.-Colonel Neil lectured to the native students at the Central School and on the following day he and Dr Gilmour of Auckland were entertained to luncheon by the Branch.

WEST INDIES

203 Several of the West Indian Branches have been concerned with the organization of the medical service as in British Guiana, Trinidad, Jamaica and the Windward Islands the respective Governments are evolving schemes of reorganization. The Jamaica Branch sent a deputation to the Government Committee urging that the possibilities of a scheme of National Health Insurance should be explored before any other form of reorgan-

ization was introduced. The Branch is also making an effort to expand its library, and it has encouraged interest in its proceedings by publishing its transactions for 1935-6 in pamphlet form. The British Guiana Branch has held six medico-political meetings which considered, in addition to reorganization and other matters, the question of fees under the Workmen's Compensation Act. The Grenada Branch is to be congratulated on the high average attendance it has secured at its meetings. The Southern Division of the Trinidad Branch reports a very successful year. The monthly meetings of the Division have become an essential part of professional life and the opportunities for pleasant association are much appreciated. The Northern Division has held nine clinical meetings but the Honorary Secretary expresses disappointment at the small attendances.

GIBRALTAR

204 The Gibraltar Branch has held four meetings during the year. It has continued its special work of entertaining medical officers of the Fleet stationed at Gibraltar and it in its turn was invited on board *H.M.S. Hood* by Surgeon Commander Forde, who demonstrated the methods adopted for dealing with casualties in action.

MALTA

205 In addition to its ordinary clinical meetings the Malta Branch arranged a special meeting open not only to members of the Branch but also to members of the Camera Medica and final-year students. The subject was diphtheria and the discussion was opened by Surgeon Lieut. Commander C. H. Birt.

CYPRUS

206 Since the first Annual Meeting of the Cyprus Branch in March 1936 the Branch has held five general meetings and one special meeting. For one meeting a very successful symposium on hydatid disease was arranged. The Branch hopes during the coming year to develop the social side of its activities.

EGYPT

207 The Egyptian Branch has sustained a great loss by the death of Sir Mohamed Shahin Pasha, who was an honorary member of the Association. The Branch has held five clinical meetings and one medico-political meeting during the year.

SUDAN

208 The Sudan Branch has held six clinical meetings and a medico-political meeting. It has found that its medical problems are very similar to those of the East African Branches and the representation of the Sudan Branch at the interterritorial meeting at Kampala was considered to have been of great value. It is hoped that it will be possible to arrange to hold one of these meetings at Khartoum.

EAST AFRICA

209 The interterritorial meetings hold an important place in the life of the East African Branches. In 1936 the meeting was held at Kampala, and it was attended by representatives from Uganda, Kenya, Tanganyika and the Sudan. Sir Albert Cook chose as the subject of his presidential address the medical history of Uganda. A number of papers on local diseases were read, and a resolution was passed advocating organized research by Colonial Governments into the mental and physical characteristics of East African natives.

The individual East African Branches have dealt with many medico-political problems, some of which have been referred to Headquarters.

SOUTH AFRICA

210 The Departmental Committee on National Health Insurance has recently issued its report. The subject of National Health Insurance has occupied a large share of the attention of the Federal Council and the South African Branches for some years, and the Association in South Africa is to be congratulated on the fact that the majority report is practically in agreement with all the suggestions and recommendations made by the Association. The report includes recommendations that a general practitioner service for insured persons should follow the lines of the British scheme, and that remuneration for both general practitioner and specialist services should be arranged on a capitation basis. It is considered to be unlikely that a Bill to give effect to the recommendations will be introduced into Parliament before next year.

Much heartburning has been caused amongst the profession in South Africa by the question of the payment of honorary staffs in hospitals for the treatment of the sick poor. The medical relief of the indigent is now one of the obligations of the Provincial Administrations, and the profession considers that it should not therefore be expected to give its services gratuitously as it did in the days when the sick poor were dependent upon the charity of the public. The feeling of injustice is intensified by the imposition of a professional tax, so that, as is said not only does the doctor pay his ordinary tax as a citizen but he gives his services free in the public hospitals and also pays a special tax for the privilege of doing so. After much persistent agitation by the Federal Council and the Branches the principle of payment was accepted by the Inter-Provincial Consultative Committee but the Provincial Executive of the Cape Province has offered to the profession without consulting the hospital boards an entirely inadequate figure. The offer, which was much below the minimum honorarium suggested by the Association has been rejected.

The tenth Annual Scientific Meeting is to be held in Bloemfontein in September, under the presidency of Dr S M de Kock.

The Northern Transvaal Branch reports a successful series of clinical meetings during the year, the programme covering a wide range of subjects. Two special meetings are particularly mentioned one of these being devoted to a symposium on gall bladder conditions while the second was an outstandingly successful general practitioner evening.

The Honorary Secretary of the Pretoria Division says that the Division has experienced a lively time during the year on account of its negotiations with sick benefit societies. Panel practice has now been introduced and the Division's new rules and new tariff of fees have been adopted by the two societies having a compulsory membership. The in-coming Council will have the task of dealing with the societies with voluntary membership. The Division believes that the new arrangements compare favourably with those in other areas.

The new building of the Southern Transvaal Branch has now been completed and it was formally opened by the Hon J H Hofmeyr on November 13 1936 when 300 members and their wives were present. An appeal is being made for funds for defraying the cost of the building. As a means of attracting more members to meetings the Branch proposes to introduce sectional meetings.

Reports of action taken in connexion with workmen's compensation hospital staffs and other medico-political matters and of successful clinical meetings come also from the Pietersburg and Eastern Transvaal Divisions.

ADEN

211 In the second year of its existence the Aden Branch held six ordinary meetings and one general meeting at all of which scientific matters were discussed. The Branch

has continued its policy of inviting to its meetings all registered medical practitioners who may be in Aden for the time being and a considerable number of naval surgeons belonging to ships temporarily in the neighbourhood of Aden have thus been enabled to take part in the life of the Branch. To one meeting non-medical guests were also invited.

INDIA

212 The great event for the Indian Branches during the past year was the visit of the Medical Secretary, whose notes on his tour have already been published in the *Supplement*. The United Provinces Branch reports nine meetings, to some of which final-year students and members of the staff of King George's Medical College and Hospital were invited and five meetings of the Branch Council have been held. The Bombay Branch has adopted a number of suggestions which it is hoped will improve the working of the Branch. They include the formation of Divisions within the Branch, more intensive recruitment, more frequent meetings and the appointment of a part-time clerk. The Punjab Branch has again awarded a B.M.A. Centenary Scholarship to a fifth-year student and it has spent a further sum of £87 on medical research. Fourteen lectures and demonstrations and six other clinical meetings have been arranged and the proceedings have been published for the benefit of those members who were unable to attend. The Branch has also protested to the appropriate authorities against the hardships incurred by certain medical officers employed on the North Western Railway. Reports of successful clinical meetings come from the South Indian and Madras Calcutta, Assam, Hyderabad, and Burma Branches.

CEYLON

213 The Ceylon Branch will celebrate in July the fiftieth anniversary of its formation. The celebrations will consist of scientific discussions an exhibition of medical objects of public interest a public reception and a dinner, and a special number of the *Journal* will be published. The Central Council has conveyed its cordial congratulations on the long and active existence of the Branch. The President for 1936, Dr N Attiygalle has presented to the Branch a sufficient sum to provide a President's badge. During the past year the Branch has appointed a sub-committee to formulate the views of the profession concerning the College of Indigenous Medicine and the future policy of the Branch on the general subject of Ayurvedic medicine. The quarterly publication of the *Journal* of the Branch has proved a great success.

MALAYA

214 The Malaya Branch has continued its varied activities and the list of subjects considered during the year includes fees for insurance examinations the length of service of European planters and the recruiting of non members. The Branch Council received a report from the Estates Practitioners Section and it has formed a new Dental Section.

Terms of Service of European Medical Officers in West Africa

(Continuation of para 142 of Annual Report)

215 The medical officers in West Africa have now submitted to the Secretary of State a further memorial as a rejoinder to the observations of the Colonial Office on their first memorial. The new memorial is signed not only by the medical officers in Nigeria but also by medical officers in the Gold Coast Sierra Leone, and Gambia. As Dr E C Braithwaite who is acting as secretary to the medical officers in Nigeria, will be in this

country at the end of June, it is proposed to arrange a meeting of a subcommittee to discuss the whole subject with him

Termination of Appointment of a Medical Officer in Kenya

216 The Council has received an application from the Kenya Branch for its assistance on behalf of Dr H L Gordon whose appointment as visiting physician to the Mathari Mental Hospital has been terminated by the Kenya Government for the purpose of replacing him by a full time officer. The Council considers that, in view of the special nature of Dr Gordon's work and of the research work he has performed during his tenure of office the Government should have continued his appointment as visiting physician for a short period after the introduction of the new officer and subsequently retained his services in a consultative capacity. The rearrangement of the staffing appears to have been made with undue haste and the Council proposes, therefore, to place its views before the Colonial Office

Sarawak Medical Service

217 The Council has submitted to the London office of the Sarawak Government certain representations concerning the conditions of service of Government medical officers. It is complained that although the country is prosperous, the medical staff has been reduced from seven to three members, and that it is now proposed to appoint a Director of Medical Service from outside the Service. Other causes of dissatisfaction are the withdrawal of the right to private practice the inadequate transport facilities, the deterioration of the free quarters provided and the substitution of a second class for a first-class passage for officers going home on leave. The London office of the Sarawak Government has passed the committee's letter to the Government in Sarawak.

Barbados General Hospital

218 Advertisements were received for two junior house surgeons and one senior house surgeon for the Barbados General Hospital. The salaries offered were considered to be inadequate and the general conditions of service to be poor. The advertisements submitted have therefore been refused.

SCOTLAND

Scottish Scale of Salaries for Whole-time Public Health Appointments

(Continuation of para 155 of Annual Report)

219 The whole position of the Scottish scale of salaries for whole time public health appointments is being reviewed with special reference to obtaining recognition of the scale by the local authorities

Methylated Spirits Bill (Scotland)

220 The Council has considered the provisions of the Methylated Spirits Bill (Scotland), which seeks to restrict the sale of methylated and surgical spirits. The Bill in its present form contains no provision exempting surgical or methylated spirit supplied on a prescription given by a registered medical practitioner or for the sale of such spirit by a dispensing doctor.

The Council is taking steps to ensure that, for the purposes of their profession, registered medical practitioners shall be exempted from the provisions of this Bill.

Midwives (Scotland) Act, 1915

221 Arising out of the interpretation by Glasgow Public Health Department of the scale of fees payable by

local authorities to doctors called in by midwives under Section 22 (1) of the above Act legal opinion has been obtained regarding the matter. The opinion expressed was that it was impossible for anyone to give a definite opinion on the question as to whether the fee of £1 is covered all attendance on mother and child for ten days after confinement as the wording was so indefinite and that if the matter were taken to court a judge might decide either way.

The Council is convinced of the equity of the doctor's claim, and as the Glasgow Corporation differs on the legal position the Council is exploring the question further with a view to its being referred for judicial settlement.

Report of Departmental Committee on Scottish Health Services

(Continuation of para 154 of Annual Report)

222 The findings of the subcommittees appointed to prepare a critical digest of the various sections of this report were submitted to a special Joint Committee of the parent Committee held on May 27 last and a report, incorporating these findings, is to be considered at the October meeting of the Scottish Committee.

Maternity Services (Scotland) Act

223 Reference to this Act is made in para 193 of this report.

British Medical Bureau Scottish Branch

224 A Scottish Branch of the British Medical Bureau has been established at 21 Alva Street, Edinburgh. Mr W M Scobie who has had an extensive experience of this work has been appointed Manager. He will carry out all the Agency and Accounting Business of the Bureau under the general direction of a Scottish Board. This development will afford practitioners in Scotland better facilities for taking advantage of the work carried out by the Bureau.

BUILDING

225 In accordance with the undertakings agreed upon by the Representative Body at Edinburgh, 1927 the Association is committed to begin the demolition of Block C (Nos 3-7 Upper Woburn Place) in September next and to erect thereon a building in accordance with the plans already approved by the Bedford Estate.

Proposals for dealing with this site were discussed and it was finally agreed that the Association should proceed with the proposal originally outlined at Edinburgh in 1927 and approved then by the Representative Body for the complete development of the site in pursuit of which the present gate house in Blocks A and B had been erected providing for lifts staircases corridors and land lord's services in preparation for the full development of the site.

In view of present difficulties in obtaining steel and other building materials however, the Council approached the Bedford Estate with a view to obtaining an extension of the time during which the building proposals should be executed, and the Bedford Estate has consented to a postponement of the commencement of building to a date to be agreed.

The closing of the composing department has freed the fourth floor of the North Wing B.M.A. House and plans are in preparation for the conversion of this floor into offices some of which will be available for letting.

Repairs repainting, and redecoration in accordance with the maintenance clauses in the lease are being undertaken.

E KAYE LE FLEMING

Chairman of Council

APPENDIX V

SCHEME FOR THE PROVISION OF MEDICAL ATTENDANCE AND TREATMENT FOR PERSONS OF MODERATE INCOMES ABOVE THE NATIONAL HEALTH INSURANCE LIMIT

OBJECT AND- CONSTITUTION

1 *Object*—The Service of (hereinafter called the Service) is an association of medical practitioners constituted to organize the provision of medical attendance and medicine* for persons of moderate income above the National Health Insurance limit—that is, persons whose family income is between £250 and £

2 *Area* †—The area of the Service is

3 *Members*—Any duly registered medical practitioner practising within the area may become a Member of the Service upon signing an undertaking to conform to these Rules. Members may be either Acting or Honorary. An "Acting Member" is one who undertakes medical attendance on the subscribers to the Service upon the terms laid down in these Rules. An "Honorary" Member is a member who has signed the undertaking to abide by these Rules but who does not undertake ordinary medical attendance in connexion with the Service.

4 On application for membership practitioners must furnish evidence of membership of one of the medical defence organizations and must continue effective membership of such so long as they are members of the Service.

5 *Officers and Committee*—The officers of the Service shall be a Chairman, Honorary Treasurer and an Honorary Secretary, all of whom must be Members of the Service. The Committee shall consist of the above officers together with Members of whom Members shall be elected by the local Division or Branch of the British Medical Association.

MEETINGS AND GOVERNMENT

6 *Annual General Meeting*—An ordinary General Meeting of the Members called "The Annual Meeting" shall be held before of each year. At this meeting the officers and members of the Committee shall be elected with the exception of those to be elected by the local Division or Branch of the British Medical Association and the annual report of the Committee and statement of account of the Service for the preceding year shall be presented.

7 *Special Meeting*—A Special General Meeting of the members may be convened at any time by the Committee and shall be convened by the Secretary at the earliest practicable day and in any event within twenty-one days of receiving the requisition of Members.

8 *Quorum*—At a General Meeting (ordinary or special) members shall constitute a quorum.

9 *Notice*—Subject to the provision hereinafter contained providing for fourteen days' notice in the case of a proposed alteration of Rules at least seven days' notice of every General Meeting and of the business thereof shall be given by the Secretary to all members but the accidental omission to give notice to any member shall not invalidate the proceedings of a meeting. The notice of a General Meeting (and also a members' requisition for a General Meeting) shall state the agenda thereat, and only matters arising out of the agenda shall be dealt with at that meeting.

10 *Election of Officers*—At each Annual General Meeting all the officers and members of Committee shall retire but shall be eligible for re-election.

* Where it is proposed to inaugurate a Service for the provision of medical attendance and drugs, etc., and the practitioners concerned do not desire to conduct dispensing, it is suggested that the pharmacists of the district covered by the scheme should be approached with a view to effecting an arrangement with them for the dispensing and supply of the necessary drugs and appliances.

† As far as possible the area of the Service should correspond with one or more of the areas defined under the provisions of the National Health Insurance Act. In the case of a large area such as a county subdivisions might be formed each with its own Committee, income limit, officers and officials.

11 *Powers of Committee*—The Committee may make rules for its meetings and fix a quorum. Subject to such regulations not inconsistent with these Rules as may from time to time be prescribed by the members in General Meeting the Committee shall

deal with all such matters as the appointment or dismissal of all employees or agents of the Service; make all insurance arrangements for such employees and agents as may be necessary; effect arrangements with chemists, lease premises (if any) and manage all the other affairs of the Service not required to be dealt with at a General Meeting.

12 *Members Not to Hold Contributory Contract Appointments or to Accept Lower Rates*—A member shall not conduct any private medical club nor shall he hold any contributory contract appointment whatsoever except with the consent of the Committee of the Service, such consent not to be unreasonably withheld.

13 *Canvassing and Advertising*—(1) Canvassing and/or advertising shall not be permitted by or on behalf of, any individual member of the Service, but legitimate local publicity may be given to the Service as a whole.

(2) A member shall not himself receive, or employ a collector to collect subscriptions from contributory contract patients for services or benefits rendered under the Service.

(3) No official employed in the Service is permitted in any way to influence or attempt to influence any subscriber, in favour of any particular practitioner on pain of immediate dismissal.

14 *Expulsion of Members*—Any member who shall after due inquiry by the Committee be held wilfully to have committed a breach of the conditions of these Rules or to have acted in a manner tending to increase unfairly his claim to a share in the balance of moneys available for distribution amongst the members of the Service may be expelled from membership of the Service by a vote of three-fourths of the members present and voting at a General Meeting given after hearing and considering the report of the Committee. At least seven days' notice of the meeting of the Committee at which the inquiry is to take place with particulars of the charge alleged shall be sent to the member concerned by registered post at his last known address and he shall by such notice be invited to attend the inquiry and shall be at liberty to call such evidence and to give such explanations thereat as he may desire. Production of the Post Office registration receipt shall be sufficient proof of service of the notice.

15 *Alteration of Rules*—These Rules shall not be altered except with the consent of two-thirds of the Members present and voting at a General Meeting, provided that fourteen days' notice of the terms of any proposed alteration of the Rules shall have been given in the agenda.

SUBSCRIBERS

16 *Admission*—Subject to the provisions of Rule 27 admission shall be solely through the doctor of the subscriber's choice. If the doctor considers the risk in any individual case to be too great for the ordinary premium he may arrange with the proposer for a higher premium suitable to the case and shall so inform the head office. Such arrangement may take the form of the provision of medicines by the subscriber.

17 *Eligibility*—The Service is available to persons of moderate income above the National Health Insurance limit and their dependants—that is, persons whose family income

is between £250 and £ All subscribers on admission shall make a declaration as to individual or family income as the case may be and this declaration shall be renewed annually. At the time of application also a declaration as to health must be made on the prescribed form. Should cases arise in which there may be doubt as to the eligibility of the applicants for admission they shall be referred to the Committee for its consideration and the decision of the Committee on the question of eligibility shall be final. If any subscriber shall in the opinion of the Committee cease to be eligible on economic grounds his name shall be removed from the list of subscribers.

18 *Subscriptions*—The contributions of subscribers shall be

Subscriptions shall be such as will ensure to the members of the Service a rate of remuneration commensurate with the standard of fees charged in private to those who will be eligible to participate in the Service.

19 *Arrears*—Subscribers in arrears are not eligible for benefit. After four weeks of such arrears of subscriptions their names shall be deleted from the list of subscribers and they shall not be readmitted until all arrears of subscription are paid.

20 *Choice of Medical Attendant*—(a) Except as provided in Rule 27 a subscriber shall on admission and at such other times as are provided by these Rules choose his medical attendant from the members of the Service who are willing to attend him and shall be entitled to the services of such member only.

(b) The contract of the subscriber shall be with his medical attendant only and not with the Service or the other members of the Service. In the event of a subscriber changing his address the consent of the doctor to attend at the new address must be obtained.

(c) A subscriber may change his medical attendant at any time. No subscriber in arrears shall be entitled to transfer until all arrears have been paid up.

(d) A practitioner may at any time give notice to the head office of his desire to have a subscriber's name removed from his list and unless the subscriber transfers immediately to the list of another doctor his name shall be removed from the date for renewal of subscription or at the end of three months whichever is the shorter period.

(e) A subscriber removing shall at once notify his new address to the secretary of the Service.

21 *Subscribers Cards*—Every subscriber shall on admission be supplied with a card on which shall be printed such of these Rules and such information as may be approved by the Committee including the name of the subscriber's medical attendant. Production of the card showing subscriptions paid up to date constitutes the subscriber's right to attendance.

22 *Benefits to Subscribers*—After a period of one month from the time when the first subscription has been paid and provided subscriptions are continuous, subscribers shall be entitled to the following benefits: attendance at the doctor's surgery or at home as the case may require and such medicines and dressings as are usually supplied also at the subscriber's own request an annual medical overhaul.

Subject to the consent of the medical practitioner concerned the patient may become eligible for immediate treatment under the scheme on payment of a fee of £1. This fee shall be payable direct to the doctor.

23 *Limitation of Benefits*—The Service does not include attendance at confinements, operations requiring a general anaesthetic, operative dentistry, the administration of a general anaesthetic, vaccination, special certificates and reports, appliances (such as trusses), special examinations (x-ray, bacteriological etc.) and specially expensive drugs (insulin sera etc.) and dressings not usually supplied in private practice.

FINANCE

24 *Payments*—All payments made by a subscriber shall be the exclusive property of the member who is his medical attendant at the time when such payments become due. Sub-

ject only to a rateable deduction for the expenses of the Service.

25 *Moneys Collected*—All moneys collected shall be paid into a bank to the credit of the Service.

DISTRIBUTION OF SUBSCRIPTIONS

26 All subscriptions received shall as laid down in Rule 24 be credited to the member entitled thereto. At the end of every quarter the secretary shall deduct from the amount credited to each member

(a) For general expenses of the Service (including collection) per cent

(b) For mileage per cent and shall pay the balance to the member or members entitled thereto as soon as possible after the end of the quarter.

NON CO-OPERATING PRACTITIONERS

27 The patients of non co-operating practitioners may be admitted as subscribers to the Service on application to the central office and subject to their providing satisfactory evidence of health.

Where public advertisement is contemplated for the Service one of the following provisions must be adopted.

Alternative 1

In the case of a subscriber electing to choose a practitioner who is not a member of the Service the contributions of such subscriber shall be allocated to a pool which is separate from the Members funds. There shall be deducted from the moneys paid into the pool such amount as is laid down in Rule 26 for the expenses of the Service.

Any such subscriber when submitting quarterly or yearly to the Committee or to its appointed representatives a receipted account or accounts with details as to the number of attendances and visits etc. for advice and treatment received during the previous quarter or year shall be reimbursed from the moneys in the pool in accordance with the following scale:

(Here will be inserted the Scale)

save that in the event of there not being a sufficient total sum available in the pool to meet the full charges in accordance with the above scale the Committee shall have power to make such percentage adjustments as are necessary to effect an equitable subdivision of the funds available.

The total liability of the Service towards such subscribers shall be limited to the financial dimensions of the pool.

Alternative 2

Where a subscriber elects to be treated by a practitioner who is not a member of the Service the proportion of his contributions which would normally be paid to the Member shall be credited to a fund to be known as The Non-Co-operating Practitioners Fund. Subscribers' claims relating

This will only apply in the case of a Service operating in a rural or semi-rural area when consideration might be given to the adoption of some such arrangement as follows:

Mileage—A Mileage Pool shall be formed consisting of all the sums deducted for mileage subscriptions under clause above.

There shall be set aside each year for division among members practising in areas of exceptional difficulty such a sum as the Committee shall from time to time determine and the same shall be divisible yearly or oftener as may be determined by the Committee.

The balance of the Mileage Pool shall be divisible among members in the following manner:

(a) Members practising in an urban area shall not be entitled to any share of the Mileage Pool.

(b) Members practising mainly in semi-rural areas—for example an area containing a concentrated population of 3,000 and over—shall be entitled to receive out of the Mileage Pool a sum equal to 12½ per cent. of the gross subscriptions received from their patients.

(c) Members practising mainly in rural districts—for example, an area containing a concentrated population of under 3,000—shall be entitled to receive out of the Mileage Pool a sum equal to 17½ per cent. of the gross subscriptions received from their patients.

If the Mileage Pool is not sufficient to pay in full the amounts calculated as above each payment shall be decreased in ratio to the percentages mentioned above. If there shall be any balance of the Mileage Pool after calculating the amounts due to each member under this clause such balance shall be carried to a sinking fund to be applied from time to time as the Committee may determine.

The Committee shall be entitled to pay each quarter such sum as it shall think fit on account of mileage and may retain the balance for distribution at the end of the year.

to non-co-operating practitioners services will be met out of this fund *pro rata* wholly or in part according to the amount available in the fund and to the claims against it for the period during which contributions have been paid in

TRANSFER OF PRACTICE

28 In all cases where a practice changes hands subscribers on the list of the former member shall be treated as remaining on the list of the continuing or incoming member unless the subscriber transfers to the list of another member and the amounts received from the subscriber shall be apportioned accordingly

FORMER MEMBERS

29 The subscriptions collected for any former member of the Service and not already paid to him before the date of termination of his membership shall be paid to him as soon as conveniently may be, after the deduction of his share of the common expenses and the subscribers whose medical attendant he was shall have the right to choose as medical attendant any other member who is willing to attend

30 Where a member has ceased for any reason to be connected with the Service the Committee shall have power at

such times as are deemed by it to be expedient, to bring such fact to the notice of each subscriber on the list of the member concerned

LIST OF SUBSCRIBERS

31 The Committee should supply each member of the Service with a list of subscribers contracting with him and entitled to his services and periodically thereafter with a list of additions and corrections

INTERPRETATION

32 In these Rules, where the context does not forbid words denoting the masculine gender shall include the feminine and words in the singular shall include the plural, and vice versa

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June, 1937

APPENDIX VI

SUGGESTED INCREASE OF FEES FOR MEDICAL WITNESSES IN CRIMINAL CASES

1 The British Medical Association draws attention to the inadequacy of the fees at present payable to medical practitioners called upon to give professional evidence in Magistrates Sessions and Assize Courts, and especially in the Central Criminal Court, and urges a substantial upward revision of these fees. In this connexion the Association wishes to emphasize that the existing fees are maximum fees and are higher than those actually paid in many areas

2 The Association understands that the fees payable to medical witnesses are based upon the supposition that the practitioner gives evidence of fact only, and are intended merely to compensate him for loss of time and not to remunerate him for the skilled work and careful study involved in the carrying out of his examination, the preparation of his notes and the giving of his evidence in Court. The Association maintains that any just assessment of the fees must take into account the highly skilled and responsible nature of the duties undertaken as well as the time expended and the interference with the practitioner's ordinary work with consequent suspension or loss of professional engagements

The Nature of the Practitioner's Evidence and the Responsibilities Involved

3 It is generally recognized that the medical practitioner's evidence is frequently of considerable importance in determining the issues before the Court and that whilst he is supposed to give evidence of fact only, it is a common practice for counsel on both sides to question him upon the facts which have been submitted and to seek to obtain from him an opinion requiring professional experience and sometimes specialized knowledge

4 It is therefore incumbent on him not only to conduct with particular care the examination which will form the basis of his evidence but also to study thoroughly the pathological and other aspects of the case in order that he may be prepared to deal with searching questions, failure to answer which may reflect on his professional capacity and involve him in adverse comment in Court

5 The following are examples of the responsibilities which fall upon the medical witness

Alleged Murder or Manslaughter Suicide—A full examination of the deceased person is essential in order

to ascertain such matters as the approximate time of death, the presence or absence of external marks of violence and the significance of any wounds (whether self-inflicted and by what type of instrument produced)

An examination of the mental state of any accused person charged with murder or manslaughter is necessary, as evidence on this point may be of considerable importance

Alleged Rape—A full examination requiring special care is essential, as the evidence of the medical witness is of grave importance

Gross Indecency and Alleged Sexual Offences—The medical witness must be prepared to give evidence as to the mental standard of persons charged with these offences

Drunkenness—This class of case involves a severe test of professional skill and of the powers of observation of the medical witness

Alleged Wilful Neglect or Ill treatment of Children—The practitioner must be prepared to give evidence as to the state of nourishment of the children and as to the significance of any bruises, etc., which may have been occasioned by ill treatment

6 In short the medical witness is commonly required not only to be an accurate observer and recorder of facts but also to exercise skilled judgement in respect of matters of considerable difficulty and crucial importance. For this reason alone his present remuneration must be considered unsatisfactory

The Time Expended and the Interruption and Distraction of Professional Work

7 Before attending at Court the medical witness as has already been stated must give careful consideration to his notes and familiarize himself with all details and with the pathology of the case in order that he may be fully prepared with his evidence and be in a position to deal with points which may arise in cross-examination. Such preparation entails a considerable expenditure of time

8 The medical witness is compelled by subpoena to attend at the Magistrates Sessions or Assize Courts. In the Sessions and Assize Courts it is often impossible to give him any indication of the actual time at which he

will be required to give evidence. He has often therefore to hold himself in readiness to attend when required and it frequently happens that not until 6 p.m. in the evening is he told whether he will be required upon the next day. He must accordingly arrange his professional engagements in order that he may be free to go into Court at any moment. In general medical practice this may well give rise to serious difficulty, especially if the practitioner is single-handed (that is, has no partner or assistant). It is a common experience of members of the profession throughout the country that their attendance at Court leads to a serious interruption and disorganization of ordinary professional work.

9 The Association urges that this is a factor which must be taken into consideration and it asks that a retaining fee of one guinea should be paid for each day for which the medical witness is required by notification to hold himself in readiness to attend the Sessions or Criminal Court.

Magistrates' Courts

10 In Magistrates' Courts, where there is a closer liaison between the doctor and the other parties concerned it is frequently possible to permit the practitioner to give his evidence at a prearranged time. Moreover these Courts are usually in closer proximity to his work than are the Assize and other Criminal Courts. For these reasons the Association while insisting that the increase in the fee of the medical witness should apply to Magistrates' Courts recognizes that the fees payable in these Courts should be lower than those of the Assize and Sessions Courts.

The Special Position of London

11 The position of the police surgeon in London calls for special mention since the inadequacy of the fee is to him a particularly serious matter because of the frequency with which, in the ordinary course of his duties, he is required to appear at the Central Criminal Court and the Sessions. Moreover, owing to the volume of business dealt with at these Courts the metropolitan police surgeon has frequently to be "on call" and is often involved in heavy loss of professional emoluments as a result of uncertainty as to the time at which he will be required to appear and the consequent impossibility of conducting his practice in the manner open to other practitioners.

12 Prior to the abolition of Grand Juries it was the practice to require his attendance on the opening (Grand Jury) day and usually on one or more subsequent days. Payments were invariably calculated on a whole-day basis even when, as sometimes happened, attendance was nominal or for a short period. It was recognized that

the doctor, whether present or not was in fact retained, and that all his professional arrangements were for the time being subordinated to the requirements of the Court. With the abolition of Grand Juries this partial compensation for loss of the practitioner's time has disappeared.

Proposed New Scale of Fees

13 The Association urges that the existing scale be replaced by the following new scale:

Magistrates' Courts	£1 11s 6d for one half day's attendance
	£3 3s 0d for one whole day's attendance
Sessions or Criminal Courts	£3 3s 0d for one half day's attendance
	£5 5s 0d for one whole day's attendance

Half-Day Attendance

(a) The half-day allowance shall be paid where a witness is necessarily detained from his home or professional practice for a period of four hours or less for the purpose of giving evidence.

Whole Day Attendance

(b) The whole-day allowance shall be paid where a witness is necessarily detained from his home or professional practice for a period greater than four hours.

Retaining Fee

A witness shall be entitled to payment of a retaining fee of one guinea for each day for which he is required by notification to hold himself in readiness to attend the Sessions or Criminal Court.

Travelling Allowances

The witness shall be entitled to the following travelling allowances:

For attending a Court at a distance of over two miles:

(1) To witnesses travelling by railway or other public conveyance the fare actually paid. Railway fares except for special reasons allowed by the Court shall be 1st class, and if return tickets are available only return rates shall be allowed.

(2) Where no railway or other public conveyance is available and one or more witnesses necessarily travel by a hired vehicle the sum actually paid for the hire of such vehicle not exceeding 1s. 6d a mile each way provided that where two or more witnesses attend from the same place the total allowance shall not exceed 1s. 6d. a mile each way unless the Court is satisfied that it was reasonably necessary to hire more than one vehicle.

(3) To each witness travelling on foot or by private conveyance where no railway or other public conveyance is available, a sum not to exceed 6d a mile each way.

APPENDIX VII

MEMORANDUM UPON THE REPORT OF THE SCOTTISH DEPARTMENTAL COMMITTEE ON HEALTH SERVICES

1 While the Council has concentrated its attention on Part III of the Report dealing with Medical and Allied Services it should not be thought that it has not found other parts of the Report both informative and stimulating. Nor indeed should an absence of reference to particular recommendations be taken to imply that the Council does not find itself in agreement with them.

PART II

Heredity, Nutrition, Education, and Environment

2 Education (Chapter VIII).—The Council concurs in the suggestion contained in paragraphs 329–333 of the Education Section that the central departments for health and education should co-operate in framing a policy of

education for health. The school medical service should, in its view, provide a continuous supervision of the schools from a health point of view. It is of particular importance that health education other than that provided in schools should be a primary function of the Department of Health.

PART III

Medical and Allied Services

3 Extended General Practitioner Service (Chapters XI to XIII).—The Council is in complete agreement with the thesis that as part of a policy for the promotion of the health of the people it is necessary to secure that as far as possible all members of the community should

have available the services of a general medical practitioner."

4 With the general arguments for the extension of the existing services provided by statute, and with the proposal to secure this development by the extension of National Health Insurance to include dependants of insured persons and others in similar economic circumstances, the Council is in complete agreement. In the Association's proposals for a General Medical Service for the Nation this policy is expressed in the following terms:

Every kind of service which may be necessary for the prevention and cure of disease and for the promotion of full mental and physical efficiency should be at the disposal of every member of the community.

The medical service of the community must be based on the provision for every individual of a general practitioner or family doctor.

The medical benefits of the present National Health Insurance Acts should be extended so as to include the dependants of all persons insured thereunder and entitled to medical benefit.

5 The Association goes further than the Departmental Committee and recommends that the content of medical benefit under the National Health Insurance Acts should be widened so as to include consultant and specialist benefit.

6 With the recommendation that the basis of the employment of the general practitioner should be that obtaining in the existing National Health Insurance Scheme that is, by contract for part-time service remunerated by capitation fees and with the recommendation that the principle of free choice of doctor should be preserved the Council is in complete agreement.

7 The Association agrees wholeheartedly that the training of the general practitioner should be such as to develop the preventive outlook and has, in its Reports on Medical Education, urged the necessary modifications of the medical curriculum to secure this end. The recent recommendations of the General Medical Council if implemented by the Teaching Bodies should result in a great improvement in this direction.

8 **Maternity and Child Welfare (Chapter XIV).** *Maternity.*—With the recommendations of the Departmental Committee under this heading the Council is in general agreement. Indeed it has repeatedly urged the establishment of a comprehensive National Maternity Service based on the provision for each mother of a doctor and a midwife supplemented by consultants and institutional facilities. Continuity of medical care should as the Departmental Committee recommends be secured by the continuous medical supervision throughout every pregnancy, confinement and puerperium by a general practitioner.

9 To the Departmental Committee's proposal that the general practitioner should provide continuous ante-natal supervision and remain available for consultation at every stage of labour and the puerperium the Council would add that the general practitioner should whenever he deems it necessary attend at any stage of labour and the puerperium.

10 The Council strongly endorses the view expressed in paragraph 522 of the Report that it is taking the long view of the future of medical practice to encourage the practice of midwifery by the family doctor and to build up the maternity service on the foundation of doctor and midwife.

11 With the recommendations relating to the better practical training of doctors and midwives, the need for an adequacy of trained and properly remunerated midwives and the need for the provision of consultant obstetricians the Council is in cordial agreement. Indeed there are a number of developments for which the Association has provided as a part of a comprehensive National Maternity Service.

12 The Departmental Committee recommends that the work of the clinics should be developed in co-operation with general practitioners. It is presumed that the clinics envisaged are consultative centres to which would be referred by general practitioners those patients regarding whom they desired a consultative opinion. This in the view of the Council, is the best way of securing effective co-operation between the local authority and the general practitioner.

13 The Departmental Committee recommends an increase in hospital facilities for maternity cases, suggesting the provision of units of sufficient size to justify the employment of a resident medical officer. It is assumed that what the Departmental Committee had in mind was the increased provision of hospital beds to be available primarily for abnormal cases. So far as normal cases are concerned a method of organization based on institutionalization is unsound and unlikely to secure increased efficiency of medical service. Continuity of medical care should be maintained—throughout each pregnancy and between pregnancies—except where clinical considerations make it desirable to transfer the patient from the care of one doctor to that of another. In cases in which specialist attention is not necessary this continuous medical care should be provided by the family doctor of the patient's choice even though the patient is admitted to an institution.

14 With the recommendations relating to the giving of advice on the control of conception, with the establishment of a system of registration of stillbirths and the continuance of arrangements for investigating maternal deaths in Scotland, the Council finds itself in agreement although it suggests that the form used for the inquiries into maternal deaths should be revised after consultation with the Scottish Committee of the Association.

15 The Council agrees that the introduction of a comprehensive maternity service on the lines suggested will call for special measures and in this connexion urges an early consideration of the Association's proposals for a National Maternity Service. The special measures should secure the establishment in one stage of a maternity service of a national character administrative arrangements only being referred to local authorities.

16 **Child Welfare.**—The Council is in general agreement with the recommendations under this heading with amplifications on the lines of the Association's policy.

The infant could be taken to the doctor who had supervised the mother during her pregnancy, and perhaps attended the confinement, who is familiar with the home conditions and the family circumstances and who is at hand for emergencies at all hours of the day and night as compared with the rigidly limited time service of the infant welfare centre.

For the special purpose of instruction in mothercraft the centres are admirable and must certainly be continued. The centres should retain and even enlarge their educational and social values, but should not take on the appearance of hospitals or out-patient departments. The centres will increase in efficiency in their proper sphere when they can no longer be regarded as usurping the place of the family doctor, but are, in fact, in friendly collaboration with him.

17 On the subject of periodical medical examination by general practitioners of children under five years of age with reports to the local authorities the Council suggests that there should be a system of medical examination by the general practitioner either upon his own initiative or on reference of the child to him by the health visitor with a view to a report being made to the school authority on the health condition of the child when he enters a public elementary school. The Council is in agreement with the recommendation of the Departmental Committee that a system of medical examination by the general practitioners of children under five years of

age with reports to the local authorities should be developed

18 That there are serious gaps in organized provision for children between one and five years of age the Council agrees as it does with the suggestion that as far as possible the arrangements for children under five years of age and school children should be developed together to form one service, provided this refers to administrative arrangements only

19 School Health Service (Chapter XV)—In general the Council endorses the proposals of the Departmental Committee. The Council emphasizes that this service both in its central and local administration should be regarded as primarily a health and not an educational service

20 In order to co-ordinate the work of the general practitioner and the school health service the local authority should arrange that when the child leaves school a report is available if desired to the general practitioner on the health condition and medical history of the child as disclosed by the school medical reports. This would be of particular importance if the suggestion contained in paragraph 17 were adopted

21 The Council suggests that greater emphasis should be laid on the continuity of medical supervision and after care of children throughout school life rather than upon routine medical inspection. This should have the further advantage of bringing the general practitioner into closer relationship with the school medical service

22 Infectious Diseases (Chapter XVI)—The Council approves the recommendations under this Section desiring at the same time strongly to endorse recommendations (3) and (4) suggesting the amendment of the law so as to maintain the infectious diseases service flexible and in line with modern developments. It cannot be too strongly emphasized that there should be such a concentration in hospital units as will permit adequate facilities for accommodation and specialist treatment on modern lines. Wherever practical the infectious diseases unit should be attached to a general hospital

23 Poor Law Medical Service (Chapter XIX)—The Council concurs in the recommendations in this Section and particularly in the suggestion that the local authorities should be given by central authorities a lead in the direction of a domiciliary Poor Law medical service based on continuity of medical supervision by the family doctor of the patient's choice. This, as the Departmental Committee points out, is necessary in order that local authorities may avoid action which might cut across national policy in the development of medical services

24 National Health Insurance Medical Service (Chapter XX)—The Council welcomes the tribute paid by the Departmental Committee to the success of the National Health Insurance scheme

25 Highlands and Islands Medical Service (Chapter XXI)—In the Council's view this service would be strengthened by the introduction of a superannuation scheme for its medical officers

26 Hospital Services (Chapter XXII)—In expressing agreement with the Committee's general recommendations under this Section it is desired to draw attention to the desirability of recognizing the services of the staffs of voluntary hospitals by payment for their services. Consideration of the change in clientele and of the change in the law leads inevitably to certain conclusions. The strictly charitable basis of the voluntary hospital now exists only to the extent that the poor are still treated gratuitously, the majority of persons obtaining treatment are those who can pay and do in fact pay directly or indirectly, towards their maintenance and treatment. Although the medical profession will gladly give, as always its services gratuitously to those who cannot afford to pay for them, it is inequitable to require it to give its services without remuneration to voluntary

hospitals which treat persons able to pay and which in practice collect payments from a large number of their patients. The field of private practice has inevitably contracted with the result that consultants and in particular the younger consultants are finding it increasingly difficult to secure and maintain a standard of living which represents a reasonable reward for their services and which enables them to maintain the highest possible standard of professional efficiency. There should be remuneration of the hospital staff in respect of all medical services in hospital for which payment is made, directly or indirectly—by contributory scheme, local authority, employer or patient. The voluntary hospital and the county or county borough authority, in the area where the powers conferred under the Local Government Act are being properly utilized are serving the same section of the community and the principle of remuneration for services rendered should be adopted in both kinds of hospital

27 The Council notes with interest the proposals contained in recommendation (8) in regard to a method of supervision and guidance of voluntary hospitals by the Department of Health in Scotland and wishes to make it clear that it does not necessarily follow that this method could be applied with success to England and Wales

28 Mental Health Service (Chapter XXIII)—The Council concurs in these recommendations suggesting at the same time that accommodation should be provided in general hospitals for observation beds and beds for early and minor cases of mental disorder and subject to the important proviso that Recommendation 7 should apply to all children, and not only to those under 5

29 Industrial Health Services (Chapter XXIV)—The Council is not satisfied that a case has been made out for the separation of occupational from other diseases for the purposes of clinical observation

30 Dentistry (Chapter XXV)—The Council desires to emphasize the importance from a medical point of view of an efficient dental service. Insufficient use is being made by parents of facilities provided by the school dental service even in those cases where dental treatment is provided

31 Other Services (Chapter XXVII)—The Council agrees that there should be available special diagnostic and treatment facilities, utilizing so far as possible voluntary agencies, supplementing them where necessary

32 With regard to the provision of a consultant and specialist service the present policy of the Association is that a consultant service and all necessary specialist and auxiliary forms of diagnosis and treatment should be available for the individual patient, normally through the agency of the family doctor. The method by which these services should be provided, however, is not laid down in the policy of the Association, and the Council will report further upon this matter

PART IV

Finance and Administration

33 Finance (Chapter XXVIII)—The Council strongly supports the observation of the Departmental Committee that true economy is to be found by reducing the burden of ill health by the adoption of a co-ordinated national health policy. In relation however, to the financial proposal that a capitation fee of 6s per annum should be payable for medical attendance on the dependants of insured persons the Council regards the amount suggested as grossly inadequate

34 Administration (Chapter XXIX)—In the Council's view units of local administration should be of a size and nature and enjoy a rateable value such as would permit the organization of a comprehensive and efficient health service

35 On theoretical grounds the proposal to create for the purposes of health administration, regional areas related

to natural hospital areas rather than local government boundaries is one which has much to commend it. Practical considerations, however, lead to the conclusion at the present juncture that the more expedient method of establishing units of efficient proportions would be by the transfer of the health functions of the smaller authorities to those larger authorities which are of sufficient size and rateable value. An essential administrative safeguard would be the establishment by the local authorities to which health functions are assigned of a statutory committee to which would stand referred all questions relating to the medical and allied services.

36 Certain services however, and particularly those of an institutional character cannot be efficiently and economically managed by many even of the larger existing authorities. The Council welcomes therefore the Departmental Committee's recommendation that the powers of the central department for initiating and securing schemes of co-operation among local authorities should be strengthened.

37 The National Health Insurance service would require special treatment. It should remain under central management, the local administration should provide for adequate representation on the appropriate committee and sub-committee of the bodies now represented on insurance committees and the establishment of a professional committee comparable to the panel committee with similar duties and functions.

THE ASSOCIATION OVER-SEAS

The meeting of the Dominions Committee on May 24 over which Dr William Paterson presided was occupied to an unusual extent with what may be called personal questions—that is to say questions relating to pay, promotion status, or privileges of individual medical officers or small groups in the Colonial Medical Service. It is inevitable that in such a service, with its members isolated and subject to varying administrations in all parts of the world such questions should arise more frequently than in the public health service at home and when the matter is beyond adjustment by the local Branch recourse is naturally made to headquarters of the Association as represented in this instance by the Dominions Committee. The Committee has some very delicate work to do much of it of a kind which cannot usefully be published.

On this occasion the cases which came before the Committee related to places as far away as British Honduras, Barbados, Kenya, West Africa and Egypt. One complaint from a medical officer attached to a Government service for example was that for the third time seniority had been set aside: he had been passed over for an expected appointment and the Government had appointed a young man believed to be under 30. This complaint is not infrequent in the Colonial Medical Service but in this instance there was an added touch. The officer making the complaint stated that he had learned from a member of the Legislative Council who had been to see the Governor on the subject that the Governor had wired to the Colonial Office that he wanted an Englishman. The officer in question happened to have been born in Bombay and several of his colleagues had been born in distant parts of the Empire. If the condition of actual birth in the home country is insisted on it will on the basis of past experience rob the service of a good deal of distinction. Not a few men in the Colonial or the Indian Service were born into it and are none the less of British birth and tradition because their fathers were serving at the time it came over to them.

The treatment accorded to one member in an African colony was the subject of a long memorandum placed before the Committee. This member had been dismissed from his post as a medical officer attached to a Government hospital for the reason given being that a younger and more active man and a whole-time officer was required. It was pointed out that the member in question was a doctor of medicine and was in full health and vigour

and no suggestion has been made that he is unequal to his work. The point is, however, that the effect of the decision is to bring to an end a first-class piece of research work involving a psychological and physical study of the African native, a work which has aroused widespread interest in this country. The Dominions Committee decided to communicate with the Colonial Office on the subject.

The question of the Sarawak Medical Service (which is not a part of the Colonial Medical Service) was again before the Committee. It is stated that it is now proposed to second medical officers from Malaya to the medical service in Sarawak. One of the main points for which the Sarawak medical officers have pressed is that they should be treated similarly to the medical officers in Malaya. If the conditions of service in Sarawak are to be improved it seems only equitable that before there is any such seconding of officers who had resigned because their representations hitherto had failed should be given an opportunity of returning to the service.

European Medical Officers in West Africa

The position of European medical officers in West Africa engaged the close attention of the Committee, which appointed a sub-committee to explore the possibilities of the most useful action. A memorandum from Nigeria stated that according to the revised scale for 1935 there has been an actual reduction in the emoluments of certain officers although during recent years their work and responsibilities have greatly increased. In proof of the latter point some remarks are quoted from Sir Walter Johnson who was from 1929 until recently director of medical and sanitary services in Nigeria. He stated that in the old days the Government doctor was the cantonment doctor, whose work consisted of looking after the medical needs of a few European officers, African troops and a prison. Usually his work was finished in less than half a day. Now quite 90 per cent of the Government medical officer's time is spent upon medical work for the general African population and the day is all too short for the huge volume of work he gets through.

It was also stated that the European official population has been considerably increased largely owing to the action of the Governments of West African colonies in offering every inducement to wives of Government officials to go out for at least a part of their husbands' tour, resulting in more work for the men engaged on the clinical side. It was claimed that there had been discrimination between the administrative and the medical departments, the pay and the prestige of the former being raised and that of the latter being lowered although since the salary rates were fixed seventeen years ago there had been such a vast increase in the work and responsibilities of medical men. A memorial on the subject has been addressed to the Secretary of State signed by 104 medical officers from Nigeria, thirty from the Gold Coast, nine from Sierra Leone and five from Gambia. He is asked to appoint an impartial committee to go into these matters.

The Committee considered the arrangements for the Overseas Conference to be held during the Annual Meeting at Belfast and some general conversation took place on the desirability of sending a member of the Medical Secretariat on a colonial tour in order to establish contacts, investigate difficulties on the spot, and increase the likely effectiveness of action by the Association.

A memorandum has been sent to all county, county borough and metropolitan and municipal borough councils by the Air Raid Precautions Department of the Home Office drawing attention to the necessity in matters of air raid precautions of the closest co-operation between the local authority and the occupiers of industrial or business premises in its area. The memorandum points out that even the largest establishments in which an air raid precaution scheme may have been prepared will look to the local authority for various services which are beyond their resources to provide.

TESTIMONIAL TO DR GUY DAIN

The objects of the Fund are to honour Dr Dain for his valuable services to the medical profession during the past twenty years and to give effect to Dr Dain's wish that the amount subscribed shall be utilized for the purpose of assisting the education of sons and daughters of medical practitioners who are in need of such help.

FIFTH LIST OF CONTRIBUTIONS

The following is the fifth list of contributions to the Fund

East Riding of Yorkshire Local Medical and Panel Committee	10	0	0
Dr A T Ross (Meggavisey)	1	1	0
Barnsley Local Medical and Panel Committee	6	19	0
Midlothian Panel Committee	10	10	0
*Stoke-on-Trent Panel Committee	20	0	0
Worcestershire Panel Committee	50	0	0
†York (North Riding) Panel Committee	33	6	8
Berkshire Panel Committee	21	0	0
Ayr County Panel Committee	10	10	0
Anonymous	2	2	0
Dr A Forbes (Sheffield)	5	5	0
Durham Local Medical and Panel Committee	105	0	0
Ex G P	2	2	0
Gloucestershire Panel Committee	25	0	0
Westmorland Panel Committee	15	0	0
Somerset Panel Committee	10	13	0

The total amount received up to June 12 1937, is £2 17s 9d

Cheques should be made payable to the Dain Testimonial Fund and forwarded to the Honorary Treasurer Dr G C Anderson BMA House Tavistock Square London WC1

* First instalment of a total contribution of £60
† " " " " " " £100

GENERAL MEDICAL COUNCIL

DISCIPLINARY CASES

Adultery and Professional Relationship

The Council on May 28 and 29 considered the case of DOUGLAS CHEETHAM PIM DSO MD 1920 U Dubl registered as of Brecon Road, Abergavenny who was summoned on the charge of having committed adultery with Mrs Anne Alma Ferguson on various dates during 1935 and that in August, 1933 the said Mrs Ferguson had consulted him about the health of her son and during the years 1934-6 he had also stood in professional relationship with Mrs Ferguson and her son and maid-servant. The complainant was Mrs Ferguson who was represented by Mr J P Valetta counsel. Dr Pim was defended by Mr W A Macfarlane counsel instructed by Messrs Le Brasseur and Oakley on behalf of the London and Counties Medical Protection Society.

Mr Valetta in opening the case said that it was one in which dates were very material. The defence was that Dr Pim knew Mrs Ferguson as a child and met her again in July 1933 on holiday in Ireland when old acquaintance was renewed and shortly afterwards intimacy occurred. This adultery in 1933 was not the consequence of any professional relationship. Mrs Ferguson, on the contrary stated that adultery took place for the first time in January 1935 when she and Dr Pim went together for a week to Torquay. She denied that he knew her as a child. After she had met him socially in Ireland in 1933 she consulted him about the health of her son. A specialist had diagnosed tuberculosis, but Dr Pim, after examining the boy contradicted that view and his opinion was confirmed by another specialist. Dr Pim had earned her gratitude by this and other services on behalf of her son. He afterwards told her of his domestic unhappiness, and before January 1935 she was told that he and his wife had parted. In March of that year to her surprise she was served with divorce papers naming her as intervener but the petition was withdrawn within a few days and Mrs Ferguson discovered that Dr and Mrs Pim were again living together. This inquiry had been forced upon Mrs Ferguson by reason of scurrilous statements circulated in the town—Cheltenham—in

or in the locality of which the parties had resided. It was said that she had broken up the Pim ménage and taken the man away from his wife which was entirely contrary to the facts.

Mrs Ferguson in evidence said that her marriage with an Australian had been dissolved owing to desertion there was no question of misconduct. She first met Dr Pim in Ireland in 1933 but no misconduct took place nor was it ever suggested. She spoke to the subsequent medical examination of her son by Dr Pim certain small attendances upon herself including an anaesthetic for a dental operation and attendance on her maid-servant who was Dr Pim's insurance patient. She denied in cross-examination that she had told certain persons in Cheltenham that she was taking these proceedings to get revenge on Dr Pim.

Dr Pim in evidence reaffirmed his declaration that he had known Mrs Ferguson as a child that he had met her in Ireland in 1933 when acquaintance was renewed and shortly afterwards after they had been to a dance together misconduct took place. Later he had written to her that as he was married the association had better cease but she threatened to commit suicide and begged him to renew their friendship. He denied that he had examined her son or was associated with the decision to seek a specialist. Mrs Pim gave evidence confirming that of her husband and said that it was in November 1934 he admitted to her that he had committed adultery with Mrs Ferguson.

After the case had been considered *in camera* the Council found the facts alleged against Dr Pim proved to its satisfaction and directed the registrar to erase his name.

Canvassing

The Council considered the case of BAKHTAVAR SINGH JAIN registered as of Wocley Castle Road Selly Oak Birmingham who appeared on the charge that he had canvassed patients of other practitioners in particular, in October 1936 one Alfred Bird whose transfer to his insurance list he procured and one Arthur Eccleston and his wife whom he endeavoured to obtain with their child as his patients. Similar allegations were made with regard to two other patients.

The complainant was Dr Francis R Gedye who was represented by Mr Macfarlane counsel instructed by Messrs Le Brasseur and Oakley, solicitors, and Dr Jain was defended by Mr A Davies counsel, instructed by Messrs Cole and Matthews. An application had been made earlier during the Council proceedings on behalf of Dr Jain that the case might be postponed in view of the fact that writs for slander had been issued by him against a certain person or persons, and the case might be expected to be heard shortly at Birmingham assizes. The application was refused. Mr Macfarlane called no evidence to support the charge of canvassing. Albert Bird. He called Mrs Eccleston whose doctor had been Dr Gedye who stated that Dr Jain called on her and gave her a professional visiting card. Mr Arthur Eccleston, her husband also gave evidence that he had overheard Dr Jain ask his wife if she and her husband would go on his panel. A document was put to this witness which he admitted writing and signing at a later date. In this he declared that the doctor had not asked him and his wife to come on to his panel and that the allegations of canvassing had been put into his mouth by a solicitor's clerk. He now said that he had written this contradictory statement at the respondent's dictation. He was told by Dr Jain that he was taking proceedings for slander against another doctor and that if he (Dr Jain) did not win his case before the GMC the witness would be brought into the slander action and get into serious trouble. He therefore considered the best thing to do was to wash his hands of the case.

Mr W H Evans, who was on the list of Dr Thomas said that Dr Jain had asked him on whose list he was, and whether he would like to change over to his. In cross-examination he said that after he had made a statutory declaration a gentleman whom he did not know had induced him to sign a contradictory statement of which part was true and part was not, as he had got timid.

Mrs Florence Jones gave evidence as to a doorstep conversation with Dr Jain who had asked her as an insured person whether she would like to sign on to his list. He gave her a card which she had burnt. Mrs Ellen Atterbury also gave evidence that Dr Jain had called and left his card.

Dr Jain, in evidence said that he had once nearly a year ago treated Mrs Eccleston's child and the visit was entered in his day book which he produced. He merely saw Mrs Eccleston standing at her door and asked after the child he had treated. He had not seen her husband nor given a card nor indicated that he wanted to attend. Later Mr Eccleston told him that he had been pestered by solicitors and their clerks to go up to London over the case and wished to wash his hands of the affair because he had made a statement which was not correct and had simply been prepared for him to sign. Eccleston thereupon wrote another statement in his own words, no part of it being dictated to him. His conversation with Mr Evans was due to the fact that he thought he was another Evans a brother who had been his patient, and whose record card he had been asked by the insurance committee to return. His conversation with Mrs Jones was a chance one begun by her with the remark that she had a cold and was coming to see him; he did not ask her to sign on as his patient. His visit to the Atterburys was merely to ask the man to attend to the garden of his surgery. He had never invited any of the witnesses to come on to his list.

The witness was closely cross-examined as to the entries in his day book relating to his attendance on the Eccleston child and it was suggested by the Legal Assessor that 1937 had been altered to 1936. The witness replied that the material must have been copied from another book and by a slip of the pen the entries had got out of chronological order.

The Council found that three of the charges had been proved to its satisfaction and instructed the registrar to erase the name of Bakhtawar Singh Jain from the *Medical Register*.

Charges of Canvassing Dismissed

The Council dismissed the charges relating to canvassing brought against HUGH McNICHOLL, registered as of London Road, King's Lynn. It was alleged that in 1936 or 1937 or both years he had canvassed the patients of Dr Guy Kinnear by furnishing or causing to be furnished to them his professional cards. Ten charges in all were set out, some relating to the canvassing of named persons and others to the employment of two persons as agents. The complainants were the London and Counties Medical Protection Society represented by Mr Macfarlane, counsel, instructed by Messrs Le Brasseur and Oakley, and Dr McNicholl was represented by Mr Charles Davis, solicitor of Messrs Bulmer and Davis. Dr Guy Kinnear, a practitioner of Nottingham, London, S.E., gave evidence that he started practice in that neighbourhood in 1935 and the respondent came afterwards, living about a mile away. A man who with his wife and daughter had been attended by Dr Kinnear for some time had brought witness a professional card of the respondent, which was put in evidence. A woman witness gave evidence as to calls made upon her by the respondent and was cross-examined. Dr Charles Wortham Brook, another practitioner of Nottingham, also testified as to having received respondent's cards from a number of his patients. He denied that he was co-operating with other practitioners to get the respondent out of the neighbourhood, but respondent was putting them in a difficult

had taken some cards without his knowledge and distributed them. Evidence on behalf of the respondent was given by four other witnesses.

After deliberation by the Council in camera the President announced that the charges had not been found proved.

The last case was that of ALBERT RUDOLF RELLUM, registered as of Dockhead, Bermondsey, who was charged with having canvassed certain patients of Dr Joseph Frelich who brought the complaint. Dr Rellum was accompanied by Mr John Ritchie, counsel.

Dr Frelich stated that Dr Rellum had formerly been his assistant. After he had left his service a patient Mrs Selley called at his surgery and told him that the respondent had been canvassing members of her family who were patients of his. Mr and Mrs Selley and two sons gave evidence, but at the conclusion of the complainant's case without calling upon the respondent the Council decided that the charges had not been supported to its satisfaction.

The final act of the Council at the end of its five day session was to re-elect Mr Michael Heseltine as Registrar. Sir Robert Bolam, in making the proposition, complimented Mr Heseltine on the excellent services he had rendered during his four years of office.

Correspondence

CHIROPODISTS AND OPTICIANS

SIR.—It is announced apparently with authority that the Board of Registration of Medical Auxiliaries has decided to include in its register chiropodists who pledge themselves to confine their activities to the treatment of abnormal nails and all superficial excrescences occurring on the feet such as corns, warts, callosities, bunions, etc. As this formula was refused "recognition" by the Annual Representative Meeting in 1934 it must be presumed that the representatives of the British Medical Association on the Registration Board have been outvoted by their colleagues and that they are now anxiously considering their position. The bond it appears is not all on one side. Whether chiropodists consent or do not consent to the prescribed limitation of their activities is their own affair, but medical practitioners will read with surprise as part of the bargain that doctors will in future be required to send their patients to a registered chiropodist only. Thus the Board undertakes whether with or without authority to give pledges as well as to accept them, though it is difficult to believe that the representatives of the B.M.A. on the Board are consenting parties to these arrangements.

The position is rendered the more acute by the parallel proposal of the Minister of Health to establish a register of opticians who are to receive official recognition as competent to treat errors of refraction, to detect the presence of disease and not less important and not less difficult to certify the absence of disease.

The candidates in each of the two groups urge one and the same plea—namely, practical training in the recognition and treatment of abnormal conditions occurring in a particular and limited part of the body, the foot in the one case, the eye in the other, the acquisition of skilled craftmanship in dealing with these conditions, and again the ability in the one concerned to recognize in spite of the lack of medical training the presence or absence of any pathological condition that would call for the care of a medical practitioner.

The answer to these claims need not be stated in detail. It includes a recognition of the right of the individual citizen to choose for his medical advice whom he will, an inability on the part of the medical profession to accept responsibility for any treatment based on the opinion or diagnosis of any person who has not as a minimum been trained and examined in the terms of the medical curriculum, and an affirmation of the need in the public interest of maintaining a ready recognition of the distinction between practitioners who have been recognized as qualified medical practitioners and those who have not been so recognized. The immediate point is that the latter are not

applicable equally to the two groups here concerned and that the setting up of a 'register' in the one case as in the other tends to blur in the public mind the distinction between fully qualified medical practitioners and other persons who what ever their merits are not fully qualified medical practitioners. If the Registration Board is to be allowed with professional approval to set up a Register of Chiropodists with what countenance can the profession oppose the Register of Opticians favoured by the Ministry of Health?—I am etc

London W1 June 12

C O HAWTHORNE.

SIGHT TESTING OPTICIANS AND OPHTHALMIC BENEFIT

SIR—Through the kind offices of the Member for my constituency I was able to listen to the debate on the Ministry of Health Estimates in the House of Commons on June 8. The Minister in a laudable speech embracing his many excellent wares and services did not refer to his proposal to permit immediately the setting up of a register of sight testing opticians.

Sir F Fremantle (St Albans) flourishing a batch of telegrams of objection to such regulations in a depleted House of at most thirty Members dealt with the matter concisely but comprehensively and with appropriate emphasis in the discussion which followed. He reminded the House of the findings of two relevant departmental committees declaring against such ultimate responsibility of diagnosis being placed in the hands of opticians; he also pointed out the adequacy of existing arrangements set up in the form of the National Eye Service expressly to meet the demand in question—that of the insured population. He might well have reminded the Minister of his own agreement with the view of the profession opposed to such recognition as expressed by an influential medical deputation.

I was unable to remain to hear the Parliamentary Secretary reply to the debate; he was reported to have mentioned the matter stating practical difficulties of universal application of the benefit and insufficient education of the public in the use of the present facilities. If this were true could not the Minister include consideration of this matter in his intended

Use Your Health Services drive next autumn? He surely would not remedy the existing alleged failure to use the ante-natal services (for so he complains) by vesting diagnostic responsibility in midwives!

Even if it could be admitted that practical difficulties in meeting the demand exist it would I submit, be the duty of the profession strenuously and unequivocally to express its opposition to the 'recognition' of a register granting such powers whether directly or inferentially to a group of opticians so long at any rate as they have not the means to an essential knowledge of clinical pathology.

In my view the ability fully to appreciate the eye not merely as an optical apparatus, however wonderful but as a living neurovascular organ lies at the root of the matter, and may account for the apparent apathy of the influential lay public to the fundamental issue involved.

I suggest that an invitation to Members of Parliament to consider the danger and to make individual representations to the Ministry would be treated sympathetically and would meet with the desired effect—I am etc

Barnes SW June 9

H C SMITH

* It is understood that a communication on this matter has been addressed to all Members of Parliament by the National Ophthalmic Treatment Board—Ed. *BMJ*

INSURANCE CAPITATION FEE

SIR—In the Memorandum of the Minister of Health published in the *Supplement* of May 29 (p. 317) it is stated that the hospitals have relieved the general practitioner of many of his more onerous responsibilities (paragraph 28) and this is used as an argument for the reduction of the capitation fee. Whatever the case in large towns the facts are very different in the smaller ones where the hospital staff consists entirely of the general practitioners of the district and the conditions in Melton Mowbray must be similar to those in many other places of the same size.

In paragraph 26 it is stated that cases of incapacity in hospital have increased by 12 per cent in two years and this is in keeping with our impressions. Here we have a hospital consisting partly of private but mainly of free beds. It started in 1920 as a cottage hospital containing six beds, now there are thirty six beds and an extension that will give us over fifty beds is nearly complete. The annual maintenance is covered by voluntary subscriptions derived for the greater part from small payments from the insured class—a fact that shows that the services provided give satisfaction.

Except for unusual major operations and a few special orthopaedic ones which are performed here by visiting consultants and the specialties (for example radium applications ear and eye cases) which are sent elsewhere all the common medical and surgical ailments are dealt with entirely by the local staff each member of which is on the panel. For instance one doctor has made himself competent in x-ray and plaster work another has interested himself especially in medicine and takes charge of the difficult diabetics does blood counts etc two others divide the surgery and so on. As there is no house surgeon the after-care of operation cases devolves also on the staff and may entail many extra day and night visits.

The point I wish to make is this that whereas in the big towns a panel doctor may send his difficult case to hospital and be relieved of the treatment here we send the patient to hospital also but have to follow him there and administer the treatment ourselves. The difference in the amount of time and responsibility entailed is enormous. Last year in the free wards there were 443 admissions and 297 operations—all of these were from the insured class and the majority were actually insured persons. Fractures treated mostly without admission numbered 101 with 170 applications of plaster. These figures take no account of cases treated but not admitted to beds such as those of abscesses of all kinds, extensive cuts foreign bodies in the hand and many other troublesome conditions which the practitioner in the large town would automatically send to hospital.

What would be considered the adequate fee if these services had to be given by individual panel doctors throughout the country? Or what would a London panel doctor think if when called in the middle of the night to a case of intestinal obstruction he then had to wake one colleague to give the anaesthetic and another to assist while he did the operation? Of course so far as we are concerned the present fee is ridiculously inadequate and we could not exist to give the services we do but for the income derived from private practice. Our consolation is the added interest we have in our work but when I read the account of the specious case that is being made to reduce the capitation fee I feel that doctors placed as we are here can at any rate answer very completely the charge that hospitals are doing our work. We have every reason to demand some encouragement for what we do by a very considerable advance in the present rate of payment—I am etc

Melton Mowbray, June 6

H S FURNESS

SIR—As one of those who have started insurance practice since that fateful year 1924 I would in all humility draw your attention to a few aspects of the question of the capitation rate which have not received a proper airing during the Court of Inquiry.

In the first place I think that I am expressing the thoughts of a number of my colleagues when I say that the findings of the 1924 inquiry have no meaning for me. They were arrived at before I even started medicine and seem irrelevant. I would estimate that half the insurance doctors have changed since that date. No keen young practitioner can feel that he is being adequately remunerated for his work on the present scale of 1s 6d a service but unfortunately it is the only way of starting a practice. The security of a panel is the only one accepted by those agents who lend money to the impecunious young doctor. Again the introduction it affords to the private side of practice is not to be ignored. It is, however, begging the question to give these as reasons for keeping the capitation fee at the insignificant figure at which it now stands.

British Medical Association

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Departments

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Street Dublin (Telegrams Bacillus Dublin Tel 62550
Dublin)

Diary of Central Meetings

JUNE

18 Fri Science Committee 2 p.m.
24 Thurs Insurance Acts Committee 2 p.m.
30 Wed A.R.M. Agenda Committee 11.15 a.m.

Notice of Annual General Meeting

NOTICE CONVENING MEETING

Notice is hereby given that the Annual General Meeting of the British Medical Association will be held in the Assembly Hall, Fisherswick Place, Belfast, on Tuesday, July 20, 1937, at 12.30 p.m. Business (1) Minutes of the last meeting (2) Appointment of auditors (3) Report of election of President for 1938-39

G. C. ANDERSON
Medical Secretary

L. FERRIS SCOTT
Financial Secretary
and Business Manager

Notice of Extraordinary General Meeting

Notice is hereby given that an Extraordinary General Meeting of the British Medical Association will be held at the Assembly Hall, Belfast, on Tuesday, the 20th day of July, 1937, at 12.30 o'clock in the afternoon or as soon thereafter as the Annual General Meeting of the Association shall be terminated, when the following resolution, with or without amendment, will be proposed as a Special Resolution

RESOLUTION

THAT the Articles of Association of the British Medical Association be altered in manner following

(i) By inserting in line 1 of Article 5 before "By laws" the words "Regulations or" and by inserting at the end of the same article the following additional paragraph

Provided always that in the case of any person who shall have been a Member of the Association for a period of 50 years no further annual subscription shall be payable as from the 1st of January next succeeding the expiration of such period or in the case of existing Members who have been Members for more than 50 years then as from the 1st of January 1938 but so that this proviso shall be without prejudice in the case of a Member who is a Member of a Corporate Branch or of a Corporate Group to his obligations as such Member of the Corporate Branch or of the Corporate Group

(u) By adding to Article 6 the following additional paragraph

Provided further that in the case of any person who shall have been a Member of the Association for a period of 50 years such person shall without payment of any annual subscription as from the 1st January next succeeding the expiration of such period or in the case of existing

Members who have been Members for more than 50 years then as from the 1st January, 1938 and during the continuance of his Membership be entitled to all the privileges aforesaid but so that this proviso shall be without prejudice in the case of a Member who is a Member of a Corporate Branch or Corporate Group to his obligations as such Member of the Corporate Branch or of the Corporate Group

(iii) By substituting in Article 7 lines 6-8 the words "Under Article 9 (c) or (d) for the words by reason of his conviction or expulsion as hereinafter provided

In relation to "Associates" and "Associateships"

(iv) By amending the headings to Article 3 to read as follows

II—MEMBERSHIP AND ASSOCIATESHIP

ELIGIBILITY FOR MEMBERSHIP

(v) By inserting after Article 4 the following new Article

Each Branch shall have power to elect as Associates such persons and in such manner as the By-laws may provide and to admit Associates so elected to such privileges (not being inconsistent with the provisions of the Regulations and of the By-laws) as may from time to time be conferred on them by or under the By-laws

An Associate shall not be a Member of the Association or of any Division or Branch thereof for any purpose and no Associate shall act as a Member of the Council representative or officer of the Association or of any Branch or Division or be entitled to receive notice of or to be present or to vote at any General Meeting of the Association

(vi) By inserting in line 2 of Article 5 after "Member" the words and Associate and in line 6 of the same Article after Member the words "or Associates."

(vii) By inserting after Article 6 the following new paragraph

Each year's subscription shall entitle the Associate to the privileges (not being inconsistent with the provisions of the Regulations and of the By-laws) which may for the time being be conferred by or under the By-laws on Associates of that Division and of that Branch of which he is an Associate

(viii) By inserting in line 1 of Article 7 after Member" the words or Associate, in line 5 of the same Article after membership" the words or his former associateship (as the case may be) and in line 6 of the same Article after membership" the words or associateship"

(ix) By amending the heading to Article 8 to read as follows

Duration of Membership and Associateship

(x) By amending line 1 of Article 8 to read as follows

Every Member and Associate shall remain a Member or Associate (as the case may be) until his

By inserting in line 2 of the same Article after "membership" the words or associateship (as the case may be)"

(xi) By amending the heading to Article 9 to read as follows

Termination of Membership and Associateship

and by inserting in the same article the following words

In line 1 after membership the words or associateship"

In line 1 of (a) after "who is a Member the words or Associate"

In line 13 of (c) after (iv) the words "in the case of a Member

At the end of (c) the following words

or (v) in the case of an Associate if he ceases to be entitled to legal recognition as a member of the medical profession in the country in which he is permanently resident.

struction in air raid precautions would begin in a few weeks time

Dr A V NEALE (Birmingham) demonstrated the following interesting cases: streptococcal empyema in a child; polio myelitis; spinal tumour with paraplegia; diabetes treated with protamine insulin; pernicious anaemia after pregnancy; diverticulitis and carcinoma of the colon; Simmonds' disease.

CAMBRIDGE AND HUNTINGDON BRANCH ISLE OF ELY DIVISION

At a meeting of the Isle of Ely Division held at March on May 18 Dr J W BONE (Luton) gave an interesting lecture on the British Medical Association World Tour. Dr Bone illustrated his remarks with a film of the tour and both his address and the film were greatly appreciated.

CEYLON BRANCH

A special general meeting of the Ceylon Branch was held at the Colonial Medical Library, Colombo on January 11 with Dr N ATTYGALLE in the chair. The meeting had been convened in order to give members an opportunity to meet Sir RICHARD NEEDHAM who gave an address on 'Medical Education in the East'. On the motion of Dr J R BLAZE, seconded by Dr H O GUNewardene, a vote of thanks was accorded Sir Richard Needham for his address.

At a meeting of the Branch held at the Colonial Medical Library, Colombo on January 27 with Dr BLAZE in the chair, Dr Frank Gunasekera was elected representative in the Representative Body and Dr H C P Gunewardene a delegate to the Annual Meeting of the British Medical Association at Belfast. On the motion of Dr V GABRIEL, seconded by Dr H M PERIS, the Branch Council was elected with power to co-opt other members when necessary, as the committee to work in connexion with the celebrations of the fiftieth anniversary.

The new president Dr ATTYGALLE delivered his inaugural address on 'The Problem of Carcinoma of the Uterus in Ceylon'. On the motion of Dr S T GUNASEKARA, seconded by Dr LUCIAN DE SILVA, a vote of thanks was accorded Dr Attygalle for his address.

A special general meeting of the Branch was held at the Colonial Medical Library on February 2 with Dr ATTYGALLE in the chair. The president introduced Dr M J STEWART, professor of pathology in the University of Leeds who gave an interesting address on 'Medical Research' for which he was heartily thanked.

At a meeting of the Branch held at the Colonial Medical Library on February 17 with Dr ATTYGALLE in the chair, a communication from the Minister for Health regarding medical certificates for Government employees was considered. After a lengthy discussion a motion by Professor P B Fernando, seconded by Dr S R GUNewardene, was carried by eleven votes to three as follows: 'That subject to the rights of employers to employ their own medical examiners the Ceylon Branch recognizes the principle that every registered medical practitioner has a right to issue medical certificates.'

Dr C C de SILVA showed a case of hereditary ectodermal dysplasia and reported on three other similar cases.

At a meeting of the Branch held at the Colonial Medical Library on March 17 with Dr ATTYGALLE in the chair, Dr de SILVA read a paper on 'Hereditary Ectodermal Dysplasia' and Dr J H F JAYASURIYA read notes and demonstrated a case operated on for spinal cord tumour, a case of old standing chronic empyema treated by phrenic evulsion and major thoracoplasty and a case of cerebral tumour operated on a year previously. The two speakers were thanked by the meeting for their addresses.

DORSET AND WEST HANTS BRANCH BOURNEMOUTH DIVISION

At the annual meeting of the Bournemouth Division held at Boscombe Hospital on April 28 with Dr J C A NORMAN in the chair, the annual report and financial statement of the Division were unanimously adopted.

The following officers were elected for 1937

President: Dr J DIXON Green; Vice-Chairman: Dr R J MAULROY; Treasurer: Dr O C CARTER; Dr E Douglas Granger, Representative Body; Drs Walter Asten and Carter.

Deputy Representatives in Representative Body: Drs Norman and C E Gautier-Smith.

Auto serum Treatment in Drug Addiction

Dr MARGARET VIVIAN read a paper on 'Auto-serum Treatment in Drug Addiction'. Dr Vivian said that this treatment was discovered accidentally by a Dr Modinos in Egypt when he was treating a patient by these means for arthritis,

and he had published a paper which had fascinated Dr Vivian and she had decided to try the treatment herself. She had treated nine patients and although she did not claim that they were free from the liability of relapse she could claim that in a short time and in a very pleasant way they could be entirely taken off the drug to which they were addicted. The technique was to raise a blister and withdraw the fluid up to 9 ccm in quantity and inject it into the patient. This was repeated again after three days and in some cases a third injection was given on the seventh day. Dr Vivian then gave details of two cases in the first of which she had great trouble in raising a blister at all but eventually succeeded in getting a canthos plaster that raised a good sized blister on the patient's abdomen. Ten ccm of fluid was then injected and the patient's daily dose of morphine which had been 3 grains was at once cut down to a grain and a half. To Dr Vivian's surprise she began to sleep and eat well and showed no signs of distress. Three days later another blister was raised and 7 ccm of fluid was injected. After this no morphine at all was given but a small dose of dionin was substituted. The patient continued to sleep and eat was quite oblivious of the fact she was not having her usual dose of morphine and felt very well. Three days later there was a third injection and the patient felt wretchedly ill and vomited for several days. However the patient who was a medical woman felt she could stay in the home no longer and returned to Scotland to her practice. She arrived home worn out and with a bad headache but had kept well ever since.

In the second case a doctor had been taking thirty grains of morphine, ten grains of cocaine and a bottle and a half of whisky a day. The first day the patient was admitted blisters were raised the fluid injected and the patient given a relatively small amount of morphine. He slept and ate well and made no complaints at a daily dose of two grains of morphine for the first three days. No whisky was given or cocaine at any time. Three days later 10 ccm of fluid was injected and a quarter of a grain of dionin was substituted for the morphine the patient making no complaint of needing morphine. The following night he seemed excited and unlikely to sleep and Dr Vivian asked Dr H J A. Simmons to give him some sodium cyanide in order to ensure a good night's sleep. This was administered on three consecutive nights and the patient slept from six to eight hours on each occasion. A third blister fluid injection was given three days later since when the patient has had no further need or desire for drugs or alcohol. Dr Vivian closed by stating that she had approached the Home Office with a suggestion that she should be allowed to demonstrate the blister fluid method to one or more of the prison doctors so that they might use it in cases of drug addicts sentenced to gaol but in reply was received that it was considered unnecessary to introduce any new methods of treatment in view of the fact that the prisoners were under their complete control so that there was no difficulty in depriving them of morphine.

An interesting discussion followed in which Drs ASTEN, MAHOMED, DIXON, GREEN and S A MONTGOMERY took part, and a hearty vote of thanks was accorded to Dr Vivian for her very interesting paper.

Treatment of Acute Delirium

Dr STEPHEN HORSLEY read a paper on 'The Treatment of Acute Delirium'. Dr Horsley said that delirium was a symptom-complex and might occur as a passing complication in many disorders including head injury, epilepsy, cardiovascular disease, alcoholism, drug poisoning and auto-intoxication. The characteristic symptoms were confusion with hallucinations, restlessness, and suspicion. There was always some physiological dysfunction such as tremors, tachycardia, pyrexia, and sleep was either absent or very deficient and without prompt treatment the extreme restlessness led to prostration which ended either in circulatory failure or in coma. The prognosis was always grave and every effort should be made to remove the patient at once to hospital. The therapeutic indications were to procure sleep and support metabolism. The choice of drugs was important and Dr Horsley thought it unwise to employ chloral or opium derivatives, and he favoured some of the newer derivatives of barbituric acid. He emphasized however that rest alone was likely to fail unless necessary active steps were taken to combat dehydration and toxæmia, this entailed administration of adequate amounts of fluid and he advocated administration of large quantities of saline or saline and glucose by the intravenous route. The daily hypodermic injection of one litre of Ringer Locke's solution was of greatest therapeutic value.

SOUTH WESTERN BRANCH TORQUAY DIVISION

The annual general meeting of the Torquay Division was held at Torbay Hospital on April 23 when Dr ERNEST WARD and later Dr D J BATTERHAM occupied the chair.

The following officers were elected

Chairman Dr Bitterham *Vice Chairman* Dr Annie Bryce
Honorary Secretary Dr R H Robinson *Honorary Auditor* Dr P A McCallum *Representative in Representative Body* Dr Ward
Deputy Representative in Representative Body Drs A E Carver and D Cronie *Charities Secretary* Dr R A Intey

The annual report of the Division was received and adopted and the thanks of the Division were conveyed to the honorary secretary for his work during the year. It was also agreed to send a copy of the annual report to each non member of the British Medical Association in the area of the Division with a covering letter drawing attention to the activities of the Division in particular and of the Association as a whole and emphasizing the advantages of membership, before the Annual Meeting of the Association at Plymouth in 1938.

A resolution was passed unanimously expressing the Division's wish to give active help and support to the Plymouth Division on the occasion of the Annual Meeting of the Association and recording the fact that the corporation of the borough of Torquay had intimated its desire to co operate.

SURREY BRANCH KINGSTON-ON-THAMES DIVISION

At the annual general meeting of the Kingston on Thames Division held at the Kingston and District Hospital on May 4 the annual report of the Division was adopted.

The following officers were elected for 1937-8

Chairman Dr J Ferguson *Vice-Chairman* Dr Helen Lukh
Honorary Secretary and Treasurer Dr Ralph G Smith *Charities Secretary* Dr A R C Dooley *Representatives in Representative Body* Drs Noel E Waterfield and Eleanor H Kelly *Deputy Representative in Representative Body* Dr D H Fulton

The Division's appreciation of the services of Dr A S Hollins as chairman during the past year and of Dr Lukh as honorary secretary and treasurer over a period was recorded. The meeting closed with a vote of thanks to the hospital authorities especially the nursing staff for providing accommodation for the monthly meetings of the Division during the past session.

SURREY BRANCH RICHMOND DIVISION

At the annual meeting of the Richmond Division held at the Richmond Royal Hospital on May 14 with Lieut-Colonel E L GOWLAND in the chair the following officers were elected for 1937-8

Chairman Dr D A Chamberlain *Vice Chairman* Dr D S Murray *Secretary and Treasurer* Dr R Duncan *Representative in Representative Body* Dr Isabelle W Horsley *Deputy Representative in Representative Body* Mr J W Heekes

A film on "The Science and Art of Obstetrics" was shown by the kindness of Petrolagar Laboratories Ltd. and was much appreciated. The CHAIRMAN proposed a vote of thanks to the representative of the firm and to the committee of the hospital for placing a room at the disposal of the Division and for hospitality. Lieut-Colonel E V HUGO proposed a vote of thanks to the retiring chairman, Colonel Gowland and this was heartily acclaimed.

YORKSHIRE BRANCH HUDDERSFIELD DIVISION

A meeting of the Huddersfield Division to which non members had been invited was held at Huddersfield on April 28 when Dr F GAMM was in the chair. Mr L DOUGAL CALLANDER, president of the Yorkshire Branch delivered a lecture on "Round the World in Fifty Minutes." His remarks were illustrated by lantern slides and the B M A World Tour Film.

On the motion of Dr W H SMALES seconded by Dr R S PARK, a hearty vote of thanks was accorded Mr Callander for his address.

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses and demonstrations: tuberculosis demonstrations for M R C P candidates at Preston Hall, Maidstone, July 3; proctology at St Mark's Hospital, July 5 to 10; dermatology at Hospital for Diseases of the Skin, Blackfriars, SE, July 12 to 24; urology at All Saints Hospital, July 12 to 31; heart and lungs at Victoria Park Hospital, July 3 and 4; medicine and surgery at Miller General Hospital, July 10 and 11. Full particulars of all courses can be obtained from the Fellowship of Medicine, 1 Wimpole Street. W. Courses are open only to members of the Fellowship.

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL, Ducane Road, W.—
Daily, 10 a.m. to 4 p.m. Medical Clinics, Surgical Clinics and Operations, Obstetrical and Gynaecological Clinics and Operations. *Tues*, 4.30 p.m. Dr D Hunter, Occupational Diseases. *Wed*, 12 noon, Clinical and Pathological Conference (Medical). 2 p.m. Dr King, Carbohydrate Metabolism and Diabetes. 2 p.m. Clinical and Pathological Conference (Surgical). *Thurs*, 2.15 p.m. Dr Duncan, White Radiological Demonstration. 3 p.m. Operative Obstetrics. *Fri*, 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology).

ELLOWSHIP OF MEDICINE AND POST GRADUATE MEDICAL ASSOCIATION, 1 Wimpole Street, W.—*West End Hospital for Nervous Diseases*, Welbeck Street, W. Afternoon M R C P Course in Neurology. *Chelsea Hospital for Women*, Arthur Street, SW. All-day Course in Gynaecology. *City of London Hospital*, Victoria Park, E. *Wed* and *Fri*, 6 p.m. M R C P Course in Heart and Lung Diseases. *Brompton Hospital*, SW. *Tue* and *Wed*, 5 p.m. M R C P Course in Chest Diseases.

HOSPITAL FOR EPILEPSY AND PARALYSIS, Maida Vale, W.—*Thurs*, 3 p.m. Dr Blake Pritchard, Clinical Demonstration.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—*Thurs*, 2 p.m. Clinical Lecture, Mr Eric J Lloyd, Spinal Deformities in Children. 3 p.m. Clinical Pathological Lecture, Dr A Signy, Interpretation of Faecal Bacteriology. Out-patient Clinics, mornings 10 a.m. to 12 noon. Ward Visits, afternoons 2 p.m. to 3.30 p.m.

INSTITUTE OF PATHOLOGY AND RESEARCH, St Mary's Hospital, W.—*Thurs*, 5 p.m. Dr W E Gye, Recent Work on Cancer.

ST PAUL'S HOSPITAL, Endell Street, W.C.—*Wed*, 4.30 p.m. Mr Jocelyn Swan, Growths in the Bladder.

SOUTH WEST LONDON POST-GRADUATE ASSOCIATION, St James' Hospital, Quekett Road, Balham, SW.—*Wed*, 12.40 p.m. Visit to Parke, Davis and Co. Hounslow.

TAVISTOCK CLINIC, Malet Place, W.C.—*Thurs*, 3 p.m. Dr H. Crichton Miller and 4.30 p.m. Dr Cedric Shaw, Summary of Introductory Course of Psychological Medicine for the General Practitioner.

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

Section of Orthopaedics—Provincial meeting at Exeter, Sat., 145 p.m. Demonstration of cases at Princess Elizabeth Orthopaedic Hospital.

NATIONAL COUNCIL FOR MENTAL HYGIENE—At 26, Portland Place, W. *Thurs*, 3 p.m. Annual General Meeting, 4.30 p.m. Public Meeting. Speaker, Dr Henry Yellowlees.

NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.—*Thurs*, 9 p.m. Twelfth Annual Macalister Lecture by Sir Arthur MacNalty, The Doctor in Politics and Diplomacy.

Naval, Military, and Air Force
Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Commanders A W Gunn to the *Hawkins*, A G Lee to the *Pembroke* for Royal Naval Barracks.

Surgeon Lieutenant Commanders J Cussen and T G B Crawford to be Surgeon Commanders.

Surgeon Lieutenant Commander V J Fielding has retired at his own request.

Surgeon Lieutenant Commanders D A Newbery to the *Pembroke* for Royal Naval Barracks (June 21) and to the *Sussex* on recommissioning. E E Malone to the *Shropshire*. R V Jones to the *Wellington*.

Surgeon Lieutenants D B Jack to the *Wildfire*, F W Baskerville to the *Pembroke* for Royal Naval Barracks (June 12) and to the *Sussex* on recommissioning. H O Connor to the *Inglefield*. F P Ellis to the *Victory* for Royal Naval Hospital Haslar. G H C R Critien to the *Resolution*. G R Rhodes to the *Rochester*. I C Macdonald to the *Falmouth*. G L Hardman. J F Meynell. W S Parker and W B Teasey to the *Victory* for Royal Naval Barracks.

ROYAL NAVAL VOLUNTEER RESERVE

Probationary Surgeon Lieutenant D R Maitland to be Surgeon Lieutenant.

ROYAL ARMY MEDICAL CORPS

Lieutenant J A G M Lynch to be Captain with seniority May 1, 1936. (Substituted for notification in the *London Gazette* of May 7, 1937).

The appointment of Lieutenant J A G M Lynch is antedated to May 1, 1935 under the provisions of Article 36 Royal Warrant for Pay and Promotion, 1931 but not to carry pay and allowances prior to May 1, 1936.

KING'S COLLEGE HOSPITAL Denmark Hill SE—Assistant Neurologist

KING'S LYNN WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL—H P Salary £125 p.a.

LANCASTER COUNTY MENTAL HOSPITAL—A M O (female unmarried) Salary £500 £25 £600 p.a.

LEWIS CITY—A R M O (male unmarried) for Killingbeck Sanatorium Salary £250 p.a.

LIVERPOOL ROYAL INFIRMARY—Locumtenent Pathologist (non resident) Salary £10 per week

LIVERPOOL CITY—A M O for Cleaver Sanatorium for Children Heswall Salary £300 p.a.

LIVERPOOL HAINEMANN HOSPITAL—R M O Salary £120 p.a.

LONDON CHEST HOSPITAL Victoria Park E—Assistant Tuberculosis Officer Salary £100 £25 £700 p.a.

MANCHESTER ANCOATS HOSPITAL—(1) C O (2) H S to the Ear Nose and Throat Department Salaries £250 p.a. and £100 p.a. respectively

MANCHESTER EAR HOSPITAL—R H S Salary £120 p.a.

MANCHESTER ROYAL INFIRMARY—Resident Clinical Pathologist (male) Salary £150 p.a.

MANCHESTER ROYAL MANCHESTER CHILDREN'S HOSPITAL—(1) R M O (unmarried) (2) R H S Salaries £150 p.a. and £100 p.a. respectively

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES—H S Salary £150 p.a.

MANSFIELD AND DISTRICT GENERAL HOSPITAL—H S (male) Salary £150 p.a.

MENBOROUGH MONTAGU HOSPITAL—R H S (female) Salary £120 p.a.

MIDDLESBROUGH NORTH RIDING INFIRMARY—(1) Senior H S (2) Third H S Males unmarried Salaries £175 p.a. and £140 p.a.

MIDDLESEX COUNTY COUNCIL—(1) A M O and (2) J R A M O for North Middlesex County Hospital Edmonton Salaries £350 p.a. and £250 respectively (3) Visiting Dental S for West Middlesex County Hospital Isleworth Salary £2 2s per session

NATIONAL TEMPERANCE HOSPITAL Hampsstead Road NW—C O (male) Salary £120 p.a.

NORTHAMPTON GENERAL HOSPITAL—H S (male) Salary £150 p.a.

NORWICH NORFOLK AND NORWICH HOSPITAL—(1) General H S (2) H S to the Orthopaedic Department (3) C O Males unmarried Salaries £120 p.a. each

NOTTINGHAM GENERAL HOSPITAL—(1) H S for Ear Nose and Throat Department (2) R C O (male) Salaries £150 p.a. each

NOTTINGHAMSHIRE COUNTY COUNCIL—Assistant School M O (male) Salary £500 £25 £700 p.a.

NUNEATON GENERAL HOSPITAL—(1) R S O (2) H S Salaries £275 p.a. and £150 p.a. respectively

OLDHAM COUNTY BOROUGH—R A M O (unmarried) for the Municipal Hospital Salary £200 p.a.

PENSHURST CASSEL HOSPITAL FOR FUNCTIONAL NERVOUS DISORDERS—Medical Director (male) Salary £1,200-£1,500 p.a.

PLYMOUTH PRINCE OF WALES HOSPITAL Devonport—J H S Salary £120 p.a.

PLYMOUTH PRINCE OF WALES HOSPITAL Greenbank Road—(1) H S (2) H P Salaries £120 p.a. each

PONTERFRACT GENERAL INFIRMARY—J R M O (male unmarried) Salary £150 p.a.

PORT-OF-SPAIN CITY—Medical Officer of Health Salary £800 £25 £1,000 p.a.

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY—H S Salary £150 p.a.

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN St Quintin Avenue W—H S (male) Salary £120 £150 p.a.

QUEEN MARY'S HOSPITAL FOR THE EAST END E—(1) Casualty and Outpatient Officer (unmarried) Salary £150 p.a. (2) Surgical Anaesthetist Honorarium £52 10s p.a.

QUEEN'S HOSPITAL FOR CHILDREN Hackney Road E—Visiting Anaesthetist Fee £1 is per attendance

READING ROYAL BERKSHIRE HOSPITAL—C O (male) Salary £150 p.a.

ROTTERHAM HOSPITAL—H S to the Ophthalmic and Ear Nose and Throat Departments and to administer anaesthetics Salary £120 p.a.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL Great Portland Street W—Two H Ss (males unmarried) for the Brockley Hill Branch Stanmore Salaries £150 p.a. each

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL Broad Street WC—Refraction Officers

ST GEORGE'S HOSPITAL, S.W.—Assistant P

ST MARY'S HOSPITAL W—Casualty H P Salary £150 p.a.

SCUNTHORPE AND DISTRICT WAR MEMORIAL HOSPITAL—S in charge of the Orthopaedic Department and Fracture Clinic Honorarium £200 p.a.

SHEFFIELD CHILDREN'S HOSPITAL—H S (male unmarried) Salary £100 p.a.

SHEFFIELD ROYAL INFIRMARY—C O Salary £150 p.a.

SHREWSBURY ROYAL SALOP INFIRMARY—R H S (male unmarried) Salary £160 p.a.

SOUTHWICK COUNTY BOROUGH—(1) Senior Assistant M O H Clinical Tuberculosis Officer and Deputy Medical Superintendent at St Chad's Hospital Male Salary £750-£937 10s p.a. (2) Assistant M O H and Assistant School M O (male unmarried) Salary £350 £25 £550 p.a.

SOMERSET COUNTY COUNCIL—A M O (male) Salary £500-£25 £700 p.a.

SOUTH EASTERN HOSPITAL FOR CHILDREN Sydenham SE—Two R M Os Honorariums £100 p.a. each

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL—(1) C O (2) Resident Anaesthetist and H S for the Ear Nose and Throat Department Males unmarried Salaries £150 p.a. each

STOKES-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R H S Salary £175 p.a.

STOKES-ON-TRENT LONGTON HOSPITAL—H S Salary £160 p.a.

STOURBRIDGE CORRELY HOSPITAL—H S Salary £100 p.a.

SUNDERLAND ROYAL INFIRMARY—(1) R S O (male) (2) C O Salaries £250-£300 p.a. and £150 p.a. respectively

SWANSEA GENERAL AND EYE HOSPITAL—H S (male unmarried) Salary £150 p.a.

TUNBRIDGE WELLS KENT AND SUSSEX HOSPITAL—H S and C O Salary £150 p.a.

WARWICK WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS—J A M O for King Edward VII Memorial Sanatorium Hertford Hill Salary £250 p.a.

WEIR HOSPITAL Grove Road Balham SW—J R M O (male unmarried) Salary £150 p.a.

WEST SUFFOLK COUNTY COUNCIL—County M O H and School M O Salary £1,000 p.a.

WESTMINSTER HOSPITAL Broad Sanctuary SW—Dental S

WILKINSON GENERAL HOSPITAL Harlesden Road NW—C O (unmarried) Salary £100 p.a.

WINCHESTER ROYAL HAMPSHIRE COUNTY HOSPITAL—H S (male) Salary £125 p.a.

WOLVERHAMPTON ROYAL HOSPITAL—Hon Assistant S and Hon Assistant Gynaecologist

WORKSOP VICTORIA HOSPITAL—Junior Resident Salary £130 p.a.

MEDICAL RETIREE UNDER THE WORKMEN'S COMPENSATION ACT 1925 for ophthalmic cases arising in the Sheriffdom of Lanark Applications to the Private Secretary Scottish Office Whitehall SW 1 by June 30

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 42 45 46 47 48 49 50 51 55 and 56 of our advertisement columns and advertisements as to partnerships assistantships and locumtenencies at pages 52 and 53

APPOINTMENTS

CHAMBERLAIN Digby F.R.C.S. Surgeon with Charge of Outpatients General Infirmary at Leeds

COOPER H G N F.R.C.S., Resident Surgical Officer Ancoats Hospital Manchester

KANE Mrs Winifred A. M.R.C.S. L.R.C.P. Lady Assistant Medical Officer City of Coventry Public Health Department

MOLL H H M.D. M.R.C.P. Honorary Physician General Infirmary at Leeds

CHARTERHOUSE - - - - 94 Hallam Street W—Honorary M.R.C.S. L.R.C.P. M.B. B.Ch.

QUEEN CHARLOTTE'S MATERNITY HOSPITAL Marylebone Road N.W.—Senior Resident Medical Officer Edward Meek M.D. Assistant Resident Medical Officer Oswald Lloyd M.R.C.S. L.R.C.P. Resident Anaesthetist and District Resident Medical Officer Edith Parry Evans M.R.C.S. L.R.C.P. Resident Anaesthetist Ann Gibb M.B. Ch.B.

CERTIFYING FACTORY SURGEONS—J S Moore M.R.C.S. L.R.C.P. for the St Austell District (Cornwall) J L Hill M.B. Ch.B. for the Newport District (Monmouthshire)

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue

BIRTH

GRAVES—On June 13 at 41 Devonshire Street to Mrs K A H Graves M.D. wife of Dr T C Graves F.R.C.S. a son

DEATH

FLETCHER—On June 8 1937 at 587 London Road Glasgow Thomas M Fletcher M.B. Ch.B.

in those patients with symmetrical lesions especially of the extremities and in those having typical visomotor disturbances

HEALTH INDICES

An endeavour to rationalize the presentation of material for use in the preparation of statistics relative to health has recently been described under the title of 'Health Indices'. There is, the authors of the article state, increasing recognition of the fact that mortality figures by themselves even where authoritative are not a complete criterion of the healthiness or unhealthiness of a community. Other relationships which have been adduced as bearing obviously on the question have so far been applied for the most part in investigations of limited range and the need is felt for a system at once more flexible and comprehensive which could function if not in every possible case at least in a wider field. The working out of the system here presented which aspires to meet these requirements, originated at Geneva but was later transferred to the United States in order to benefit by the experience already accumulated in that country in the matter of health surveys. Pioneer studies had been made there by Dr John S. Billings while chairman of a committee of the American Public Health Association. His schedule of the topics which he regarded as possessing significance was broadly based, well founded and far ahead of contemporary opinion. But in more recent times his aims appear to have been largely lost sight of and his ideals narrowed down to the production of rating sheets or appraisal forms equipped with which duly filled in cities and counties have courted applause in 'health conservation contests'. While these contests served the undoubtedly useful purpose of stimulating community interest in health the points which they stressed had too little reference to the basic criteria of healthiness. The new system of health indices does not omit the essentials. As presented it is composed of three main divisions: (A) indices of vitality and health (B) indices of environment and (C) indices of administrative activity. The categories of division A are population, natality, still births, infant and maternal mortality, general mortality and causes of death, morbidity, invalidity, insanity and mental defects, alcoholism and drug habit, accidents, suicides and homicides and examinations of physical fitness. The categories of division B, environment, are climate, topography and density of population, occupation, distribution of wealth, cultural level, illegitimacy and prostitution, housing, nutrition and consumption of alcoholic beverages etc. The categories of division C, indices of administrative activity, are community expenditures on sickness and public health, sanitary personnel, vital statistics, laboratory services, acute communicable diseases, venereal diseases, tuberculosis, other diseases, general public health, nursing, maternity, hygiene, infant and pre school hygiene, school hygiene, physical education, general sanitation, food inspection and nutrition, housing, industrial hygiene, health instruction, care of the insane and feeble minded, hospital

facilities, health insurance, free medical assistance in old age, care and cure of the aged. The completion of the full list of items under all the forty-four categories for a large and well organized city is a task of some magnitude even allowing for the circumstance that all the items may not figure in every area. For routine use in a handy list of a hundred indices is offered. For initiating comparative studies of a number of communities there is added a short list of sixty indices. The use of the indices is exemplified by a study of the city of New Haven, Connecticut. The compilation naturally bears the stamp of transatlantic usage and health organization but the indices properly handled and where necessary adjusted so as to fit in with local conditions should serve to elicit in any country numerical data in a form amenable to statistical treatment.

CHEMICAL PROPERTIES AND PHARMACOLOGICAL ACTION

The correlation of pharmacological action and therapeutic effects with chemical constitution and physico-chemical properties has attracted many workers but hitherto progress has lagged. The similarity of effects of substances of vastly different chemical structure and the great complexity of the organs and tissues upon which they appear to act make the problem difficult of solution from the start. The absence of any unitary hypothesis renders the production of therapeutically active synthetic compounds a tedious business and there seems nothing for it but to test innumerable compounds with the hope that somehow an active one will be hit upon. When an active body is discovered little if any reason is found for its activity and it often happens that slight modification of the molecule produces a change in activity out of all proportion to the apparent significance of the change in chemical structure. In certain fields empirical rules have been evolved which give a rough guide for the synthesis of new agents—e.g. in the field of anaesthetics where a criterion to be followed is lipid solubility—but in the main good fortune plays a predominant part. When we consider as Starkenstein¹ points out the infinite possibilities of reaction between the molecules of protein, carbohydrates, fats and sterols and organometallic and dissociated inorganic combinations in the cell then the problem can be more clearly defined. But the constant proximity in protoplasm of oxidation and reduction of formation and neutralization of acid and alkaline valencies must be associated with biological events of which we can only be dimly aware. Even when as in the case of hypnotics, narcotics, local anaesthetics and organic arsenicals relations are known between constitution and effect reliance must still be placed upon demonstrable pharmacological action and not upon chemical properties. Examining the similar problem of toxicological action Starkenstein notes that whereas so many pharmacological agents can bring about acute toxic effects only few lead to chronic poisoning. This he finds true not only for complicated organic compounds of high molecular weight but also

¹ *Quart. Bull. Illth. Org. L. O. N.* 1936, 5, 901.

² *Klin. Wschr.* 1936, 15, 1865.

for simple elements and inorganic compounds. A series of investigations made him conclude that only those substances can lead to chronic poisoning which exert a paralytic action in the organism. Poisons on the other hand, which only act in the direction of stimulation appear never to produce chronic poisoning. Applying these conceptions to the elements arranged in the periodic system Starkenstein finds that only the following elements are capable of producing chronic intoxication: mercury, thallium, lead, bismuth, phosphorus, arsenic, antimony, manganese and radium emanation. All these elements except manganese fall either into group 5 (sub group b) or period VI of the periodic table. The precise significance of this fact is not immediately obvious but it led Furth to examine the physical properties of the elements mentioned. Most of these he found to be supraconductors—i.e. their electrical resistance suddenly disappeared at certain temperatures. This led to further investigation of the physical properties of the elements with the object of further correlation with pharmacological action. It was found that the ratio of the melting point (absolute) to the density expressed some characteristic property. If the elements are arranged in ascending order of this ratio he found that those which can produce chronic toxicity appear mainly at the head of the table with the lowest values. This was not the case for all the elements mentioned above but the exceptions (As, Sb, P, Mn) had the property of forming alloys which also gave very low values for the ratio investigated. Since the elements which cause chronic poisoning exert their influence when brought into the organism as such Starkenstein and Furth suggest that some significance must lie in the demonstrated facts that they are supraconductors on the one hand and have low MP/density ratios on the other.

QUEEN'S INSTITUTE OF DISTRICT NURSING

The jubilee of the institute was commemorated on Wednesday June 16 when Her Majesty Queen Mary, its Patron, inspected at Buckingham Palace over 2000 Queen's nurses and awarded badges to those who had qualified for them. In 1887 Queen Victoria gave £70 000 part of the Women's Jubilee Offering, to found the institute. She became its Patron Queen Alexandra followed her. On her death £233 000 was raised for the institute as a memorial to her. She was followed by Queen Mary the present Patron. The institute prepares nurses who have received full hospital training for the special work of district nursing. It ensures by a system of inspection that their work shall be kept up to a high standard. It provides district nurses for England, Scotland, Wales and Ireland. The magnitude of the task is shown by the fact that about fifteen million visits are paid yearly to patients in their own homes by some 7000 nurses which works out at 50,000 visits a day. The institute's nurses attend nearly 69,000 cases of midwifery yearly; the mortality rate of these is 2.58 per thousand. The institute is celebrating its jubilee by raising funds to enable it to train more nurses and to help the local District Nursing Associations to raise funds to pay for and suitably house as many Queen's

nurses as are required for each district. Medical practitioners who know full well the value of district nurses will no doubt use their influence in support of the jubilee appeal.

BLOOD GROUPING OF THE BANTU

The art of investigating blood groups has been of valuable assistance to the ethnologist. Few nations especially primitive ones, know much about their own history, and what they do know is often distorted by legend. The language of a race may disappear through the imposition of the language of a conqueror. The anthropologist may easily lose himself in a multitude of measurable characteristics. Blood grouping alone can show the exact proportion of blood introduced by invaders into an invaded people of a different group coefficient. The literature on the blood group characteristics of various races is enormous, but much work can still be done with benefit to ethnology provided that the results are accessible and properly classified. One of the latest population studies is a thesis on the grouping of 5000 Bantu of different races by R. Elsdon-Dew of the South African Institute for Medical Research, Johannesburg.¹ He found that the Bantu are not homogeneous from a serological point of view but their position on the diagram by which it is customary to show the serological characteristics of a people indicates a more primitive distribution of the blood groups than that found in any other black race for which the figures are available. He concludes that the Bantu are the most primitive black race known, and that the negroes are the result of a mixture of Bantu with some other stock such as the Egyptian. They must he thinks have separated from the main mass of mankind before the characteristics A and B appeared. Anthropologists have already indicated that the Bantu are predominantly of negro origin with a lesser proportion of Caucasian blood. If this is true then the other progenitor of the Bantu must have had even less A and less B than they and, if the proportion of Caucasian blood is more than a trace, must have stood very near the origin of the diagram the point where there are no A or B characteristics in a race at all. Serologically, the Hottentots are predominantly Caucasian but, either alone or with the Bushmen, they could not have drawn the Bantu from the origin to their present position for, if they had then the Bantu would be for the most part Hottentot-Bushman. On the other hand, intermixture with the Caucasian races could have given the Bantu their present place, and so the serological findings confirm those of anthropology, linguistics and cultural studies. The tentative reconstruction which Dr. Elsdon-Dew suggests is that at some early date Africa was inhabited only by a black race probably living near the West Coast, and having O as their sole blood group. Then the country was invaded by a light-skinned small race bearing the factors O and A only. These people probably did not come into contact at this stage with the black inhabitants but moved south founding the race of Bushmen. Next came the invasion of a taller light-skinned race bearing again only the factors O and

¹ Publ. S. Afr. Inst. med. Res. 1936 No. 39, 7, 217.

A They remained in the north and formed the progenitors of the present Herbers. Finally, after having all the blood groups mixed and spread throughout Africa a part of them moving down to Central Africa pushing the Bushmen further south. The modern representatives of this race are the Hottentot. At this stage the black race still unaffected to any great extent by factors A and B moved south with the Hottentot and the Bushmen in front while further invasions of completely grouped races behind affected those left in West Africa and the rearward of the black horde. This interesting conjecture is of course subject to revision in the light of further experience but it is obviously based on prolonged skilled and careful research. Incidentally Dr. Elsdon Dew's thesis gives one of the clearest summaries of the elements of blood grouping that has yet appeared.

AN UNUSUAL PITUITARY SYNDROME

Since Simmonds described in 1914 the syndrome produced by destruction of the anterior lobe of the pituitary further confirmation of the widespread influence of this gland has been obtained especially during the last decade. The possible relationship direct or indirect, of the anterior pituitary and blood formation has so far not attracted a great deal of attention. I. Snapper, J. Groen, D. Hunter and L. J. Witts¹ now describe a remarkable syndrome of anterior pituitary and gonadal insufficiency associated with achlorhydria, anaemia, and subacute combined degeneration of the cord. They present six patients four men and two women, between the ages of 42 and 58, all of whom had had symptoms of anterior pituitary insufficiency for a number of years and one of whom had signs of a chromophobe adenoma. Insufficiency of the gonads considered to be secondary to hypopituitarism was shown in these patients by lack of physical vigour and sexual interest or desire, amenorrhoea and in two cases by small size and imperfect descent of the testes. The facies was dull and expressionless, the movements lethargic, sexual hair was absent and the hair of the scalp and eyebrows was scanty or absent. The basal metabolic rate in the four patients in whom it was estimated under suitable conditions was considerably depressed but there was no reason to believe that they were suffering from true myxoedema. The skin was soft moist and elastic, there was no subcutaneous oedema, the appearance of the patients bore no resemblance to that of a patient with myxoedema, and the basal metabolic rate unlike that of myxoedema was raised by the administration of thyrotropic hormone. All the patients had hypochlorhydria and five complete achlorhydria. Anaemia developed relatively late in the course of the disease. In three there were symptoms of subacute combined degeneration of the cord, in one the anaemia was hypochromic and responded to iron and in two it was of the Addisonian type and responded to liver treatment. The authors consider that the anaemia was essentially gastrogenous and hence an indirect effect of insufficiency of the anterior lobe of the pituitary. They

postulate that anterior pituitary deficiency is followed by achlorhydria and that the achlorhydria may induce later a long interval in iron-deficiency anaemia, a hyper-deficiency anaemia, subacute combined degeneration of the cord or a combination of these conditions.

PREVENTION OF URINARY CALCULI

In patients who suffer from some disease of bone needing prolonged immobilization and who at the same time have retention and infection of urine the presence of calculi in the urinary tract is an unpleasant and not infrequent complication from which every effort should be made to guard them. The patient undergoing prolonged orthopaedic treatment needs protection from this complication just as elderly immobilized patients do from hypostatic pneumonia. The urinary problem has recently been studied by Higgins and Schlumberger¹ of Cleveland who point out that in patients undergoing orthopaedic treatment several of the known aetiological factors associated with the formation of urinary calculi are aggravated either by their disease or by its treatment. These factors are infection (either local or focal), stasis, hyperparathyroidism, nutrition deficiency and phosphaturia. Investigations have shown the great importance in these immobilized orthopaedic cases of the nature of the diet and the reaction of the urine—two factors intimately related. Diet however is of more importance than its effect on the hydrogen ion content of the urine because it is known that adequate amounts of vitamin A are necessary to maintain the integrity of epithelial structures. When a deficiency of vitamin A exists stratification of the transitional epithelium of the bladder, ureters and renal pelvis occurs and this change apparently favours the formation of calculi. As the calculi in these orthopaedic cases are found to consist of phosphates and carbonates of calcium and magnesium it is important to prevent the precipitation of these salts. The urinary reaction should therefore be kept on the acid side (pH of 5 to 5.2) by an appropriate diet with a high vitamin content and if necessary also by the use of acidifying agents such as ammonium chloride. Details of suitable acid forming and high vitamin diets are given in Higgins and Schlumberger's paper which may profitably be consulted by those who have to treat these patients. It is important to examine the urine frequently in all recumbent orthopaedic cases to give an appropriate diet and as a safeguard to make an x-ray examination before their discharge from hospital in order to rule out the possibility of a silent renal calculus.

The King has nominated Sir Arthur MacNalty to be for five years a member of the General Council of Medical Education and Registration in the United Kingdom, in succession to Sir Henry Dale.

Queen Mary will open the new medical block, King George V Building at St Bartholomew's Hospital on Thursday July 8 at 3 p.m.

¹ *Quart J Med* 1937 6, 195

¹ *Arch Surg* Chicago, 1937, 34, 702.

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Dr M. H. Salaman has compared the serological properties of the elementary bodies of vaccinia virus with those of the soluble antigen of the virus which can pass through filters that retain the bodies. He has shown that the virus neutralizing power of an anti-vaccinal serum can be removed by absorption with a sufficient dose of washed elementary bodies, but not by absorption even with large doses of the soluble antigen. Dr Hurst, by passing the filterable virus of rabbit myxomatosis through the brains of rabbits for several generations has obtained a variant which, inoculated into skin areas generally failed to produce death though local and generalized lesions persisted. The discovery of this variant should facilitate research into the relation between myxoma and fibroma, as it will now be possible to study animals that have recovered from myxoma without having to give them the fibroma virus first. Sir John Ledingham has shown that animals infected with fibroma virus and particularly with the 'inflammatory' variant, develop agglutinins for myxoma but often little or none for fibroma until a dose of myxoma virus is given, when agglutinins for both appear in the serum.

Dr C. R. Amies's further researches have confirmed the fact that fowls with a Rous sarcoma develop anti-bodies for the Rous No. 1 sarcoma agent, prepared by repeated high speed centrifugation of cell-free tumour extracts. It was found, too, that the sera of rabbits hyper-immunized with normal fowl protein showed strong neutralizing activity against these purified suspensions of the Rous No. 1 agent. It would appear that fowl protein may be one of the antigenic constituents of the tumour agent.

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The work of Dr A. Felix and Miss R. M. Pitt strengthens an earlier conclusion that only strains of *S. typhi* containing both "O" and "Vi" antigen possess the highest degree of virulence of which *S. typhi* is capable. Many attempts to prepare an antityphoid vaccine which would enable the "Vi" antigen to be preserved in its most effective form have been unsuccessful. With Dr W. D. Nicol, Dr Felix tested the antibody response of fifty persons who had been given subcutaneously three doses of an alcohol-killed typhoid vaccine. All those inoculated showed a marked increase in "O" antibody and in half there was a significant increase in the "Vi" antibody. The results of an examination of sera from forty-five typhoid carriers suggest that "Vi" agglutination should have a definite place in the routine diagnosis of typhoid carriers. Each of the twenty-five strains from chronic typhoid carriers was found to contain "Vi" antigen.

Dr F. A. Gorer, who with Dr Schütze has been investigating the influence of genetic constitution on immunity and immune processes, found that sarcoma arising in a pure line of albino mice was transferable to all other members of the line and certain hybrids derived from it but not to unrelated mice. Those hybrids susceptible to grafts of the tumour possessed an antigen in their erythrocytes derived from the albino ancestors. In the absence of the antigen the tumour invariably regressed.

Endocrinology

One of the most remarkable properties of the sex hormones is that of stimulating the development of the sexual organs of both sexes in normal rats and bringing about a return of the atrophied organs of gonadectomized animals to, or towards, the normal condition. Dr V. Korenchevsky, with Mrs M. Dennison and Miss K. Hall has studied the effect on male and female rats of various combinations of the male hormones trans-dehydroandrostosterone and testosterone propionate and also of the probable intermediate compounds in the biological formation of sex hormones. The effect of various combinations of these hormones with oestrone was also investigated. They found testosterone propionate the most powerful of this group, and showed that in appropriate doses it brings about a return to the normal condition of the atrophied sexual organs in castrated male rats and a return to nearly normal weight of the sexual organs in ovariectomized rats. That these hormones are still essentially male however, is shown by the fact that their restorative effect on all the sexual organs of the male rat is complete, whereas the complete effect was obtained in females only when testosterone propionate was administered simultaneously with the female hormone (oestrone). Complete recovery of all the atrophied sexual organs with oestrone alone was not possible. These results suggest a possible reason for the simultaneous presence of "male" and "female" hormones in the organism of either sex.

Unlike the other male hormones testosterone propionate continues to stimulate, though with a slowly decreasing action, the sexual organs for as long as nine days after the last injection. During this period it maintains its effect on the adrenals while the katabolic effect, as shown by changes in body weight, even increases. This property is therapeutically valuable in that results can be obtained with injections as infrequent as once in ten or even perhaps fourteen days.

Professor P. Ellinger and Dr A. Lambrechts, studying the localization of the glycosuric action of phloridzin have shown that it interferes with the passage of certain substances from the lumen into the epithelium of the proximal tubules. The mechanism of this blockade has, however, not yet been ascertained.

Professor Ellinger, in collaboration with Dr Dorothy Hare and Dr S. Levy Simpson, has investigated the influence of the cerebrospinal fluid of an acromegalic woman on the urinary chloride and water excretion of rabbits injected subcutaneously with the fluid and given water by the mouth simultaneously. A definite increased rate of chloride elimination resulted, but normal water diuresis was unaffected. Cerebrospinal fluid from normal people and sera from the acromegalic patient and other control patients had no action either on chloride excretion or on diuresis. This effect was less after irradiation of the pituitary gland, which also produced clinical improvement. In control experiments a standard solution of pitressin had an anti-diuretic action and increased the rate of chloride excretion. It has not been possible to decide whether the anti-diuretic and chloride-eliminating effects are due to different hormones or whether the anti-diuretic action of the posterior lobe hormone was masked by that of some other substance in the spinal fluid of this patient.

Nutrition

A comparison of the results of biological and spectrographic estimations of vitamin A has been conducted by Miss Hume in order to obtain trustworthy figures for the conversion factor required for relation of the results of the biological and spectrographic tests and expression of the latter in international units. If certain reported discrepancies cannot be resolved it is possible that the spectrographic method will be abandoned and vitamin A standardization made to depend only on the biological test.

At the Department of Animal Pathology, Cambridge, Dr H Chick has collaborated with Dr T A Birch and Sir Charles Martin in an investigation of the nutritive defects of maize. A diet containing over 80 per cent ground whole white maize supplemented with permeal and a small amount of purified casein, extra salts and cod liver oil was given to young pigs. After about six weeks on this diet they lost weight, became anorectic, suffered from severe diarrhoea and died unless the diet was changed. The disease was prevented if 4 per cent yeast was included or if the maize was replaced by a mixture of wheat and barley. It was cured in a dramatic manner when yeast or an autoclaved protein free yeast extract was added to the diet. These facts point to a deficiency in maize of some heat stable constituent in the yeast extract—that is some constituent of vitamin B. Dogs given the above diet develop the condition known as nutritional black tongue which many believe to be analogous to human pellagra.

Miss A M Copping has continued the investigation begun by Dr M H Rosecoe in 1935 on the vitamin B₁ and B contents of wholemeal flour and bread and found them to be much greater than those of white flour and bread. The last two, however, proved unexpectedly rich in vitamin B₂ and the amount in the bread was not to be attributed to the added yeast since the values for the flour and the bread were equal. The content of flavine was low in both types of flour and bread and the second constituent of the vitamin B complex (so called vitamin B₂) was abundantly present in the wholemeal flour and bread but less in the white flour and bread.

Dr T F Macrae and Miss C F Edgar have shown that aqueous yeast extracts contain two factors in addition to vitamin B₁ and lactoflavine necessary for the growth of rats. One of these factors is removed with lactoflavine from the yeast extracts by adsorption with fuller's earth in acid solution while the other remains in the fuller's earth filtrate. The factor adsorbed by fuller's earth may be eluted with barium hydroxide. They have been working on the chemistry and purification of the factor which is not adsorbed by fuller's earth. The results obtained suggest that this vitamin may be quite distinct from vitamin B₂ as described by György.

Dr S S Zilva has studied the relation of the intake of ascorbic acid to the vitamin C content of the selective organs and other tissues of guinea pigs to their susceptibility to scurvy, to the urinary excretion of ascorbic acid, and to their general well being. He found that in order to attain the maximum concentration in the tissues ten times the protective dose had to be given. The accumulated vitamin C in the body of the guinea pig does not act as a store in the true sense of the word. The results support the view that there is a wide margin of unsaturation with vitamin C which has no obvious detrimental effect on the health of the individual. Dr Johnson found that guinea pigs deprived of vitamin C did not develop cataract. The humours of the eye and the lens behaved like the selective tissues: the vitamin disappeared during dietetic depletion and reappeared in the original concentration when ascorbic acid was injected into the animals.

Biochemistry

Dr A R Todd and Dr F Bergel have finally synthesized ancurin (vitamin B₁₂). The synthetic product was identified with the natural vitamin by chemical and biological methods and synthesis of related compounds has been undertaken with a view to determination of the structural features essential for antineuritic activity. Dr Todd has also done some preliminary work in an attempt to isolate the sterility factor in vitamin E in the unsaponifiable fraction of rice and oil.

Therapeutic Sera and Vaccines

Dr W T J Morgan has elaborated a method for the isolation of the antigen of *B dysenteriae* Shiga and

describes the antigen in its natural state as a polysaccharide-lipoid complex representing about 50 per cent of the antigenic complex. The method he uses has been applied to other bacteria.

Dr G I Pettie has confirmed the fact that an inoculum containing comparatively few living meningococci suspended in a solution of mucin is lethal to mice by intraperitoneal injection. The relative virulence of meningococcal strains can now be estimated without difficulty by means of the mucin technique.

Other work has seemed to show that the addition of 50 to 60 per cent of glycerin to tetanus toxin has a remarkable stabilizing action on it and within recent years the same principle has been extended to the toxin of *C. welchii* and to dysentery toxin (Shiga). Glycerinated preparations of this kind can be stored at -30°C—a temperature which is not sufficient to freeze them but which retards internal chemical and enzymic changes and thus inhibits destruction of the specific molecules. Further general work on the stability of therapeutics has been continued.

BRITISH ASSOCIATION OF RADIOLOGISTS

THIRD ANNUAL MEETING

The third annual meeting of the British Association of Radiologists was held in London on June 11 and 12 under the presidency of Professor J M WOODFORD MORRISON. Two sessions were held, one of them devoted to radiotherapy and the other to radio-diagnosis and both attracted large attendances.

A brief lecture on the after-care of patients suffering from breast cancer was delivered by Dr I HERMANSON JOHNSON. He described the objects of such after-care as being to keep the patient free from the external signs of the disease, to avert pain and discomfort, to prevent or delay the onset of metastases, to recognize and treat at the earliest possible moment any metastases that occur, and to ensure that the patient's psychological reactions are as normal as possible. In his experience the mental state of those who knew they were suffering from cancer was far better than those who merely suspected it. The patient-to-day had a more philosophical outlook on life and death than his predecessors and of course however depressing mortality statistics might be they related to the average not to the individual and did not prevent the possibility of miracles. He urged the creation of special after-care clinics for such cases in hospital districts.

Wave-length in Radiotherapy

The controversy regarding wave length as a factor in radiotherapy was opened by Dr G I STANNING who suggested that there was a selective action in rays of shorter wave length (that is, rays having greater penetrating power). There was not only clinical but laboratory evidence to that effect. The distance so to speak between damage to the skin and damage to the growth was much greater with the short wave than with the long wave. He agreed that the selective action of the shorter waves was only one factor concerned, but it made a decisive difference in radio resistant tumours.

Dr J H DOUGLAS WEBSTER took a different view. He regarded wave length as one of the least important factors in radiotherapy. The evidence for selective action of the short wave was extremely tenuous. There was of course a better depth dose with higher voltage but the same result could be obtained by using the tube at a greater distance. Differences in results were due to variations in intensity and time, not to wave length as such. Dr RALSTON PATERSON said that at the present time it was easier and more successful to treat cases with shorter wave length, but more important than any specificity difference was the factor of skin reaction. The skin reaction dose for dose, varied with difference of wave length but he believed that the effect was a physical not a biological one. If the skin had a greater tolerance for shorter wave

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Dr P. A. Gorer, who with Dr Schütze has been investigating the influence of genetic constitution on immunity and immune processes found that sarcoma arising in a pure line of albino mice was transferable to all other members of the line and certain hybrids derived from it but not to unrelated mice. Those hybrids susceptible to grafts of the tumour possessed an antigen in their erythrocytes derived from the albino ancestors. In the absence of the antigen the tumour invariably regressed.

Endocrinology

One of the most remarkable properties of the sex hormones is that of stimulating the development of the sexual organs of both sexes in normal rats and bringing about a return of the atrophied organs of gonadectomized animals to, or towards, the normal condition. Dr V. Korenchevsky, with Mrs M. Dennison and Miss K. Hall, has studied the effect on male and female rats of various combinations of the male hormones trans dehydroandrosterone and testosterone propionate and also of the probable intermediate compounds in the biological formation of sex hormones. The effect of various combinations of these hormones with oestrone was also investigated. They found testosterone propionate the most powerful of this group, and showed that in appropriate doses it brings about a return to the normal condition of the atrophied sexual organs in castrated male rats and a return to nearly normal weight of the sexual organs in ovariectomized rats. That these hormones are still essentially male, however, is shown by the fact that their restorative effect on all the sexual organs of the male rat is complete, whereas the complete effect was obtained in females only when testosterone propionate was administered simultaneously with the female hormone (oestrone). Complete recovery of all the atrophied sexual organs with oestrone alone was not possible. These results suggest a possible reason for the simultaneous presence of "male" and "female" hormones in the organism of either sex.

Unlike the other male hormones testosterone propionate continues to stimulate, though with a slowly decreasing action, the sexual organs for as long as nine days after the last injection. During this period it maintains its effect on the adrenals, while the katabolic effect, as shown by changes in body weight, even increases. This property is therapeutically valuable in that results can be obtained with injections as infrequent as once in ten or even perhaps fourteen days.

Professor P. Ellinger and Dr A. Lambrechts studying the localization of the glycosuric action of phloridzin, have shown that it interferes with the passage of certain substances from the lumen into the epithelium of the proximal tubules. The mechanism of this blockade has, however, not yet been ascertained.

Professor Ellinger, in collaboration with Dr Dorothy Hare and Dr S. Levy Simpson, has investigated the influence of the cerebro-spinal fluid of an acromegalic woman on the urinary chloride and water excretion of rabbits injected subcutaneously with the fluid and given water by the mouth simultaneously. A definite increased rate of chloride elimination resulted, but normal water diuresis was unaffected. Cerebro-spinal fluid from normal people and sera from the acromegalic patient and other control patients had no action either on chloride excretion or on diuresis. This effect was less after irradiation of the pituitary gland, which also produced clinical improvement. In control experiments a standard solution of pitressin had an anti-diuretic action and increased the rate of chloride excretion. It has not been possible to decide whether the anti-diuretic and chloride eliminating effects are due to different hormones or whether the anti-diuretic action of the posterior lobe hormone was masked by that of some other substance in the spinal fluid of this patient.

Nutrition

A comparison of the results of biological and spectrographic estimations of vitamin A has been conducted by Miss Hume in order to obtain trustworthy figures for the conversion factor required for relation of the results of the biological and spectrographic tests and expression of the latter in international units. If certain reported discrepancies cannot be resolved it is possible that the spectrographic method will be abandoned and vitamin A standardization made to depend only on the biological test.

lengths the whole explanation of the clinical differences lay in that fact

Low Voltage Near-distance X-Ray Therapy

Brief contributions were made by Professor WOODBURN MORISON Dr J F BROWLEY and Dr S B ADAMS on low voltage near-distance x-ray therapy. Dr Adams described results as elicited at the Royal Cancer Hospital where the method had been employed for two years. The most suitable conditions for treatment by this method were skin cancer cases. Very little inter-cavity work was done. Cases of malignant disease of the tongue and tonsil being treated by 'bomb' therapy. Certain nodular types of breast cancer were suitable, and among non-malignant conditions treated with success were boils, lupus, moles, and warts. Keloid scars responded well.

The second session was devoted to radio diagnosis. Dr E LYSIOLM of Stockholm gave an address on experiences in ventriculography based on over 600 cases submitted to this procedure generally with lipiodol and described the localization of the various brain tumours. It was explained that all the neuro-radiological work in Sweden was concentrated in one clinic, of which Dr Lysiolm had charge. Dr H W A POST read a paper on salpingography—the radiological examination of the uterus and Fallopian tubes by means of lipiodol or other iodized oil. Other papers were read by Dr E ROHAN WILLIAMS on urography in pregnancy, by Dr H M WORTH on the use of lipiodol in the localization of spinal tumours, and by Dr M H JURE on cases of suprarenal tumour.

Annual Dinner

The annual dinner of the Association was held on June 11 under the presidency of Professor J M WOODBURN MORISON. In proposing the health of the Association Mr S J WORSLEY acting principal of the University of London referred to the fact that the University had instituted what he thought was the only chair of radiology in this country—the one at present filled by Professor Morison. It had also instituted a diploma in radiology, a step not taken without some difficulty. It was inevitable that a university so placed in relation to medicine as London must take steps to put radiology on a proper footing. Already eight schools of the University were prepared to give instruction in some part of the course, though actually at present the burden was being borne by two. In 1936 twelve students passed the second part of the examination for the diploma—a small but promising beginning. Dr R M BEATH of Belfast, in responding, thanked the members for making him president-elect, which he considered a tribute to Irish radiology. He referred to the sound work done by his three predecessors in the chair—Dr F J Brailsford, one of the prime movers in the formation of the Association and Dr R S Paterson and Professor Woodburn Morison who had guided it on sound lines. The main motive of the Association was the training and education of the radiologist. It was moving for a higher diploma, and hoped at some time to form a college of radiology.

Dr R E ROBERTS proposed the health of the guests who included Sir Cuthbert Wallace, President of the Royal College of Surgeons, Sir Walter Langdon Brown, Mr Rock Carling, Mr Dickson Wright, and representatives of the *Lancet* and the *British Medical Journal*. Sir WALTER LANGDON BROWN in responding suggested as a motto for radiologists the latter part of Burke's aphorism, 'What shadows we pursue! or St Paul's, Now we see through a glass darkly.' He referred to the great differences which modern scientific apparatus had made in the practice of medicine and recalled a remark of his old chief Samuel Gee, 'Formerly the diagnosis of renal calculus required a good deal of skill, now it will require no skill at all, but at any rate we shall have certainty.' Professor WOODBURN MORISON proposed the health of 'Absent Friends,' having in mind particularly that veteran radiologist, Mr C Thurstan Holland of Liverpool, who had written, 'Doctor's orders must sometimes be obeyed, especially when one is not well enough to disobey them.'

Reports of Societies

HYPERTHYROIDISM AND THE THYROTROPIC HORMONE OF THE PITUITARY

At a meeting of the Section of Therapeutics and Pharmacology of the Royal Society of Medicine on June 8, Dr DOROTHY HARE presiding, Dr ARNOLD LOESER of the Pharmacological Institute of the University of Freiburg addressed the meeting on 'Hyperthyroidism and the Thyrotropic Hormone of the Pituitary.'

In the first part of his lecture Dr Loeser discussed the influence of the thyrotropic hormone of the pituitary on the thyroid and the effects of stimulation of the thyroid on the body in general. The hormone he said, acted directly on the gland cells. It was inactive when given *per os* and was without effect upon growth or the sex glands. The hormone content of the pituitary varied considerably from species to species. The content of the anterior lobe (dry) in Junkmann Schoeller units per gramme was as follows:

Ox	250-500
Rat	4,000-8,000
Pig	300
Horse	70
Man	150-1,000 per gramme in total dried gland

The thyrotropic hormone not only brought about a structural change in the thyroid but also effected the liberation of iodine-containing substance from the organ. In normal rats administration of the thyrotropic hormone raised the basal metabolic rate by about 26 per cent. A further consequence of the action of the hormone on the thyroid was a change in the carbohydrate metabolism, indicated by a diminution in the glycogen content of the liver (appearing in guinea-pigs about four days after administration). On administration of the hormone symptoms of hyperthyroidism were produced, but the maintenance of such symptoms or their progress to a permanent pathological condition was restricted by the temporary nature of the hormonal effect. All the changes except exophthalmos tended to disappear and a normal condition to return or even a subnormal condition characteristic of hypophysectomized animals. Thus it was possible with the thyrotropic hormone to produce all the effects of hyperthyroidism, but not to maintain such effects completely, and to this fact was no doubt to be attributed disappointing clinical results.

The Anti thyrotropic Substance -

In addition to these regulatory processes a second factor might be present in which the pituitary played no part—namely, an anti thyrotropic extract. Associated with the administration of the thyrotropic hormone a substance gradually appeared in the blood which worked against the hormone. The origin of this substance in the body was as yet unknown. It might be fairly definitely stated, as a result of various investigations, that it was not produced in the pituitary, thyroid, adrenals, or ovaries, therefore in the interests of clarity he preferred to use the indifferent term anti thyrotropic principle or protective factor. He restricted the term hormone to a substance secreted by an endocrine gland and having as its main function to influence the activity of other organs.

His conclusions with regard to the anti thyrotropic principle were first that the action of the inhibitory factor was not restricted to a type of specific immunity reaction. Secondly it was known that the inhibitory action of normal blood might after a certain period be increased by continued administration of the thyrotropic hormone, but this increase was possible only in the presence of thyroid and could not be obtained in the thyroidectomized animal, and thirdly the anti thyrotropic principle was antagonistic only to the thyrotropic hormone.

The refractory development of the thyroid in hyperthyroidism Dr Looser's proposal was in regard to a process by means of which the organism protected the thyroid gland against a thyrotoxic hormone. This protective effect might be viewed in two ways. First, it might be on the formation of hormone in the pituitary gland secondly, by the shutting off liberation of the thyroid from the effects of the hormone by the appearance of the antithyrotropic substance. The first account is better supported by the facts. The effects of the thyrotoxic substance and over secretion of thyroid hormone did not act in other words, the existence of hyperthyroidism is not produced. The refractory condition of the thyroid which after a certain latent period is freed from the administration of pituitary hormone could, however, be broken through by a dramatic drop of the pituitary hormone progressively increasing again. Third, the refractory and functional state of hyperthyroidism might not only be maintained but continually developed until death occurred. One action of the thyrotoxic hormone is the production of degeneration and diffuse necrosis of the liver and kidneys, was only observed under the effect of progressively increasing hormone dosage. By continually raising the dosage the duration of the effect of the thyrotoxic hormone could be extended and the animal, in contrast to those receiving a constant dosage, could be maintained in a state of hyperthyroidism until death.

These observations led to the conclusion that by continually increasing the hormone dosage it was possible to break through all the safeguards which protected the thyroid against the thyrotoxic hormone and the effect of the organism from a flood of thyroid secretion. The refractory condition of the thyroid which on a constant dosage of pituitary hormone set in rather rapidly might be overridden by continually raising the dosage. At least two ways were conceivable for the production of a continual state of hyperthyroidism: first the continual stimulation of thyroid activity with the normal protective function of the organism still preserved and secondly, the failure of the protective function accompanied by a constant or increasing stimulation of thyroid activity. With these conceptions the condition of experimental hyperthyroidism with its related clinical counterpart Basedow's disease took on a new aspect and with it the possibility of a curative therapy, as for example the administration of a highly active antithyrotropic factor as worthy of consideration in certain cases.

Discussion

Dr C. I. COPT said that the question arose whether the thyrotropic hormone had any place in the aetiology of primary Graves's disease. Was the hormone increased in amount in the circulating blood in cases of this disease? This might be expected in view of the physiological properties of the substance. If serum from a case of Graves's disease were taken and injected into the guinea pig it was found not to stimulate the gland in the same way as the patient's gland had been stimulated but rather to produce a more resting state in the gland. So far from containing thyrotropic hormone it appeared to contain an anti-thyrotropic factor. This made it rather difficult to put forward the hormone as the immediate cause of the hyperplasia and over activity of the gland in Graves's disease. Again if this hormone were increased in the body did it appear in the urine? Methods of concentrating any hormone that might be in the urine had been used in cases of Graves's disease and in no case had there been any evidence of the presence of this hormone in the urine, rather the impression was that it was less in the urine of patients with Graves's disease than in that of normal individuals. There was an extraordinary lack of agreement as to whether or not the hormone was present in demonstrable amounts in the blood in this disease but the balance of evidence was in favour of the view that if the hormone was there it was rather less in Graves's disease. American workers had suggested that it was increased in certain cases of myxoedema. Cases

of myxoedema had not been easy to obtain untreated but in two cases of primary myxoedema there was no evidence of hormone in the serum. But they differed from the American workers in that they were experimental, the serum of the American cases were the result of complete thyroidectomy. The evidence pointed to the failure of the pituitary in Graves's disease and to a lack of thyroid stimulation but they had been quite unable to do with it. If the pituitary thyrotoxic hormone was produced in excess in Graves's disease and that it was antithyrotropic in effect.

Dr R. M. BRIDGES said that he had been particularly interested in those rather unusual patients who had exophthalmos associated with hyperthyroidism. He thought they formed a class distinct from primary Graves's disease but a point of special interest was that they fell into two groups, one consisting of patients who had the exophthalmos in which there were exophthalmos and exophthalmos developed in patients who had had a thyroidectomy done for primary hyperthyroidism. From a study of the experiments with the exophthalmos number showing a relation to the thyroid rate was greater than in one group than in the other. Following on increased basal metabolic rate and the linked up in an increasing way with other experimental showing that it was possible for the thyrotoxic hormone to produce exophthalmos in the more readily in animals in which the thyroid had been previously removed. He had not quite decided whether Dr Looser believed in the exophthalmos was a separate symptom from the hyperthyroidism and was due to the thyrotoxic hormone rather than to hyperthyroidism itself.

Dr A. W. SHERMAN said that he too had been unable to find any evidence of thyrotoxic hormone in the serum of patients suffering from toxic goitre. He had had the opportunity of testing the serum of four or five patients with spontaneous myxoedema—that is not those who had developed myxoedema as a result of thyroidectomy—and in these also he had been unable to find any evidence of the thyrotoxic hormone. It appeared from the literature that these results were conflicting. In most of the cases of toxic goitre workers on this subject had found no evidence of thyrotoxic factor in the serum but there were one or two cases in which they could definitely find such evidence and there was a tendency to divide cases of Graves's disease into two groups, the larger being cases of primary hyperthyroidism without any primary pituitary involvement and the smaller group cases primarily of hypersecretion by the anterior pituitary of thyrotoxic substance and it was recommended that every case of Graves's disease should be examined from the point of view of secretion of thyrotropic hormone or the presence of such hormone in the serum. According to these workers the pituitary cases should be treated by deep x-ray therapy to the pituitary and good results were claimed in this small group of cases. The antithyrotropic factor was of considerable interest and might be used in the treatment of toxic goitre. He felt that the majority of cases of toxic goitre were due rather to an inability to form this substance than to an excessive production of thyrotropic hormone.

Dr A. S. PARKES said that the term antihormone to which Dr Looser had taken exception originated in Montreal. He was still not clear whether it was meant to imply a hormone which was anti something or something which was anti to a hormone. Most of them would agree that the antithyrotropic principle was anti to the hormone. His colleagues at Hampstead had been generally careful to refer only to the antithyrotropic serum and never to an antithyrotropic hormone. He wondered whether Dr Looser had tried out any immunological tests with the antiserum. (Dr Looser indicated that he had not.) Again in what proportion of normal sheep did he find demonstrable antithyrotropic activity in the untreated serum? (Dr Looser said that he could not answer that question.) Dr Parkes said that with their more gross tests they had not been able to discover

in a series of half a dozen normal sheep the anti thyrotropic activity which Dr Loeser had described. He wondered whether anti thyrotropic activity had any part to play in the normal animal in maintaining the endocrine balance.

DUAL PERSONALITY

SIR WALTER LANGDON BROWN delivered the annual Cavendish Lecture under the auspices of the West London Medical Chirurgical Society at Kensington Town Hall on June 3, entitling it "Dr Jekyll diagnoses Mr Hyde." Mr NEIL SINCLAIR, president of the society, was in the chair.

After some entertaining literary reflections on Robert Louis Stevenson and others the lecturer discussed the medical approach to dual personality. To the inheritors of nineteenth century materialistic medicine it was not a welcome discovery that the psychic was a causal factor in disease. The Freudian attitude to the unconscious was perhaps apt to give it too dark and depressing an impression. The lecturer started therefore from a biological standpoint, as Rivers would have done. Structurally numerous vestiges of earlier evolutionary phases were to be recognized in the human body and the human psyche from this point of view was likewise a product of evolution which showed many archaic features. Rivers did not accept Freud's conception of a censorship; he regarded the fantastic and symbolic forms in which hysteria and dreams manifested themselves as a regression to a lower level which was natural to the infantile stages of human development individual or collective. We reached the higher levels of our nervous system on the stepping stones not only of our dead selves but of our long-dead ancestors. The lecturer could not doubt that medicine would have to become increasingly psychological in its approach. The new psychology was a compromise, a selection from the doctrines of different schools but it was the needs of the present time which had led to its development. If some academic psychologists scoffed at it the simple reply could be made that it worked. Although it was only in its infancy its influence was overflowing beyond the confines of medicine into many other fields of thought just as did Darwin's exposition of the principle of evolution. A compact body of well informed medical opinion on the subject could be a much needed educative influence in a world which seemed to be steadily growing more psychologically sick.

At the present time, added Sir Walter Langdon Brown, the darker side of the collective unconscious was assuming a volcanic energy. If it was not to prevail they must live up to the Greek maxim. Know thyself, or Caliban would reconquer the island he inherited from Sycorax his mother. Dr Jekyll must diagnose Mr Hyde by recognizing his origin. Am I too optimistic in hoping that the profession to which Jekyll belonged can by psychological insight play an important part in leading the way to a calmer, humaner and more rational world?

The inquiry into the physical, psychological, and genetic aspects of mental deficiency carried on in the research department of the Royal Eastern Counties Institution at Colchester has received valuable aid from the trustees of the Rockefeller Foundation. Hitherto the research department under Dr Lionel Penrose has been financed by the Medical Research Council, the Darwin Trust and by the institution itself. Recently also a generous donation of £2,200 was made by the Hon. Alexandra Peckover towards the cost of a new laboratory and research offices provided by the institution. Now the trustees of the Rockefeller Foundation have opened the way to further developments by making a grant at the rate of £600 per annum for five years to provide additional research workers and a non-recurrent grant of £700 towards the cost of laboratory equipment.

Local News

SCOTLAND

St Andrews University

At a meeting of the University Court of St Andrews University, Principal Sir James C. Irvine presiding, Dr H. E. Hutchison, lecturer in clinical pathology in the University, was appointed to be warden of the William Low Residence for medical students in Dundee. This residence will be opened for medical students attending clinical courses from the beginning of October next. The Court has agreed to recognize Mayfield Hospital, Dundee, as a general hospital in which clinical courses qualifying for the degree of M.B. Ch.B. may be attended by medical students of the University. The new ordinance for the establishment of degrees of Bachelor of Dental Surgery and Master of Dental Surgery will come into effect from the beginning of the academic year 1937-8. The course for the B.D.S. will be five years of which four will embrace studies similar to those for the L.D.S. of the University, but the examinations will be of a higher standard and there will be an extra examination at the end of the fifth year. Those who have taken the B.D.S. may proceed to the M.D.S. after one year in practice as a dental surgeon, or after holding a post in a dental hospital and submitting to a clinical examination and presenting a thesis.

Edinburgh Hospital for Sick Children

The work of the Edinburgh Hospital for Sick Children is steadily increasing. 100 more cases having been treated in the wards in 1936 than in 1935, while the out-patient work has also increased. This has necessitated further nursing staff and to accommodate the extra nurses a house in the neighbourhood has been purchased. The home presented by Lord Forteviot last year has enabled 100 infants to be transferred from the hospital to the home, and this has greatly facilitated the work of the hospital. The report for 1936, which was presented at the annual meeting of contributors on June 10, shows that the number of cases treated during the year was 3,267, of which 1,308 were medical, 1,250 surgical, and 682 ear and throat cases. The average daily number of patients was 132, and the average duration of residence 15.5 days. At the out-patient department there were over 29,000 attendances, and in the sunlight department 5,616 treatments were given compared with 4,861 in the preceding year. The ordinary income for the year was £16,304, compared with £14,847 in 1935, while the ordinary expenditure was £20,699. The deficit was less than in the previous year, amounting to £4,395, as compared with £4,590. There was also a deficit of ordinary income amounting to £318 on the Muirfield Convalescent Home, and a surplus of £144 on the Forteviot Convalescent Home.

Astley Ainslie Institution

The report of the Astley Ainslie Institution for the year 1936 by Lieut.-Colonel John Cunningham, medical superintendent of the institution, shows that the number of beds is now 169. The Departmental Committee on Scottish Health Services gave a summary in its report of the methods and policy adopted at this institution as illustrating the lines along which modern ideas of convalescence are developing. This institution, being fully endowed, does not appeal to the public for support, and it only admits patients from the Royal Infirmary of Edinburgh requiring a prolonged convalescence. The total number of patients treated during the year was 1,077 including 221 children. The majority of the patients 749, were either cured or improved; only twenty were dis-

charged without any change in their condition, while 120 were sent back to the Royal Infirmary for further treatment. The maintenance cost per bed for the year was £151. The institution possesses a fully equipped department for physical therapy by massage, artificial sunlight, and various forms of electrical treatment. A special feature of the institution is the department for occupational therapy, which was opened in May, 1936, and which is one of the first of this kind in the country to be designed in connexion with a general hospital. This building is single storied and consists of a central section with two large wings containing the main workshops, one being allotted to "quiet" crafts such as weaving, painting, basketry, etc., and the other to "noisy" crafts such as carpentry and metal work. Large windows form the greater part of the wall area of the main workshops to provide adequate lighting and to enable the patients to work under what amounts to open-air conditions. The workshops are fully equipped with the apparatus necessary for various crafts, such as saws and lathes specially designed to assist in the treatment of patients showing orthopaedic disabilities. Great success has attended this form of therapy and its extension to patients confined to bed in the wards. For male patients confined to bed, rug making, basketry painting, wood carving, leather work and weaving with small looms have all been found suitable, while needlework in its various forms and knitting are most popular in the women's pavilions. Occupational classes for both men and women are conducted in the workshops, the men attending for two hours in the morning and women for two hours in the afternoon. The number of patients who underwent this form of training and treatment during the year was 658.

ENGLAND AND WALES

The Harveian Society

The Buckston Browne dinner of the Harveian Society of London was held this year in the Connaught Rooms, Great Queen Street, on June 10 with the president, Dr A H Douthwaite in the chair. The principal toast, that of the Harveian Society, was proposed by the Lord Chief Justice of England Lord Hewart, who told a number of stories, and after some banter at the expense of the medical profession paid its members a compliment by saying "When you meet the Recording Angel you will have a pretty easy time." Dr Douthwaite in his reply, thanked Lord Hewart for honouring the Society by attending its banquet and recalled that it was he who publicly pointed out that if the Osteopaths Bill became law osteopaths would have the right to sign death certificates. Briefly reviewing the events of the past year Dr Douthwaite said that the Society had now almost succeeded in paying its quota towards the restoration of Harvey's tower at Hempstead, it had moved into new quarters in Portland Place and Dr G de Bec Turtle had presented a snuff box on giving up the treasurership after ten years of enthusiastic work. Though this was against orders the president ended with an acknowledgement to Sir Buckston Browne for his generosity in providing the banquet. The health of the visitors was proposed by Mr M F Nicholls who congratulated Mr H L Eason Vice-Chancellor of the University of London, on his appointment as Principal of the University and welcomed Sir John Herbert Parsons president of the Royal Society of Medicine Sir William Willcox president of the Medical Society of London and Mr D C Norris president of the Hunterian Society. The toast was acknowledged by Mr Eason Mr Ernest Bevin and Mr Derek Curtis-Bennett. Mr Bevin expressed his pleasure at dining in good trade union company "with representatives of the Law the Church and Medicine. He spoke in warm terms of recent discussions between the Trades Union

Congress and the British Medical Association, and the good that must follow this contact in promoting the medical treatment of workpeople on sound lines. Co-operation was needed between the medical profession and industry, so that the problems that arose from the conditions of modern life might be tackled at an early stage. To-day there was a great opportunity for breaking down barriers, hitherto there had been too long a lag in the application to practice of the fruits of discovery, more collaboration would secure better results from the medical services. A bad defect in the national health insurance scheme was its failure to include women and children.

Manson and Ross Commemoration

The Board of Management of the London School of Hygiene and Tropical Medicine and the Standing Committee of the Ross Institute of Tropical Hygiene held a reception at the School on June 9 to meet the Earl of Athlone, K G, Chancellor of the University of London. The guests, many of whom were medical visitors from over-seas, were received in the library by Lord Athlone and Professor W W Jameson, Dean of the School. In the museum on the second floor Professor R. T. Leiper and Dr B G Peters exhibited living fresh-water snails, water fleas, and other crustacea, and fishes concerned in the transmission of disease in the Tropics, examples of diseased conditions caused by helminth parasites, and microscopical preparations of stages in the life histories of parasites causing tropical diseases. Professor P A. Buxton and Mr Leeson also exhibited live insects of medical interest. In the museum on the third floor a collection of original notebooks and other material relating to Sir Patrick Manson and Sir Ronald Ross were displayed. Dr G P Crowden demonstrated an air conditioned cubicle for use in the Tropics, and other demonstrations concerned with warmth and comfort measurements and standards for factories and shops, and the use of reinforced aluminium foil for insulation against radiant heat were given by Dr T Bedford, Dr Crowden, and Mr Luxton. In the lighting laboratory Mr T C Angus showed methods of lighting and ventilation in factories, and a method of controlling dust hazards in industry.

New Essex Hospital for Nervous and Mental Diseases

The Minister of Health (Sir Kingsley Wood) on June 14 opened the Runwell Hospital near Wickford in Essex to serve as a joint hospital for nervous and mental cases for the county boroughs of Southend on Sea and East Ham. The new hospital is on a pleasant country site of 500 acres, about twenty-four miles from East Ham and twelve from Southend, and in its arrangement advantage has been fully taken of new ideas and experience in mental hospital planning and construction. It is intended to house just over 1,000 patients, and it comprises from twenty-five to thirty separate units. In the central administration unit, in addition to the usual offices, there are a recreation hall with a fully equipped stage and modern cinema projector, a gymnasium, a lecture theatre, a library for patients and staff, as well as kitchens and bakery. At the side of this are separate occupational therapy workshops for male and female patients. Provision has been made for teaching numerous handicrafts such as rug-making, basketry, weaving, beadwork, pottery, and embroidery, and in addition there are special shops for upholstery, printing tailoring, boot repairing metal work, and carpentry. The admission hospital is a pleasant single storied building on the outskirts of the colony built so as to be light sunny, and airy, with plenty of veranda and solarium accommodation. In the centre portion of this building are housed the x-ray and light departments the pathological and biochemical research laboratories the laboratories of experimental psychology and clinical pathology, and a modern hydrotherapeutic department. A large common room for both sexes is also provided here, with facilities

for recreation and occupational therapy. The admission hospital includes clinical examination rooms where newly admitted patients are first seen by the resident physicians and male and female wards in the east and west wings. Two other separate buildings have been provided for voluntary patients one for men and one for women suffering from the milder forms of nervous disorder. These are really detached single storied villas with a large number of private bedrooms most of them opening directly on to a terrace as well as homelike sitting rooms with french windows. Another single storied building consisting of a central block and two wings serves as a sick hospital for patients suffering from physical complaints. Units for quiet and employable patients are arranged on either side of the administration building and surrounding these are large gardens with room for exercise and recreation. There are three private units for patients who do not require much supervision and are able to enjoy a considerable freedom within and without the grounds of the hospital and in a detached position, well away from the main blocks is Boundary House accommodating sixty male and 100 female patients suffering from the more severe forms of mental disorder with clinical rooms and a hydrotherapy department. The old idea of a refractory block has been dispelled in this pleasant building.

Correspondence

Moynihan Memorial

SIR,—The Board of the General Infirmary at Leeds realize that the greatest memorial to the genius and work of the late Lord Moynihan must always be advancement in the art of surgery which he did so much to promote. They feel, however, that it is their duty and privilege to perpetuate a record of Lord Moynihan's work for surgery and his labours in and for the General Infirmary at Leeds by the erection within its walls of a suitable memorial. Already a ward has been named the Moynihan Ward but much more than this is clearly required.

The Board have appointed a committee to submit and carry out a suitable scheme and on behalf of this committee I am able to state that the sum of £750 has already been received. More than this is needed if the memorial is to be adequate and I am authorized to invite subscriptions from medical and lay sympathizers. It is suggested that one guinea would be a suitable amount though more or less would be very acceptable. Subscriptions should be forwarded to the General Infirmary at Leeds in the name of the Moynihan Memorial Fund or to myself. They will all be very gratefully acknowledged—I am, etc.

CARLTON OLDFIELD

Leeds June 14 Chairman Moynihan Memorial Committee

Infectious Mononucleosis and Monocytic Leukaemia

SIR—May I refer to a point in Dr M. C. G. Israël's article on infectious mononucleosis and monocytic leukaemia (*Journal* March 20 p. 601). He states that "haemorrhage of any sort is rare in infectious mononucleosis". In general this is correct but epistaxis is not uncommon among children, and in extensive outbreaks at schools there are usually one or two severe cases. I have known it to be sufficiently serious to warrant blood transfusion. Haematuria is a traditional feature which was mentioned by Heubner in the discussion on

Pfeiffers original communication. It is certainly rare but I have seen several cases in which it was the first recognized manifestation and it may occur with a definite lymphocytosis but no glandular enlargement.

Dr Israël's second case was admitted to hospital for haemorrhage from the rectum. I saw a similar case in 1921 shortly after the recognition of mononucleosis in glandular fever. I have never seen another and so far as I am aware there is no other case in the literature.

May I perhaps mention that Türk spelt his name with out a c. He was a man of great personality and objected to the misspelling especially as German authors nearly always made this mistake.

There has been a fair amount of glandular fever among adults this year—I am, etc.

London W 1 June 7

H. LETHBRIDGE TIDY

Milk-borne Scarlet Fever in Doncaster

SIR—May I who was responsible for the preventive measures at the farm add to Dr R. Watson's account of the Doncaster outbreak of scarlet fever published in the *Journal* of June 12 (p. 1189).

In the first place it should be made clear that the whole occurrence was accidental and caused by a missed case of scarlet fever. On December 14 two days after discovering the milker's sore throat I found his daughter suffering from suppurative otitis media, the parents being unaware of the nature of the ailment on account of the absence of rash. The thick purulent discharge had been treated by the father since December 2. The mammary ducts of the cow's udder must have been infected by the hands of the milker, and his hands were infected from his daughter's ear discharge or from his own throat. If his hands were so infective as to cause a mastitis in the cow I cannot understand why the infection was unlikely to reach the milk from the same source before December 12.

Mr Canning assistant county veterinary officer West Riding who took the group samples on December 15 reported no evidence of mastitis. On December 20 he was able to identify the infected cow from a group so evident were the signs of mastitis and I was able to isolate the cow. Although it is obvious that the cow must have been infecting the milk supply between December 12 and 15 I cannot believe that the udder was infectious as early as December 6 or 7. If so much progress was made by the local lesion between December 15 and 20 why was so little made between December 6 and 15?

The evidence seems to favour very strongly the view that the milk was contaminated by the milker in the earlier stages of the outbreak and that the infection was continued later by the cow—I am, etc.

A. PENMAN,

M.O.H. Doncaster Rural District

June 12

Blood Transfusion in Obstetrics

SIR—With reference to the letter in the *Journal* of June 5 (p. 1176) by Dr E. K. Mackenzie replying to Dr Owen Jones's letter (May 22 p. 1090), I would heartily endorse Dr Owen Jones's method of dealing with the third stage of labour. That method of leaving the uterus unattended during the third stage has been strictly adhered to for the past four years in this institution and the cases of post-partum haemorrhage are less than 1 per cent. The results obtained have justified its continuance as during the last four years over 5,000 cases of confinement have been attended. There are two ideas underlying this technique.

1 The uterus, being exhausted during the first two stages, requires a period of rest before the expulsion of the placenta, to stimulate the uterus at this time is like the proverbial last straw, causing the uterine muscle to relax whenever the grasp is released

2 There is the temptation every now and again while the fundus is being held by the attendant to attempt to expel the placenta prematurely, resulting often in the discharge of blood clot, and when the uterus, after being pressed in this manner, assumes its normal position it sucks up from the vagina septic material into a potentially sterile cavity

I am rather surprised at Dr Mackenzie's large percentage of cases of post-partum haemorrhage and the immediate results obtained by the use of femergin and coramine. Such simple medication has not been sufficient in most of our cases to "quickly put the patient right," as more often we have to resort to intravenous gum saline or to blood transfusion. Furthermore, it is my opinion that those methods of dilatation of the vulval outlet and of the cervix shortly before completion of the first stage cannot be too strongly condemned. In this institution vaginal examinations are never permitted after labour has begun unless there are obvious complications.

As regards the anaesthetic, I find that nitrous oxide gas or even ethyl chloride are preferable to the administration of chloroform, and the apparatus supplied by the British Oxygen Company for the administration of nitrous oxide would be of great use to the general practitioner for any obstetrical complication that he has to deal with in the course of his practice.

It would also appear that the manual removal of the placenta twenty-seven times in a series of 1,279 cases seems to be a large percentage in the work of a general practitioner. I am of opinion that in obstetric practice it is best to leave things to nature when the patient's condition, temperature, and pulse remain normal. A patient should be examined abdominally, and the obstetrician should obtain sufficient knowledge as regards disproportion, delay in labour, or of the satisfactory progress thereof. I agree that ante natal examination is of first importance, but this is not always possible in hospital or general practice—I am, etc.,

County Maternity Hospital
Bellshill June 8

H J THOMSON

Treatment of Hernia

SIR—In associating myself with the remarks of Mr Delisle Gray in your issue of June 12—in which he suggests that opposition to the injection treatment is due to a complete misconception of its aims, effects and results—I would like to make a further comment on your leading article of June 5.

The term "sclerosing" which can properly be applied to the old phenol injections, which relied for their effect on destruction of tissue resulting in scar formation, is not applicable to most of the fluids in present use, and certainly not to that of the late Dr Enrique Pina, whose fluid I am using. This is "proliferating," in that it causes an exudate which becomes progressively granulation and fibrous tissue and is not formed by destruction, or necrosis of adjacent structures but results in a net gain, of new tissue, to the area. This is well demonstrated in recurrent hernia, where the injections fill up cavities and repair deficiencies in the body wall. It has also been demonstrated by microscopical examination of injected tissues—I am, etc.,

London W 1 June 12

E. W. ARCHER.

Carcinoma of the Oesophagus

SIR,—I should like to endorse Mr Tilley's opinion as expressed in his article on carcinoma of the oesophagus treated by x-ray therapy. With the modern method of treatment there does seem a little more hope than formerly. In a small series of cases treated at University College Hospital of carcinoma of the "middle third" of the oesophagus, proved by oesophagoscopy and biopsy, the longest survival is over three years (May, 1934). This patient was sent to me by Miss D J Collier. Treatment was followed by an increase in weight of 4 st. The patient can now eat anything she wishes, leads a normal life, and radiologically shows so far no signs of recurrence—I am, etc.,

E L G HILTON,
London, W C June 15 Radiotherapist University College
Hospital.

Streptocide for Streptococcal Empyema

SIR—The report of Dr James L. Brown in the *Journal* of June 5 (p 1157) regarding the treatment of streptococcal empyema with prontosil prompts me to give my experience with a similar drug in similar cases.

A man aged 26 years was admitted to the Thornton Isolation Hospital on March 26, 1937 with influenzal pneumonia of ten days duration. On admission he was extremely ill with severe dyspnoea and cyanosis, his temperature was 103° pulse rate 130 and respiratory rate 56. There were obvious signs of fluid in the right pleural cavity and on aspiration 18 oz. of thin purulent fluid were withdrawn. Culture of the fluid gave a pure growth of haemolytic streptococci. Streptocide, 1/2 gramme was given four hourly by mouth. Aspiration was repeated on March 28 and again on April 2, and 2 oz. of thin pus were withdrawn on each occasion. Clinically he continued to improve and on April 10 no fluid could be obtained by aspiration. There were now only signs of thickening of the pleura. His general condition gradually improved, and by April 20 his temperature, pulse and respirations were normal. A final paracentesis was done on May 1 with a negative result. He was discharged in a fit condition on May 17. This patient had oral medication only, and no operative procedure beyond aspiration of the chest. Hydrochloric acid dil 10 minims three times a day was given with the streptocide.

A comparable case treated in January was given proseptasine 1/4 gramme three times a day, with no hydrochloric acid dil and though his temperature, pulse, and respiration returned to normal rib resection had to be carried out to evacuate thick pus from the pleural cavity.

It would appear that large doses of the sulphonamide drugs by mouth may achieve the result obtained by Dr Brown with intrapleural therapy. In order to assess accurately the value of the sulphonamide drugs in streptococcal empyema in adults it would be necessary to know what percentage, if any, of those cases cleared up with repeated aspiration and without recourse to rib resection before prontosil was used for streptococcal infections—I am, etc.,

Fife June 7

JAMES B FLEMING M B, Ch B

Enuresis in Children

SIR—Dr McGregor's contribution on enuresis (*Journal* May 22, p 1061) is very valuable, and any correspondence which suggests help in this sometimes almost incurable condition may be useful. I therefore venture to suggest the influence that quite ordinary articles of diet may have, as I have not hitherto seen this mentioned.

For example a mother consulted me on troublesome enuresis in a 3 year-old child who was otherwise normal. The child was being given "groats" as a tea-supper dish and omission of this instantly cured the trouble. Similarly,

barley and barley water preparations may be responsible for puppy like frequency of puddles by day or night according to the time of administration

Another particularly interesting case occurred in a girl aged 7. In this case "psychology" might have been blamed (she had lost her mother) or slight babyhood habits of masturbation. All the treatment prescribed by her own father—an experienced general practitioner and a patient and affectionate observer of his own children—and various eminent children's specialists was of no avail but she was cured by the simple observation of the housekeeper that the child was always worse if she went out to tea or was given cow's milk for supper at home. Elimination of cow's milk from the diet cured the enuresis completely and immediately. At about 9 years of age the child was sent to boarding school with instructions that milk was not to be given after midday. All went well but in a later term there was complaint of enuresis and it was found that cow's milk had been given at tea time. Correction of this mistake again immediately effected a cure.

The fact that for some years this child drank goats instead of cow's milk (which was 'tuberculin' suspect in the district) may have contributed to this sensitivity to cow's milk, but these two instances suggest that the ordinary routine of habits and diet may be usefully investigated in cases of enuresis.—I am, etc.,

London W1 June 7

D C LOGAN

Health and Milk Supply of Malta

SIR—While I fully agree with the statement of Dr Harbour Stephens (June 5, p. 1179) that the infant mortality in Malta is high enough to call for action, I cannot substantiate fully his views on the cause or causes of this extraordinarily high death rate, which has been persistently over 250 per 1,000 for years. The following are the facts:

- 1 Early marriages are the rule
- 2 Large families and frequent pregnancies are also the rule especially in the depressed classes
- 3 The milk in Malta is largely obtained from goats because there is not sufficient pasture for the cow
- 4 The dry season lasts generally throughout the best part of six months—April to September. During this period the temperature rises rapidly to 80 to 85° F but winds prevail except during the month of July
- 5 Condensed milk, often sweetened and of inferior quality is very often looked upon with favour by the lowest classes who may substitute it entirely for fresh milk
- 6 This habit has established itself largely because of the ban on fresh milk from all sources imposed by the naval and military authorities for use by soldiers and sailors ever since the discovery of *Brucella melitensis* and the report of the Royal Commission that followed
- 7 Undulant fever is rampant among the civil population (up to 5 per 1,000 of the population get this fever in the course of the year). But cases of infection are practically unknown under 5 years of age. Concurrently with the human infection a similar infection occurs in goats (up to 15 per 1,000 in some herds) though the goat is often apparently sound and its yield of milk unaffected
- 8 The chief period of infant mortality coincides with the dry, hot, and windy season of the year but the dominant affections are gastro-intestinal not respiratory or circulatory. The same period coincides with the appearance of the house-fly in vast numbers
- 9 In spite of repeated periodical warnings issued by the public health department to boil all fresh milk before use the incidence of undulant fever among the adult population and of intestinal infections with a high mortality in infants has not been appreciably reduced
- 10 Goats are seldom fed on imported foodstuffs and fresh green vegetables in considerable variety are available for animals and human beings in sufficient quantities throughout the year with the exception that grazing is absent almost everywhere during the long dry season.

11 The methods of efficiently combating the growing social danger of undulant fever have preoccupied the Government of Malta for years, but apathy and prejudice even to passive resistance on the part of a considerable section of the community and the vested interests of the goat owner and milk vendor have proved insurmountable until the last few months

12 Effective steps have at last been taken after a strenuous campaign for clean and safe milk largely conducted by a few medical men in the lay press. It was pointed out that fresh milk has a food value infinitely superior to the tinned article and that all that was required was to make it safe for all without enhancing its cost price. This could only be undertaken by the Government. Accordingly, pasteurization on a large scale by the holder method has been decided upon while special researches are being undertaken with a view to discovering efficient goat vaccine against brucella infection. All the goats will gradually be rounded up and their free circulation in the public thoroughfares will no longer be possible. This experiment in social and communal hygiene which will cost the Government an initial outlay of nearly £50,000 will be watched with the keenest interest not only in Malta but throughout the Empire.—I am, etc.

Fowey June 6

J E H GATT, M.R.C.P., D.P.H.

Air Raid Precautions

SIR—We should object to the popularization of air drill not because as Dr Macdonald Ladell says, it accustoms the public mind to the idea that war is inevitable but because it accustoms the public mind to the idea that the dangers can be materially lessened by gas masks and such devices. I agree with both Drs Ladell and Leys that all attempted precautions against bombing are futile but, unlike these gentlemen, I believe that, in view of the armaments race now in progress, war is indeed inevitable and that therefore it behoves the public to begin to do something about it.

Dr Ladell quotes Coué, and there is an idea among some pacifists that Couéism will see us through, that all we have to do is to "think" there will be no war—and there will not be. The public, however, will be ere long called on to think more constructively than this. And first let them cease from blaming their governments. The governments are doing their very best to stop war, and obviously they cannot manage it. War is coming.

Is it not a strange thing that neither the medical profession as a whole, nor yet the official heads of the profession, have the slightest contribution to offer? They merely put themselves humbly under the direction of a government department. And yet elementary common sense indicates that the supreme problem in air raids on cities will not be one of fighting fires, of neutralizing gases, or of "rushing" the injured to hospitals. It will be a psychological problem. There will be universal panic in cities, and the inhabitants who are not killed outright will stampede towards the country. Nothing will stop them. Appeals to a drowning man to cease breathing for patriotic reasons, or for the sake of the women and children, leave him cold. There are such things as elementary instincts, and in such a case as this that of self preservation will come first. Has the medical profession, then, nothing to say about this, which will be a supremely psychological problem? Have the Freudians the Adlerians the Jungians, the psychiatrists, the neurologists *et hoc genus omne* nothing more to advise than that if the worst comes to the worst we must keep cool and be guided by the police?

Let me end with one suggestion a personal one. World war is the inevitable nemesis of world-wide mechanization of the individual—that is of world-wide bureaucratization. This last is also inevitable in the life of big cities.

Hence the destruction of civilization (of which war is but the final stage) can only be stopped by stopping the conditions which give rise to bureaucratization and the destruction of individuality. In other words, we must reverse the modern drift from country to town. *Obsta principis*. If this be a true reading, then why should we wait? Why should not the medical faculty, which professes to know something about psychology, take a lead, instead of sitting dumb like the rest? A drastic cure, it will be objected. Yes, but world war is going to be unutterably more drastic. Do not let us dope ourselves any longer. Let the trek to the land be initiated now, and by the medical profession—I am, etc.,

North Queensferry, Fife, June 6

A J BROCK

SIR,—It is strange to find that some medical men who are keen on the prevention of disease do not seem keen on the prevention of casualties due to air raids. Not for one moment is it maintained that even if intensive training in air raid precautions were adopted there would be no casualties, but it is certain that they could be greatly minimized both as regards mortality and disablement. There is no doubt that the casualties due to high explosive would be heavy, but we could save many by education in the principles of air raid precaution. As to the 'gas' casualties, they might be almost negligible if doctors and the general public knew what steps to take to prevent their becoming casualties, and, incidentally, if an enemy knew that a nation was trained in precautions the use of gas would be less likely.

Three types of respirator have been *proved* to be 100 per cent effective in protecting the eyes and lungs against any type of gas known or likely to be used in warfare, and the number and character of gases suitable for this purpose are limited for various reasons. The effects of vesicant gases on the body could be largely prevented by efficient attention at first aid and decontamination stations if this treatment were given early. That training in air raid precaution is war mongering seems a peculiar attitude to take, if it is necessary to have an army, navy, and air force, surely it is equally necessary to take any possible steps to protect the general public, as in any future war the public would be attacked. Some medical men do not appear to realize that the method of dealing with gas casualties especially those due to liquid mustard gas, requires special study.

The attitude of one of your correspondents Dr R M Ladell (June 5, p 1179), who states that he refuses to take part in air raid precautions is surely not the correct one for members of our profession. In a railway accident he would not refuse to attend to an injured locomotive driver even if he were the cause of the accident and equally in an air raid, even if he considered that his own country were to blame for the war, he would willingly attend to any casualties but does he realize that if he does not study the subject of air raid precautions he would speedily become a casualty himself if the raid were accompanied by mustard gas and thus throw an additional burden on the already overburdened first aid services?

It is manifestly our duty as citizens to do all in our power to prevent war but considering that all other important countries are taking precautions and therefore believe that they are of some use, we should surely do our best to at least diminish the effects of an air raid in the event of our being involved in such a ghastly

Gas Lectures, Economics, and War

SIR,—Dr Leys and Dr Ladell have hinted at a truth about war which does not seem to be generally recognized—namely, that the populace is not naturally warlike, and can only be made so by strenuous efforts on the part of statesmen and those professional speakers whom they can enlist, such as gas lecturers and frank adventurers of the Bottomley type. This was brought home to me during the late war when fiery sermons at home contrasted oddly with the spirit of junior officers and men in the trenches who were just 'fed up' and wanted to go home, there were no ideals left by 1916, and it is sheer humbug to pretend that the average man cared a damn what the peace terms were so long as he got peace.

International hatred is an artificial product which can only be kept alive by propaganda—that is, by suppressing the truth. International hatred has to be carefully tended or it dies out, there were serious signs of this happening on the Western Front at Christmas 1914, and the higher command on both sides had to assert themselves in order to prevent the war petering out from the fraternization of Tommy and Fritz.

War fever is used by statesmen as a substitution symptom for the social unrest and revolutionary tendencies due to the pangs of poverty and malnutrition and those States in which these diseases are worst tend to be the most warlike. That is why in England, where we have only a million and a half unemployed and where only a third of the population is starving we are not so aggressive as other countries, in which even the middle classes have to go without butter. In every modern State there is a danger of revolution, owing to the dissatisfaction of a big fraction of the population with their economic lot. In England it is much less than in most other countries, because the economic conditions are much less bad.

Poverty and uncongenial working conditions are the cause of social unrest, and so indirectly of war, for war is the only certain remedy for poverty. That is because poverty in the modern world is due to lack of money, and not to lack of goods. If there are too many goods for the money available the goods are destroyed and their production is restricted but war cures this by the simple process of borrowing money and paying it as wages to the unemployed for making guns and poison gas. These men are then able to buy the potatoes which would otherwise have been fed to the pigs, and the fruit which would have been allowed to rot under the trees as it did last year, and the farmer makes a profit instead of a loss in fact the whole community becomes more prosperous.

War preparations are already bringing about this happy state of affairs unemployment is declining and there is far less destruction of food than there was a few years ago. So gas lectures, by persuading people that war preparations are necessary are actually helping Europe to achieve a higher standard of living than would otherwise be possible, and are thereby staving off revolution.

I do not want it to be thought that I am advocating war but under the present financial system it seems inevitable. If rearmament were to cease now there would almost certainly be a slump employment would diminish and with it purchasing power and large numbers of people would be unable to obtain the food which actually exists. This food would then be called a 'glut' and a burdensome surplus and the efforts of statesmen would be directed towards its elimination.

Whether the peoples of the civilized world would stand this again as they did in 1931 is to be doubted if they revolted we might be involved in a situation as bad as war I cannot imagine anything worse In my view Sound Finance is rushing us full steam ahead to disaster, and I would remind anyone who says Come, come it's not so bad as that of the nigger who fell off a sky scraper and was heard to remark as he hurtled past the twelfth story 'I'm all right so far'—I am etc

Norwich, June 6

FREWEN MOOR

"What is Osteopathy?"

SIR—May I be allowed to answer the letters of Sir Morton Smart and Sir Ernest Graham Little in your issue of May 29, first in a personal capacity and secondly in my capacity of president of the British Osteopathic Association?

I personally readily admit that Sir Morton Smart and I do not agree as to the interpretation of osteopathic findings I did not and do not mean to convey any other impression The quotation from his book was taken to substantiate my argument with Sir Walter Langdon Brown that fundamentalism and modernism are not incompatible noting that the book in question was published in 1933 But the physiological circulatory conditions prevailing around a joint and the pathological findings supervening in joint injury are facts which are not altered by what interpretation he (Sir Morton Smart) puts on them or by what I read into them As president of the British Osteopathic Association I wish to emphasize that there is no evidence whatsoever that the promoters of the Regulation and Registration of Osteopaths Bill accepted the British School of Osteopathy as satisfactory Osteopathy in America is not as Sir Ernest Graham Little states a declining cult Figures are available to all It is true that there are twice as many chiropractors as osteopaths in America That is due to the fact that the osteopathic course is four years and the chiropractic course is two years It is unmanly of Sir Ernest to taunt the osteopaths with this invidious comparison, which is brought about by the adoption of the course which he recommends—namely the conforming to something very nearly approaching the normal [medical] curriculum in this country

Why does not Sir Ernest Graham Little visit the American Osteopathic Colleges as he is so very interested in the subject? He might come back with views similar to those of Sir Robert Stanton Woods who in his presidential address to the Physical Medicine Section of the Royal Society of Medicine said

Underlying the principles of osteopathy at any rate as the subject is authoritatively taught there is much that is fundamental in medicine Of the remainder there is undoubtedly matter which is new to us or at any rate to me but which we are not in a position to reject with reasoned argument Some of the teaching we cannot accept and part at least of this is already being modified But that much of osteopathic technique will be and indeed is being adopted by our profession is undoubted while some of the principles which I have in very inadequate fashion attempted to outline cannot be rejected without a more reasoned consideration and further clinical and experimental investigation than they have hitherto been accorded

Sir Ernest Graham Little asks for certain information regarding the educational aspects of osteopathy in this country These details will be made available to the public in due course, when the time is ripe—I am etc

Edinburgh June 9

W KELMAN MACDONALD

The Age Incidence and Sex Incidence of Milk-borne Typhoid

SIR—The late Dr Vernon Shaw's report (1937) on the Bournemouth epidemic contains some useful data in relation to the age and sex distribution of typhoid conveyed by milk which have not received notice in the reviews I have seen A high incidence among women and children has come to be accepted as a feature of milk-borne typhoid In a brief reference to the matter, and on rather slender evidence I ventured the view last year that while there was some ground for this belief the case was not very convincing Almost at the same time Hill and Mitra (1936) made an exhaustive comparison of outbreaks caused by infected water with others due to milk and concluded that on the average women were more heavily affected, and there was a slightly higher proportion of children (especially males) in milk epidemics but that in any particular instance the age and sex distribution would be very far from convincing evidence of the medium of infection Godfrey, in the State of New York, had come to somewhat similar conclusions

The Bournemouth epidemic was relatively large and the figures are, therefore by themselves of some value The age and sex distribution of 284 cases in Bournemouth, 205 in Poole and 26 in Christchurch (a total of 515) are given in Appendix 3 of Dr Shaw's report From charts in the body of the report it is evident that all these cases (with the possible exception of one in Christchurch) were primary house infections and therefore presumably due to milk This freedom from secondary cases is astonishing but there is nothing in another recent account by Dr H. Gordon Smith, medical officer of health for Bournemouth, to cast any doubt upon it From Shaw's figures the following table has been put together

Typhoid in Bournemouth Poole and Christchurch

Age	Males	Per cent	Females	Per cent	Persons	Per cent
—5	36	17.65	33	10.61	69	13.40
—10	42	20.59	46	14.79	88	17.09
—15	36	17.65	41	13.18	77	14.95
—20	23	11.27	43	13.83	66	12.81
—30	34	16.67	51	16.40	85	16.50
—40	13	6.37	38	12.22	51	9.90
40+	20	9.80	59	18.97	79	15.34
Total	204		311		515	

The numbers of males and females under 15 were nearly equal but the male children formed 56 per cent of all male cases while female children were only 39 per cent of female cases The percentage of 45 for children of both sexes is not very different from that recorded in some water borne epidemics Over the age of 15 there were 191 female cases as against ninety males a ratio of 212 to 100 The sex ratio over the age of 20 was even higher being 221 to 100 At first sight these are striking facts Unfortunately they cannot be placed against a population at risk in ages and sexes They may however be compared with the age distribution of Bournemouth's population in 1931 The ratio of females to males over 20 years old in the population was 163 to 100 If the consumers of the affected milk in Bournemouth, Poole, and Christchurch

were in anything like this sex proportion the selective incidence on adult females while remaining substantial, was much less impressive than would at first appear. Since a somewhat similar distribution may occur in some water-borne outbreaks (although it appears to be a much less constant feature)—and we know little about the age and sex incidence of case-to-case infections—it still seems evident that this method of differentiating the cause of epidemics is in practice unreliable and should be given less prominence than is customary in disquisitions on the subject.

About a year ago the late Dr Shaw kindly supplied me with similar data concerning the Epping outbreak of milk-borne paratyphoid in 1931. His report has never been published and I am therefore now giving the figures, which may be useful to those interested in the subject.

Paratyphoid B in Epping and Neighbourhood

Age	Males	Females	Persons
—5	25	29	54
—10	31	24	55
—15	18	14	32
—20	15	19	34
20+	27	58	85
Total	116	144	260

Here, too, it is apparent that women over 20 were twice as heavily involved as men and 64 per cent of the male cases were under 15 years of age. These ratios again, may not be peculiar to paratyphoid conveyed by milk, although the material for comparison is very scanty—I am, etc.

Cardiff June 10

RALPH M F PICKEN

Medical Aid in Southern Spain

SIR—The Southern Spanish Relief Fund, whose hospitals in Almeria suffered severely in the recent bombardment appealed through your columns for the voluntary assistance of doctors. Five applications in all were accepted after irreproachable references from colleagues had been received and after two of the applicants had been interviewed by a leading London doctor. Four of these five had successively to be repatriated in their own and our interest leaving us with liabilities of over £200.

I honour the kindly reluctance of reference writers to give information that will prevent acceptance of a colleague's application but I hope that your readers may feel the same kindly reluctance to let a compatriot suffer serious loss thereby. For I feel it impossible to charge expenses of the character incurred to a fund raised for the Spanish wounded women and children. Failing help they will have to be met from a private purse already depleted with running and raising money for these hospitals.

Any subscriptions for the relief of this personal liability should be marked "Medical" and addressed to E T Melling, I.C.I.S., hon. treasurer Southern Spanish Relief, 10 Old Jewry, L.C.2. Should they exceed the total liability subscribers will be consulted as to the refund or redispension of the balance—I am, etc.

Bicentenary of Bristol Royal Infirmary

SIR,—Sunday next, June 20 marks the completion of 200 years' work at the Bristol Royal Infirmary, for on this day in 1737 the out-patient department was opened for the reception of patients, though the formal opening did not take place until December of that year. We feel that the bicentenary of the oldest provincial teaching hospital in the kingdom is a matter of more than local interest and importance. To mark the occasion a carnival is being held at the Clifton Zoo on July 7, 8, 9, and 10. The formal celebrations will take place later in the year, probably early in October, when it is hoped that former students and others associated with the Infirmary will make a special effort to be present—I am, etc.,

E. WATSON-WILLIAMS, Ch M,
Bristol June 14 Honorary Secretary, Bicentenary Celebrations Committee

Obituary

F W COLLINSON, M.D., F.R.C.S. Ed

Consulting Medical Officer Royal Infirmary Preston

We have to announce with much regret the death of Dr F W Collinson, a greatly respected member of the medical profession in Lancashire who had been associated with the Preston Royal Infirmary for fifty years. He was president of the Lancashire and Cheshire Branch of the British Medical Association in 1929 and chairman of the Preston Division in 1922.

Frederick William Collinson was born in 1853 at Alnwick, one of three sons of the head master of the Duke of Northumberland School in that town. After leaving school he was apprenticed to a chemist and druggist at Alnwick and became a member of the Pharmaceutical Society. At the age of 27, however, he made up his mind to become a doctor and entered as a medical student at the University of Edinburgh graduating M.B. and Ch.M. with honours in 1885 and obtaining the M.R.C.S. Eng. in the same year. He proceeded to the M.D. degree and became M.R.C.P. Lond. in 1900, and took the F.R.C.S. Ed. two years later.

His first resident posts were those of house physician at the Edinburgh Royal Infirmary and resident medical officer at the Cowgate Dispensary. In 1887 he went to Preston as senior resident house surgeon at the Royal Infirmary. After two years in that appointment he set up in private practice but continued his connexion with the hospital as a member of the honorary medical staff. He brought with him from Edinburgh the Listerian outlook and technique and little by little the surgical practice of the hospital then in a very backward state, was brought into line with the new doctrines. When towards the end of the century the late Sir Charles Brown decided to give an operating theatre to the Royal Infirmary he and Dr Collinson visited many centres in order to be able to incorporate in it the latest principles of construction and equipment. Dr Collinson's skill in surgery became known far beyond Preston and he contributed a number of papers on operative procedures to the *Lancet* and the *British Medical Journal*. Besides his work at the Preston Royal Infirmary he was consulting surgeon to the Lytham Cottage Hospital and visiting medical officer to Goosnargh Hospital. During the war he did fine work for wounded soldiers at the Moor Park Hospital. In his later years he took a prominent part in the administration of the town and after service on the Town Council as made

an alderman, retiring from public life two years ago at the age of 82

Dr Collinson was held in the highest esteem by the medical profession of Preston and the surrounding country, his kindly wisdom endeared him to all his colleagues. The interment at Broughton, preceded by a service at Preston Parish Church, was attended by many representatives of medicine and of the varied public interests which he had served so faithfully.

ARTHUR DOUGLAS HEATH, M.D., F.R.C.P.

Consulting Physician General Hospital Birmingham

We much regret to record the death of Dr Douglas Heath, the well known Birmingham dermatologist. Born at Exeter sixty six years ago and educated at the Grammar School there, Heath received his medical training in London at University College Hospital. He obtained the M.B. Lond. with honours in 1894, the M.D. a year later, and the M.R.C.P. in 1901. He was elected to the Fellowship of the Royal College of Physicians a few years ago. After a full series of resident hospital posts he came to Birmingham, where for a few years he was in general practice and held the posts of surgical casualty officer and later casualty assistant physician at the General Hospital. He developed a special interest in dermatology, and in 1906 took charge of the newly created department of skin diseases. For thirty years, both in hospital and in consulting practice, he was regarded as the foremost dermatologist in Birmingham.

Heath, although of a somewhat retiring disposition, had a strong sense of duty, and he took a full share in the developments and work of his department of medicine. He was honorary secretary and later vice president of the Dermatological Section at Annual Meetings of the British Medical Association, in 1926 he became president of the British Association of Dermatologists, and in 1931 was president of the Midland Medical Society. In the latter office his wide knowledge and his enthusiasm were much appreciated.

A kind and sensitive man, Heath's rather didactic utterances and his swiftly formed opinions might have belied his true character, but, curiously enough, people even on meeting him for the first time were rarely deceived. He was an uncompromising Conservative, and his attachment to the established order of things was often evident. Until shortly before his retirement Heath travelled between his consulting rooms and the hospital on a push bicycle—which was neither washed nor oiled from the time he bought it until he exchanged it for a new one. He often pointed out that this was the most care free of all means of transit!

Heath was a man of many interests. His collections of antique furniture, of clocks, and of watches were some of the most valuable in the country, and as a judge of these things he was regarded as pre-eminent. Here as in his work his careful scrutiny, his sound judgement, and his frank and clear expression of opinion were characteristic. His association with his native county was preserved by membership of the Devon Society of which he became president. Fishing and bridge claimed much of his attention, in each he had a way of his own. In committee he was outspoken, but no one was ever hurt or offended.

A wide circle of students, patients, and friends feel that a Birmingham institution has gone, a man who was an encyclopaedic teacher, a considerate doctor and a warm hearted friend.

H. W. F.

C. H. SHORNEY WEBB, F.R.C.S.

Mr Rufus C. Thomas writes: The news of the death of Charles Shorney Webb occurring as it did just two years after his appointment as consulting surgeon to the West Middlesex Hospital must have come as a shock to all who knew him or his work. Brief though his period in West Middlesex had been, he had left his mark written indelibly on the surgical side of the hospital, the rapid development of which is known and appreciated throughout the very wide area from which its patients are drawn. To Webb's keen interest and sound surgical judgement this development is very largely due. He gave freely and of his best to the department of which his was the guiding hand and whose interests he had so closely at heart. To those of us who, like myself, had the privilege of knowing and working with him during this time his passing leaves a sense of loss which is difficult to express. His highly sensitive character was a happy blend of simplicity and deep understanding. His gentle sympathy and never failing courtesy earned for him a very deep affection, shared alike by us who worked with him and by those who, in their hour of need, came under his care. His time was short. His memory will remain, our thoughts of him filled with that feeling of kindness and friendship which to those who knew him well, was the very essence of his nature.

'E. T. C. M.' writes: The obituary notice of Charles H. Shorney Webb in your issue of June 12 is so passingly beautiful and has permanent value. 'No man liveth to himself' is indeed true of Webb. We saw his body quickly reduced to ash by the flame, but his influence in our surgery, in our art, in our grip of unseen things, will be handed on through us to the next generation and will never die. We, his friends who are still in 'the front line of battle' are compelled to pay a tribute of thanks to the outstanding contribution he made to our morale in this fight. Against what appeared to us insuperable odds he rose victoriously from defeat and despair. To those who saw this 'rebirth' there can never again be a hopeless case. Moral and spiritual war wounds in a world imprisoned in material things are either not recognized or not estimated in the cost of war. Many of us have known in ourselves and have seen in others their pain and disabilities. In these peaceful years some have, like Webb, found recovery. It is an inspiration of hope to those with scars still unhealed, with mental and spiritual faculties still distorted, to know of one who came back from 'death' to 'life'.

Dr W. Guyon Richards writes: May I pay a tribute to the memory of Dr JOHN ROUND whose death was recorded in the *Journal* of June 12. For a number of years Round spent time, energy, and money on research in regard to the early diagnosis of cancer, and in conjunction with Mr D. A. Ruddle worked out a test from urine on Benda's lines. He also suggested that zinc played an important part in cancer, and they found zinc was increased in the growth and diminished in the faeces. I shall always remember Round's zeal, kindness, and modesty. I feel it was an honour to have worked with him and assisted his work in a small way. He had the most comforting steadiness of character and bearing and was free from all self seeking.

J. G. McN. writes: I have just seen with great regret the notice of the death of Dr JOHN LUKE JACKSON in the *Journal* of May 1 and should like to pay tribute to his memory. He served with me for a short time in No. 4 Clearing Hospital during the Battle of the Aisne in September 1914. The hospital was short handed and overwhelmed with work, and Dr Jackson was one of several medical officers sent to it for temporary duty. He showed

himself to be a very good surgeon, an excellent administrator, and a pleasant, cheerful comrade. I should have liked to retain his services, but when I was asked to find medical officers to replace casualties among regimental medical officers Dr Jackson was the first to volunteer. Soon afterwards he was taken prisoner and I did not meet him again till after the war. Attending a meeting of a medical society at Knowle Mental Hospital I was delighted to find that Dr Jackson was the superintendent. Though my acquaintance with him was of short standing I had been greatly impressed by his personality and am exceedingly sorry to hear of his too early death.

A veteran member of the British Medical Association, Dr LEE FYSON COGAN, J.P., died at his home in Sheep Street, Northampton, on June 9 in his eighty-ninth year. His father was the Rev Lewis Rew Cogan, vicar of Winsley with Limpley Stoke near Bath. He studied medicine at Bristol and at Guy's Hospital, and obtained the diplomas of L.R.C.P. Ed and M.R.C.S. Eng in 1870. After serving as assistant resident medical officer at the Northampton General Infirmary Dr Cogan was appointed medical officer of health for the county borough of Northampton, a post which he held for twenty-six years. He was also medical superintendent of the Northampton Borough Hospital. He joined the British Medical Association in 1872 and continued his membership without a break for sixty-five years.

Dr HERBERT CHARLES HORACE BRACEY son of the late Dr Herbert Bracey of Bristol Road, Birmingham has died at the age of 55 in Dudley Road Hospital Birmingham after a serious operation. He had been on the staff of the Warwickshire County Council since 1912 and at the time of his death was senior assistant county medical officer of health. Before his service in Warwickshire he was on the staff of the Birmingham Education Department as assistant school medical officer and shortly after qualifying he held the posts of house physician and house-surgeon at the Queen's Hospital Birmingham. He was a Fellow of the Society of Medical Officers of Health took an active interest in the Royal Medico Psychological Society, was closely associated with Floodgate Street Medical Mission and was president of the League of Nations Union for the Acocks Green district of Birmingham. Dr Bracey was a very able clinician and a keen student of psychology, rendering him well equipped for dealing with the physical and mental health of the school child one of his principal activities. His association with the Dudley Road Hospital in the great war drew him again to that hospital during his last illness and his untimely death will be deeply felt by a wide circle of friends, personal and professional who found him always kind and sympathetic and ready to give of his best to his fellow men. His loss is particularly felt by the staff at Warwick where he was held in the highest esteem.

Medical Notes in Parliament

In the House of Lords on June 14 the Physical Training and Recreation Bill which has passed the Commons was read a first time.

The House of Commons this week considered the Education Estimates and required discussion of the Estimates for the Ministry of Health. The vote for the Board of Control was also put down for discussion. In connection with the Finance Bill on June 9 the House approved the clause increasing the Income Tax for 1937-38 from 1s. 6d. to 1s. 8d. The clause proposing a 10% increase in the rate of the Income Tax was dropped on June 10. The Finance Bill was given on June 10 to

the Civil List Act, the Diseases of Fish Act, and to other Acts.

The Parliamentary Medical Committee met at the House of Commons on June 10 and decided to ask Sir Kingsley Wood to receive a deputation on an early day about the decision in the Additional Benefits Amendment Regulations to permit under the National Health Insurance Act, sight tests by recognized opticians. The Minister has agreed to receive the deputation on June 17.

The second reading of the Children's and Young Persons (Scotland) Bill was moved in the House of Commons on June 10. This Bill had already passed the House of Lords. Mr T. M. COOPER the Lord Advocate, said this was a consolidation Bill incorporating the relevant provisions relating to persons under 18 years contained in four statutes, one in 1910, one in 1928, one in 1932, and certain provisions of the Education (Scotland) Enactment Act 1936. The measure put the law into a convenient form without introducing any change. The Bill was read a second time and sent to a committee of the whole House.

The report stage of the Factories Bill was taken in the Commons on June 15 and the following days. Sir Samuel Hoare withdrew a new clause dealing with washing facilities and a new clause proposed by Mr Barnfield for the prohibition of night baking was defeated. New clauses were added to the Bill which dealt with protection of the eyes in certain processes and with accommodation for clothing.

The Trade Marks (Amendment) Bill passed through a standing committee of the House of Commons on June 15.

Ministry of Health Estimates

The House of Commons in Committee of Supply last week considered the vote for the Ministry of Health. Sir KINGSLEY WOOD said that the net total estimate for 1937 had reached over £22,000,000 while the estimates for all services administered by the Department involved an expenditure of some £166,000,000. The Ministry of Health estimates this year showed a net increase of nearly £500,000 over those of last year. Progress under the slum clearance campaign was reflected in the provision of an additional £500,000 in respect of new houses and for the first time there was £207,000 for grants under the new Midwives Act. There had been an increase of £7,000,000 in the total of loans sanctioned to local authorities which amounted to more than £42,000,000. Considerable activity had been displayed in the provision and extension of sewers and sewage disposal and there had been increased provision for public recreation. In 1926 the total loans for public recreation amounted to £1,260,000 last year it was approximately £3,200,000. On the credit side of the health balance sheet he could say that motherhood was safer than for sixteen years inasmuch as the maternal mortality rate per 1,000 live births was the lowest on record since 1922. Infant mortality was low. The tuberculosis crude death rate continued to decline having fallen from 718 per 1,000,000 persons in 1935 to 693 in 1936 the lowest rate hitherto recorded. There had been a steady decline in the mortality from infectious diseases. There had also been a substantial decrease in the prevalence of diphtheria.

But there was another side to the health balance sheet. Cancer though many more lives were saved to-day by early diagnosis still remained one of the most deadly enemies of mankind and the heaviest single item on the debit side of the health balance sheet. It was true that diseases of the heart and circulation system headed the list but this of course might result from a number of various causes. Colds and influenza still accounted for nearly a quarter of the absence from work and while it was true that the influenza epidemic last year was not as bad as the one in 1936 it was still a heavy item on the debit side of the health balance sheet. The committee on the health balance sheet was likely to be asked to consider the health balance sheet for 1937.

POPULATION PROBLEMS

The estimated mid year population of England and Wales in 1936 was 40,839,000 and this figure showed an increase of 194,000 over the estimated mid year population figure in 1935. The total number of births was 605,292, the birth rate per 1,000 living being 14.8 which was 0.1 per 1,000 higher than the birth rate for 1935 and 0.4 above that of 1933 which was the lowest on record in this country. The total number of deaths was 495,764 and the crude death rate per 1,000 of the population was 12.1 which was 0.4 per 1,000 higher than for 1935 and 0.7 above that of 1930 which was the lowest on record. Certain facts concerning population were already known but before they could properly consider the problem they would need to know many more. The birth rate which stood in 1875 at 35.4 per 1,000 living had fallen to 14.8. He was told that mothers of to-day had about half the children that their grandmothers had and they knew that in the next fifteen years the total number of children aged 5 and over in public elementary schools might fall by as much as 1,000,000. Our population in the immediate future would contain a much larger proportion of older people. They could not of course say whether these conditions would all continue. It was not necessary to be pessimistic about the matter for instance as to whether they would have to take into account a stationary or a declining population.

At present there were two inquiries in progress one by the Registrar General and the other by the Population Investigation Committee a voluntary body under the chairmanship of Professor Carr Saunders. There was already close co-operation between the two inquiries. It was already apparent in the opinion of all these investigators and of many other authorities, that before this matter could be adequately dealt with either by them or us had been suggested by a Royal Commission further steps would have to be taken to make available certain new facts and statistics. Present methods of obtaining and keeping important vital statistics were unsatisfactory and incomplete. Further information was undoubtedly necessary in connexion with fertility. The existing birth rate figures showed the children born of the population as a whole but fertility statistics must relate to the births of particular parents, and show what kind of parents and under what conditions they produced many or few children. Other particulars wanted were the ages of the parents, the date or duration of the marriage, the orders of births and matters of that kind. If these facts were available it would be possible to investigate much more adequately the conditions and circumstances which appeared to encourage or discourage the production of children. He was considering the best steps that could be taken so that these particulars could be obtained with due regard to their confidential and personal nature.

HOUSING

Turning to housing Sir Kingsley Wood said we had had another successful house-building year. The provision of decent and better houses had been the greatest contribution which this generation had made to better health and living conditions. The 3,000,000 mark of new houses built since the war had long been passed. Since that time some 12,000,000 persons equal to 30 per cent of the population, had moved to new homes. So far as housing last year was concerned there was a record total with the erection of 346,000 houses compared with 325,000 the previous year, and 329,000 in 1934-5. The loans sanctioned for housing purposes in 1936-7 were over £33,000,000 compared with £25,000,000 in the year before. Demolition was proceeding on parallel lines, and proposals for clearance and the building of new houses were being prepared at a rate which should ensure the maintenance of the building programme at the same level during the coming year.

Rural district councils were at present concentrating on slum clearance and increased attention was being paid to it. It had resulted in the original slum clearance programme for rural district councils being increased by approximately two thirds. There was almost as big a slum problem in the rural areas as sometimes there was in the towns. The present programme covered some 55,000 houses of which nearly

23,000 were to be dealt with in clearance areas. Some 17,000 houses were already in areas which had been declared over 15,000 were covered by orders submitted to him and nearly 12,000 were in orders which had been confirmed. A total of 28,000 new houses had been built or were under construction to replace unfit houses. In many areas schemes for abating overcrowding were proceeding concurrently with the erection of houses for slum clearance. The renovation and bringing up to date of existing country cottages under the Housing (Rural Workers) Act was important. While the measures in hand for improving rural housing conditions were as much as could be carried out at the moment within the limits of the building industry the Minister had asked his Central Housing Advisory Committee to consider further steps in rural housing. He hoped soon to receive their report and then to consider what further action might be necessary in the light of that report.

RESULTS OF THE OVERCROWDING ORDER

The fixing of the appointed days—the date from which the new overcrowding provisions were to operate in particular areas—was proceeding steadily. Up to the end of March orders had been issued for fixing the appointed day for 1,484 local authorities out of a total of 1,536. The appointed day would be fixed for practically every one of the remaining fifty-two authorities before the end of the year. The abatement of overcrowding did not await the fixing of the appointed day. The amount of overcrowding had been substantially reduced in many parts of the country since the time of the overcrowding survey.

March 31 of this year marked the end of the fourth year of the five year programme of slum clearance. It had more than kept its promise. Four fifths was represented by 166,000 houses and already the houses in submitted orders and purchase agreements exceeded that number. Progress was in fact better than the figures indicated. The original programme had been constantly extended in many areas and at the end of March the revised slum clearance area programme in this country stood at 265,000 houses compared with 207,000 houses an increase of 28 per cent, while the number of houses to be dealt with under individual demolition orders had grown from 72,500 to 110,500. The total revised programme was now 375,000 or an increase of 34 per cent.

The Minister was considering again in conjunction with his Town Planning Advisory Committee the adequacy of present powers and whether anything further could be done in that connexion. With regard to town planning in London the local authorities concerned had been invited to co-operate in the establishment of a new joint standing committee, which he hoped would be set up in the very near future. He would be asking the House at a later date to approve the extension of the present rates of subsidy both for slum clearance and the abatement of overcrowding so as to apply it to houses completed by December 31, 1938. This would extend the operation of the present rates, which were fixed by statute for houses completed up to March 31, 1938 for a further nine months. When he came to review the position he would approach the matter with the view that the completion of slum clearance and the abatement of overcrowding were vital elements in the health services of this country and that the new houses provided for this purpose must be let at rents within the means of those who occupied them.

GENERAL NUTRITION

Nutrition was playing and must play an increasingly important part in health provisions and plans, but while food was important and vital good nutrition was also a matter of good housing, open spaces, good sleep and rest, and proper exercise. Following the report of the Nutrition Committee last April the Minister asked the maternity and child welfare authorities to review their arrangements for the supply of milk and meals to nursing and expectant mothers and young children. Already one fifth of the authorities had replied and many were now taking steps particularly in cases where the supply of milk had been restricted to expectant mothers in the last two or three months of pregnancy and in the case of children where it had been restricted to those of very

young age. A number were extending the service to cover the whole or the larger period of pregnancy and to include more children under 5 years of age. In addition the quantities of milk supplied were to be increased and the payment required from those recipients of milk who could afford to make some payment were in a number of areas to be fixed in the future on a more favourable scale, to ensure that all mothers who could not afford to pay for full supplies of milk should be able to take advantage of this arrangement.

DECREASE IN MATERNAL MORTALITY

The fight to reduce maternal mortality was a particularly stern and difficult one. In comparison with other countries our rate was not a specially high one but for a long period it had not substantially varied. After reading the report of the Department's investigators he had come to the conclusion that a proportion of the deaths that take place in this country were preventable. The rate fell in 1936 to 3.81 per 1,000 live births, which was the lowest figure since 1922, and this was the first year since 1924 that the figure had been under 4 per 1,000. The recent report showed that the main line of attack on maternal mortality must be the continuous improvement of the local maternity services, the keynote of which was the necessity for team work. From the proposals which had been submitted by the local authorities it could be said that satisfactory arrangements were being made under the Midwives Act in the greater part of the country. Important steps were being taken in the training of midwives and the number of ante-natal clinics had increased by seventy-six during the past year. There had also been an increasing number of mothers attending these clinics.

Infantile mortality in England and Wales had fallen to 59 per 1,000 births, which was only slightly above the low record rate of 57 in 1935. There was a steady increase in the number of children under 1 year brought to the infant welfare centres. The importance of the fullest supervision over the health of children between 18 months and 5 years had been emphasized to local authorities and there had been a substantial increase in the number of visits paid by health visitors to such children. As a result of this representation at least forty-seven authorities had established special clinics for toddlers and fifty-three had arranged for the school medical services to be available for the younger children while sixty-four had appointed additional health visitors. Although we had perhaps the finest social services in the world they were by no means fully utilized. It was regrettably a fact that nearly one-half of the expectant mothers had not been brought within the scope of the ante-natal services. It was also regrettable that there were still areas where the majority of parents had not taken full advantage of the services provided under the maternity and child welfare schemes for the benefit of their children. With regard to tuberculosis local authorities were steadily improving the provision for diagnosis and treatment but a large number of patients only came under the purview of the service when the disease was too advanced to make recovery probable. The Minister hoped in the course of this year in association with the Board of Education and the Central Council for Health Education to organize a national campaign to bring these health services more to the notice of the people. The keynote of the campaign would be "Let your Health Services."

which Sir Kingsley Wood had mentioned. He hoped that before it was too late the Minister would turn his mind to the planning of satellite towns and the location of industry. Something should be done also to provide facilities for recreation and breathing spaces within London and other large towns. Whenever there was a clearance and rebuilding scheme some part of the ground ought to be scheduled as a public open space. Referring to the question of public abattoirs he said that there were 15,000 private slaughterhouses and 120 public slaughterhouses were provided by local authorities. In London there was only one public abattoir in the Caledonian Road but there were a number of small ones. Slaughtering on a large scale should only take place in the slaughterhouses provided by public authorities or institutions like the co-operative societies. The others were of such a character as to make it very doubtful whether the ordinary rules regarding cleanliness and so forth could be observed. He hoped the Minister would consider at some time bringing forward proposals to deal with this matter.

Mr. HAMILTON KERR said that there was still very little supervision of the child between the ages of 2 and 5 years in this country. That was the chief gap which existed in our health services. Either in a local centre or in the headquarters of a town a properly organized file of the entire health history of each boy and girl should be readily available. Only by being aware of the total medical history from the age of 1 to 16 could a doctor hope to deal efficiently with a case before him. Mr. LANSBURY contended that the necessity for the services controlled by the Ministry of Health arose very largely because of poverty and until poverty was dealt with we should not make true progress. Until children could get within their homes all the food necessary for them we should not obtain that healthy virile youth population that we all wanted to see.

Mrs. TATE hoped the Minister would set up a committee to inquire into the desirability of voluntary or compulsory notification of venereal disease. She asked the Minister last year if there might be a more careful inspection of nursing homes. She pointed out that in many nursing homes there were still draperies and hangings which spread disease. Careful inquiries might be made into conditions ruling at some nursing homes to see whether they did in actual fact receive what might be called normal illnesses and whether there was not great ground for believing that curious and very undesirable practices were going on in places which were called nursing homes.

NON-TUBERCULOUS WORKERS AT SANATORIA

Mr. ROWSON said that in his constituency there was considerable complaint about the way in which posts under the Midwives Act were being advertised. The secretary of the local midwives association had sent him twelve newspaper cuttings of advertisements for persons to fill the new positions and in every case there was emphasis on the applicant being a State registered nurse in addition to being a midwife. The Minister would do well to call the attention of local authorities to the point that these advertisements were misleading and that all due consideration should be given to the woman who had the single qualification.

He accepted the statement of the Minister in regard to tuber-

He agreed that the numbers suffering from tuberculosis were falling considerably but in England, Wales and Scotland from 1926 to 1935 inclusive 390,516 people died from tuberculosis. In England and Wales alone according to last year's records there was a total of 29,201 deaths from pulmonary tuberculosis and non-pulmonary tuberculosis. This meant that in England and Wales alone 562 people a week or eighty people a day died from tuberculosis. There was reason for the most serious consideration of this matter and for the finest research we could employ to try to cut down this terrible scourge. One of the means by which we should be able to combat this disease was by the better housing and feeding of the people.

THE NEW OPHTHALMIC BENEFIT REGULATIONS

SIR FRANCIS FREMANTLE drew attention to the proposed additional ophthalmic benefits, a subject on which he had received a number of telegrams during the debate. It was a most important subject and he was not going to take sides one way or the other. He was bound to tell the House however of the feeling of those most qualified obviously to know the danger that existed in the examination of eyes for spectacles by opticians who however eminent had not the qualifications to detect serious illness at the back of the eye. There was a doubt in people's minds whether it was right that additional benefit should be allowed from the National Insurance Fund for opticians to prescribe spectacles. Obviously it was the most convenient thing to be done from the point of view of the superficial provision of spectacles.

The Departmental Committee on the Causes and Prevention of Blindness in 1922 stated quite definitely that "an official Register of Opticians would tend to mislead the public into thinking that registered opticians were competent to discharge functions which belong only to those who have had a medical training." Again a Departmental Committee in 1927 said "We are not satisfied that even those opticians who are most highly qualified in all other respects are sufficiently trained in this respect. These two bodies, therefore had taken the view that it was dangerous to allow this additional benefit to be given to a register of opticians but apparently the Minister of Health was about to make a new departure and to allow a register of these opticians to be made out. This would certainly have the effect that people going to members of the register would think that they were going to persons who were competent to prescribe as regards the trouble to their eyesight. There was thus to be said in 1927. The ordinary medical practitioner had not then any real provision to be able to deal with this question but panel practitioners had taken the matter in hand recognizing the difficulty of meeting the need of the insurance beneficiaries. There was the Association of Dispensing Opticians, and the National Ophthalmic Treatment Board had been set up with inclusive charges well within the means of those whose family income did not exceed £250 per annum. If that was so and if that was sufficiently widespread over the country, it was a dangerous thing to allow this additional benefit to be given merely for treatment by those who were not qualified to find out the trouble at the back of the eye and it was another instance where the public might be put upon in some cases by those who were really not qualified to give advice.

The case for satellite cities in general was agreed. Sir Francis continued but the real difficulty was to get them accepted and put into effect by local authorities. The London County Council said that although they had all the trouble involved in making a satellite city it would only account for a very small number of the people with whom they have to deal, that London was migrating 100,000 persons every year into the surrounding country and that if they were dealing with that number every year what was the good of little garden cities that would only deal with 50,000 or 100,000 altogether and take years to establish? That viewpoint mistook the real intention of the whole garden city campaign. It was not simply in the establishment of a garden city here or there, although that would be the ideal, but it would be in the adaptation of the whole town planning movement in that direction.

NOTIFICATION OF VENEREAL DISEASE

SIR FRANCIS endorsed the plea made by Mrs. TATE as regards the Scandinavian experiment in the treatment of venereal disease. The position required to be argued he said because it was quite clear that that experiment had resulted in a position of almost complete immunity from syphilis and a very large reduction of venereal diseases generally. Largely it was claimed by compulsory methods. Undoubtedly we had improved matters here with the inception of treatment centres but the fact was that a large number of persons failed to use the treatment to the finish. Of nearly 50,000 persons who were discharged last year from the venereal disease clinics only 22,000 had the final tests and nearly 20,000 ceased to attend before completion of treatment. What was the result? They went out to infect the community and in many cases brought into the world infected children. There was not nearly enough education in this matter and the Ministry of Health ought to exercise more pressure on the local authorities to keep up their quota of subscriptions to the Social Hygiene Council, that had been entrusted by the Government in successive years with this particular service. We should consider very seriously the question whether it was not necessary to introduce some kind of compulsion either as regards notification or as regards the completion of treatment—treatment to a finish. He did not believe the case was proved as the American Commission's report would suggest for the adoption of a compulsory system but it was foolish to blind our eyes to the results that had been obtained in Scandinavia—results which apparently we could not equal in this country. A Commission of Inquiry should be set up, it would give valuable results.

A CAMPAIGN AGAINST RHEUMATISM URGED

MR J. HENDERSON said that several Continental countries had outdistanced this country in the treatment of rheumatism. He urged the Minister to organize if possible a national service of municipal clinics in conjunction with the local hospitals, where manipulative and other treatment could be given.

MR G. GRIFFITHS urged the Minister to deal with burning pit heaps in mining districts the fumes of which caused ill health. Last year he had asked a question about the wives and dependant children of State-insured persons being allowed insulin free of charge. If the wife of a State-insured person was a diabetic and was prescribed insulin, which cost anything from 10s to 18s a week she could not, if her husband was working, no matter what his wages, get any money with which to purchase the insulin. Only ten days ago he visited in his own village a woman who had to spend 17s 6d. a week on insulin, because since her husband was earning £3 a week she could not get any from the public assistance department.

MR GODFREY NICHOLSON said that it was felt by some that the Ministry was losing a sense of proportion with regard to maternal mortality. They felt that too much stress was being laid on ante-natal treatment and not enough on the importance of skilled attention at the actual time of birth. One eminent gynaecologist had written recently "If the discussion money, and thought which have been devoted to ante-natal care in its relation to mortality during the last few years had been expended upon intra-natal care we should be able now to claim that definite progress had been made. If this suggestion is correct the answer to the question, 'How can maternal mortality be reduced?' lies in improvement beyond all measure in the standard of treatment given to the woman in labour not instead of but in addition to the efforts that have been made in the direction of ante-natal care. It is the specialist who should be looking after the actual confinement and the practitioner doing the ante-natal care. Childbirth was a major surgical procedure and the Minister should bear that point of view in mind. The solution of the problems of maternal and infantile mortality lay in educating the lay population."

MISS WARD referring to the proposed campaign of Use your Health Services asked if the Minister was absolutely satisfied that he had in his possession a detailed statement of the provision of health services as apportioned out by all the various local authorities? Before embarking upon a

campaign of 'Use your Health Services' it was important to know whether there were adequate health services provided by every local authority and also whether they had the necessary finances to enable them to take advantage of the powers conferred upon them.

GOVERNMENT REPLY

Mr BERNAYS replying to the debate referred to the figures given in the latest annual report of the Chief Medical Officer of Health of the Board of Education. He said that they showed that out of 1 680 000 school children examined only 0.7 per cent were suffering from definitely bad nutrition and only 10.6 per cent from subnormal nutrition. There was also the encouraging fact which gave the lie to the assertion about the deterioration of our national physique that the general death rate had fallen by one third during the last twenty-five years and that the death rate from tuberculosis in children under 1 year of age had been reduced by a half in the same period. Malnutrition was a problem and the Government could legitimately claim that it had been tackled with energy and effect in the last few years. The question of satellite towns was dealt with by the Departmental Committee on Garden Cities and Satellite Towns appointed in 1924. The recommendations included the establishment of a National Planning Board. The main suggestion in regard to these satellite towns was that the larger local authorities at the appropriate stage should be encouraged and if necessary, compelled to make further outward development in the form of planned units outside the town separated by adequate areas of open land. What the Government had been asked to do to night was to develop that system and to carry out those recommendations. The instances of Welwyn and Letchworth garden cities had been raised and the Government had been asked why we cannot apply experiments of that kind. These garden cities were started by public utility companies and the suggestion made was that these garden cities should be established by local authorities. That was quite a different thing. It would be quite contrary for London—to take an example—to establish an administrative council in Hertfordshire which would in fact be an urban community surrounded by another administrative council. The operations which local authorities were carrying out were doing much to secure the objects which members had in mind.

Objections had been taken to the recognition of opticians as having power to prescribe for defective eyesight. While the Minister was satisfied that the ultimate ideal was that all persons should go to a medical eye specialist, he was satisfied that it would not be practical politics under present conditions to make this an invariable procedure in all cases. The reasons were that the supply of qualified medical men was not sufficient to meet the needs of the whole population and that the people had not been educated up to recognizing the advisability of this course in what they regarded as ordinary straightforward cases of defective eyesight. The Regulations therefore provided for either of the alternative courses being followed. Every insured person was required to visit his own optician before his application for ophthalmic treatment was granted.

The amendment was rejected and the debate on the Bill as to the Ministry of Health adjourned. Subsequently it was announced by Mr Chamberlain that the debate on the Estimates of the Ministry of Health would be resumed on June 16.

Prison Expenditure

The Estimate for salary and expenses for the Prison Commissioners and expenses of the prisons in England and Wales was brought up before the House of Commons in committee on June 4. Sir SAMUEL HOARE made a statement on Home Office policy in respect of prisons. The problem of to-day was the problem of the young prisoner and how to prevent him going back to prison. In practice it had proved better to give a man privileges when he entered prison and appeal to his fear of losing them rather than to start him with none in the hope of getting something better later if he behaved well. The more humane prison administration had become the lower had been the number of habitual criminals. For some time the Home Office had tried the experiment of appealing to the prisoner's better instincts and giving him an interest in the things which really mattered in the world. An experiment in prison administration was being made in Wakefield, where between 400 and 500 men were trained under conditions of greater freedom and responsibility. The Prison Commissioners had established a camp of wooden huts, where selected prisoners lived and worked on the reclamation of scrub and woodland. This hard and healthy existence better prepared them for life in the outside world than did life within the limits of a prison cell.

Sir Samuel said that in years to come the Home Office must carry further the classification of offenders. Under the 1933 Act a great deal was done for children and young persons. They would have to consolidate their efforts more than at present on the next class of offenders, the adolescents and list of all the habitual criminals. He intended while at the Home Office to look into the question of further classification, and further legislation might be necessary. It was new interests that men and women prisoners chiefly wanted to get their minds away from morbid contemplation of the past and to get them interested in their work and in their physical health. The greatest prison reform was the reform that kept people out of prison. What chiefly mattered was the general raising of the standard of life—mental, physical and moral—outside prison walls. The problem which the House was discussing was only one part of a field of social reform, which included housing conditions and the campaign for greater physical efficiency.

Mr RHYES DAVIES moved a reduction of the vote. He said classification of prisoners according to their criminal record was not enough. There ought to be another classification according to mental and physical standards. In 1913 out of 100 000 of the population 555 were in prison. In 1930 there were 143. In 1935 the figure was 114, and in 1937 it might become less than 100. While there was a reduction in the adult prison population in relation to men and women only one seventh of that population were females. There was also a reduction in the criminal statistics relating to boys and girls in Borstal institutions but the decline in criminality among youngsters was not as steady as among adults. It would not be possible to do much more to help prisoners so long as the old prison buildings remained. When a man went to prison for ten or fifteen years the social insurance schemes were never available to him again. The House had not yet the report of the Prison Commissioners for 1936 and he could not understand why the reports were not available earlier. The previous report stated that four men and ten women were released on medical grounds. He would be happy to be assured that no babies were now born in prison.

MEDICAL EXAMINATION OF CRIMINAL LUNATICS

Mr RITSON said many appeals had been made to have a medical examination of a man who had been thirty-five years in Broadmoor as a criminal lunatic. So far as Mr Ritson knew no such appeal had ever been granted in this country, but the Home Office had now agreed that there ought to be facilities of that sort. When anyone had been locked up under conditions like these for such a term there ought to be an opportunity for examination. The notion was now

endeavouring to make mental institutions brighter and this should be applied also to prisons

Mr GALLACHER said flogging was terrible but was nothing to compare with the torture of the dark and silent cell. Some prisoners were nervous and irritable. If they made some retort to a warder they were reported and sent to the silent cell. Everything was taken out of the cell except the stool and they had to sit on that stool or walk about all day and all night. He had seen prisoners come out with their heads trembling and without any control over themselves. The solitude and silence threatened a man with complete mental breakdown.

Mr GEOFFREY LLOYD said the points made by Mr Ritson and others in speeches would receive special attention. The decline in the prison population was satisfactory. Last year the average population in all establishments was about 10,000 and the present population was about the same. The numbers had decreased since 1932 and one reason was the Money Payments Act. The extended use of the system of probation also had an effect on the prison population. The decline in prison population was most marked among women. The daily average population of women prisoners in 1910-11 was 3,581 but on June 1 1937 it was only 685. The figure for Borstal reached its peak in 1934 when there were over 2,000 inmates. From that the figure fell for a short time but was now steadily increasing and was well over 1,800 because of the increase in the age group with which Borstal was concerned. The Institute of Industrial Psychology had assisted the work of the Borstal institutions and had worked out a system of examination of individuals to help in deciding for what work they were fitted. The Home Office made a practical test with regard to the work that the boys did, and was arranging to train house masters in carrying out these tests.

With regard to other classes of prisoners the condition that hard labour prisoners must spend fourteen days without a mattress did not apply now to those who were aged or medically unfit. This matter was governed by statute and the Prison Commissioners were not free to make a change without the consent of Parliament, but the Home Secretary would consider it and other matters when the question of legislation arose. Mr Rhys Davies had referred to the Belgian experiment with young prisoners. The Home Office however did a good deal in this matter. After being sentenced all Borstal boys were collected at Wormwood Scrubs and examined on their antecedents and mental and physical circumstances before deciding to which Borstal institution they should go. When the court asked for a special report or when the Governor asked for a special examination it was always carried out. Observation and examination were made the basis of treatment. The motion for a reduction of the Estimate was withdrawn.

APPROVED SCHOOLS

The vote for approved schools in England and Wales was then brought forward, and Mr SHORT moved to reduce it. He said that up to 1928 reports were issued which gave a clear idea of the progress of administration in these schools but these reports were no longer issued. He hoped the Home Secretary would take immediate steps to ensure that some report was issued on this problem. On September 30 1936 there were 7,927 children in these schools against an average daily prison population of 11,306. A very large number of young offenders were drafted into these schools. In 1935 69,849 persons were found guilty of indictable offences. Of these 25,543 were under the age of 17. Of offenders under 17 9 per cent were sent to Home Office schools 51 per cent were placed under probation officers 8 per cent were bound over without an order for supervision and in 24 per cent of the cases the prosecution was dismissed. The figures for 1936 were not available but he surmised that there had been an increase in the number of juvenile offenders and that a larger percentage had been sent to approved schools. There were some eighty-seven approved schools and from 1930 to 1936 there had been a consistent increase in the number of children ordered by the courts to go to these schools.

Sir SAMUEL HOARE gave an assurance that in future there would be a regular report upon these schools. It was difficult to define the reasons for the increase in the number of children sent to them. The existence of juvenile courts and the greater interest taken in the condition of children might have led to that increase or there might be greater temptations for children to commit some offences. In his latest report the Commissioner of the Metropolitan Police drew attention to the fact that a large number of offences were committed by children of 13. The Home Office was not satisfied with the present position. It had not sufficient accommodation for the increasing number, and from time to time children had to be sent to remand homes and kept there much longer than could be desired. The schools as a whole turned out a good type of boy and girl, and the boys and girls made good in after life.

Mr GOLDIE remarked that boys in approved schools although 99 per cent of them came from industrial areas received an agricultural training, and he believed that a good deal of recidivist juvenile crime was because the boys found they could not compete in the labour market against those who had received an industrial training.

Mr GEOFFREY LLOYD said that in 1928 the percentage of children found guilty in the juvenile courts was 9.75 and in 1935 it was 9.21. Broadly speaking there was no evidence that the courts made increased use of this method of dealing with juveniles. The talk about a wave of juvenile crime was loose and unjustified. They were experiencing at the moment a considerable rise in the juvenile population and owing to the Children and Young Persons Act 1933 there was less reluctance to bring cases of juvenile delinquency before the courts.

The motion to reduce the vote was withdrawn and progress was reported leaving the vote open.

Health and Medical Care of Spanish Refugee Children

On June 7 Miss CAZALET asked the Minister of Health what was the present position regarding the health of the Basque children who had been brought into this country. Mr BERNAYS replied that the general health of these children was satisfactory but it was desirable on grounds of public health that the number of children in the camp at North Stoneham should be reduced as speedily as possible. The National Joint Committee for Spanish Relief was in accord with this view. Evacuation was in progress and about 900 of the 4,000 children had already been transferred elsewhere. Five cases of typhoid fever, two cases of diphtheria, and three cases of measles had occurred among the children. The patients had been isolated and appropriate precautionary measures had been taken against the spread of infection.

Captain BALFOUR asked whether if he gave the Minister any information from local residents that there were no adequate medical arrangements and that many of the helpers had no knowledge of the language at all he would take notice of that information. Mr BERNAYS said he would be glad to have any information which Captain Balfour could give him.

Mr D ROBERTS asked if it was not the fact that there were five full-time fully qualified doctors, matrons, a large staff of nurses and a staff of local V.A.D.s in the camp.

Sir FRANCIS FREMANTLE. Would not the care of these children naturally come under the local sanitary authority and the local medical officer of health and if the latter was not able to act for reasons of other functions and duties would they not come naturally under the care of a direct officer of the Ministry of Health?

Mr BERNAYS. An officer of the Ministry of Health is constantly visiting the camp and sending reports to the Ministry on the subject.

On June 8 it was announced that the Minister of Health was not aware that any instructions were given or any request made that the children from Bilbao should be vaccinated or inoculated before reaching this country.

Animal Diseases Government Policy

On June 7 the House of Commons in Committee of Supply, considered the Vote for the Ministry of Agriculture and Fisheries. Mr W S MORRISON in reviewing the work of the department, said that the milk scheme had so far rendered possible a start on the great question of improving the quality and increasing the consumption of this vital food. In the last financial year the amount of milk sold in the liquid market increased by 12,500,000 gallons, and the quantity for manufacture had increased by 8,000,000 gallons. There had been an immense increase in the number of persons producing milk of an accredited standard. Before the scheme was introduced there were only 800 Grade A licencees but now there were nearly 20,000 producers of milk of accredited standard.

With regard to poultry disease, the Technical Committee which had been set up was considering the present methods of distribution of hatching eggs, day-old chicks, and feeding stuffs. Strenuous efforts were being made to lessen the toll of mortality among the chickens. Research into the pathology of diseases which had caused the losses among poultry was being continued by the scientific bodies concerned. Any further measures which might be taken would be of an administrative character when the new central veterinary service came into being.

Referring to the immense burden of animal diseases, which cost the industry something like £14,000,000 a year he said that a great deal of work had been done in the past by local authorities and by the Ministry's veterinary service, and practical results had been obtained. During the last financial year there were thirteen centres of infection from foot and mouth disease and these comprised sixty six separate premises. The policy which had been carried out had had the result that the disease had not become endemic in this country as it had in some other countries. There was a slight increase in the incidence of anthrax, but a satisfactory decrease in swine fever and sheep scab. There were still diseases like tuberculosis, contagious abortion mastitis, etc., which took an immense toll of our cattle. The proposals which he had recently announced would involve legislation, and represented a very much bigger step forward and a much more resolute attack on this problem than had yet been made. He hoped with the co-operation of those concerned, that it would yield substantial results in freeing the industry from a wasteful burden.

Scientific Personnel of Ministry of Health

On JUNE 8 Sir KINGSLEY WOOD informed Mr Markham that on April 1 1937 the scientific staff of the Ministry of Health other than the medical and dental staffs, totalled thirteen. This figure included a chemist, chemical inspector, alkali inspectors and pharmacists. The corresponding figure at April 1 1930 was thirteen. The medical and dental staffs at the same dates were respectively medical staff 1930 104 and 1937 115 dental staff 1930 12 and 1937 16. In addition the Department's establishment in both years included a post of serologist which was temporarily vacant on April 1 last and would shortly be filled.

Capitation Fee

Mr WILL THORNE asked on June 10 whether the Court of Inquiry had come to any settlement in connexion with the fees to be charged by the doctors when boys and girls became employed after leaving school and whether the Government intended bringing in a Bill to deal with the matter?

Sir KINGSLEY WOOD answered that the Court of Inquiry which was asked to consider the doctors' capitation fee to be paid as from January next for all insured persons entitled to medical benefit on the assumption that employed juveniles would then be included had reported in favour of the present rate of nine shillings per annum. He would introduce the necessary Bill as soon as Parliamentary business permitted.

Mr THORNE: Is it in consequence of their powerful organization that the doctors have got all that they wanted?

Sir K WOOD: I would advise the hon gentleman to consult the doctors.

Tuberculin tested Herds—On March 31 last there were 1,795 herds in England and Wales licensed for the production of tuberculin tested milk. There are at present in England and Wales 293 attested herds (which are tuberculin tested) on the register kept by the Ministry of Agriculture. This number includes eighty four herds which are also licensed for the production of tuberculin tested milk.

Minimum Income and Nutrition—On June 7 Mr SANDYS asked the Minister of Health whether the Government accepted Mr Seebohm Rowntree's recently published estimate of the minimum income required to provide the essentials of life, to which his attention had been drawn and if not, whether his Department had made any such estimate of its own. Mr BERNAYS replied in the negative. He said that the Minister was advised that this estimate involved certain features that were very conjectural, and no sufficient official material for the preparation of an estimate of this kind was at present available.

Administration of Midwives Act in Glamorgan—Mr EDWARD WILLIAMS asked, on June 9, whether a number of district councils in Glamorgan opposed the administration of the Midwives Act, 1936, by the county council and had asked the Welsh Board of Health to receive a joint deputation in order that the position might be discussed, and that the Department refused to receive the deputation and gave no adequate reason for its refusal. Mr Williams asked Sir Kingsley Wood to direct the Department to receive the deputation. Mr BERNAYS replied that as the question of a local inquiry was involved doubt was properly felt as to the propriety of receiving a deputation. Sir Kingsley was however, asking the Welsh Board of Health to treat the matter specially.

Universities and Colleges

UNIVERSITY OF OXFORD

E. S. Duthie, M.B., M.Sc., Ph.D. Dub., has been appointed University Demonstrator in Pathology for four years from October 1 1937.

The name of S. Zuckerman, M.A. M.R.C.S. L.R.C.P., of Christ Church has been added to the list of members of the Faculty of Medicine.

Dr A. G. Gibson, F.R.C.P., has been constituted Nuffield Reader in Morbid Anatomy while holding the office of honorary pathologist at the Radcliffe Infirmary, from October 1, 1937.

UNIVERSITY OF CAMBRIDGE

At a congregation held on June 11 the following medical degrees were conferred:

M.D.—F. W. Shepherd, T. R. Thomson, E. W. Taylor.
M.B. B.Chir.—*D. G. Lewis, *N. B. Betts, *G. Rigby Jones, S. C. Buck, G. E. Loxton, A. E. M. Hartley, A. J. Moon, R. G. Pulvertaft, J. H. Lankester, F. S. A. Doran.
M.B.—*K. G. F. Mackenzie, *T. V. Tattersall, J. S. Ellis, A. L. Jackson, H. S. Mellows, J. M. Scott, E. F. W. Grellier, A. W. B. Rostrom.

* By proxy.

UNIVERSITY OF MANCHESTER

Dr Frederick Hall has been appointed Lecturer in Public Health Administration.

UNIVERSITY OF SHEFFIELD

At a meeting of the University Council, held on June 11, Dr Gilbert Forbes was appointed Lecturer in Forensic Medicine and Dr J. M. Kennedy Lecturer in Infectious Diseases in the place of Dr J. Clark, resigned.

UNIVERSITY OF WALES

The following candidates have satisfied the examiners in the examination indicated:

TUBERCULOUS DISEASES DIPLOMA—A. A. Azcey, M. P. Crowe, B. A. Dornier, M. C. Malkani, C. F. McConn, K. P. R. Pillai, N. N. Sen, H. K. Surveyor, G. R. Talwalker, Heien Turner.

Income Tax

Income From Foreign Estate

Q Z's wife has been left an estate abroad consisting of certain mortgages and house property in addition she was left a large private house which under the terms of the will she is unable to sell and has to maintain. The cost of management and upkeep exceeds the income from the estate. Is Q Z liable for income tax?

Income in the form of foreign mortgage interest falls within a different case of Schedule D than income from foreign rents and there is no right of set off between the two cases. Consequently Q Z is liable to account for tax on the income arising abroad as mortgage interest whether it is remitted here or not but in so far as the foreign rents are applied to meeting the cost of maintaining the property they are not taxable here. Seeing that both forms of income arise from the same testamentary disposition there is a clear hardship and we suggest that Q Z might put the facts before the Board of Inland Revenue (Somerset House WC2) asking that the income should not be divided but be treated as arising out of a beneficial interest in an estate and only the net surplus income (if any) be regarded as liable to assessment.

Private Use of House and Car

M D asks what proportion of the running expenses of a car is usually regarded as for private use where the annual mileage is say 11,000 miles and also whether the local inspector of taxes is right in excluding from the house repairs claim any expenditure which would be carried out normally by a landlord.

It is impossible to suggest a ratio for private use of car as so much would depend on circumstances—for example use during holidays—but 10 to 15 per cent is not uncommon. With regard to the house we disagree with the inspector. As M D owns his residence he is presumably allowed in respect of rent a proportion of the net income tax assessment. Either he should have been allowed a proportion of the gross assessment—that is before the statutory deduction for repairs—or a proportion of the professional assessment plus actual expenditure on the professional portion. The inspector's argument can be carried to a logical *reductio ad absurdum* by applying it to a factory or shop.

Replacement of Car

A B D bought a 14.9 h.p. car in 1929 for £299 and sold it in October 1936 for £27, buying a 13.9 h.p. M car. What can he claim?

As cost of replacement—the cost of the new car less £27—or as “obsolescence allowance £299—£27 = £272 or the cost of the new car whichever is greater. In either case the amount allowable is treated as an expense of the year 1936.

LETTERS, NOTES, ETC.

A Maternity Convalescent Home

Readers may like to know that there is accommodation at Black Lake Home Farnham Surrey for mothers who wish to take an inexpensive convalescent holiday after confinement. This convalescent maternity home which is situated in pleasant surroundings, is for the wives of professional and business men. There is accommodation for five mothers and babies, who receive expert nursing attention. Babies under a fortnight and over 3 months of age are not admitted. The home is not run for profit and the fees are from two and a half to three and a half guineas a week. In cases of special need even lower terms can be arranged.

Nutrition and Health

With a view to bringing that section of the rising generation which is passing through the secondary schools of London into contact with some of the more important aspects of science and its applications the British Science Guild in 1935 organized a new annual series of lectures. The first proved so successful that it was decided to invite the Science Masters Association and the Association of Women Science Teachers to assist in the general working of the scheme as a memorial to the late Mrs. Gabrielle Howard who was deeply interested both in science and in education. The managers of the Royal Institution lent their theatre for the

two lectures for 1937 by Sir Robert McCarrison on Nutrition and Health. Sir Robert McCarrison's lectures were given last month to over a thousand London boys and girls aged 14 and over from secondary schools and have now been printed as a pamphlet in which form they may be commended to the notice of medical students as well as to the general public. Copies can be obtained direct from the printers Messrs Headley Brothers Ashfield Kent at the following rates which include postage—1/0 0/0 6/9 5/6 5/0 7/5 2/5 3/6 9/6 6/15.

Continuity

Dr EDWARD G. WALES of Downham Market, Norfolk sends this interesting note. I am returning from practice at the end of June 150 years from father to son, four generations in the same house without a break. Perhaps this is not a record for country practice but may be nearly so. The practice will now merge with others and I remain in the same house. We have been members of the B.M.A. I believe since its foundation.

Perspective in Medicine and Art

Dr A. D. WILLIS writes. The practice of the medical art need not be fatal to or remote from the appreciation of pictorial art. One might almost say that the two are related now that the psychologists are trying to bridge the gap between the mind of the artist and the created work. In the opening words of his admirable address to the Medical Society of London (Journal May 22 p. 1057) Dr R. A. Young deals with the question of perspective in painting and draws an analogy between its pictorial and its medical usage. But I doubt if the analogy is tenable. Vital though perspective is in any sane approach to medicine I think its discovery as an unmixed blessing to painting is I should not to deprive oneself of a true and eclectic appreciation of art. Theoretically there is no reason why it should not have increased the power of artistic expression rather than change its fashion. Its abuse lay in its being regarded as an end and not as a means in artistic expression. Probably this was a factor in the decline of much good art between the thirteenth and nineteenth centuries. Be that as it may, it enabled the majority of painters during that period—in the words of Dr Johnson—to arrange things in a picture according to their appearance and real situation. I mean it encouraged them to create illusions and to cover their canvases with literary irrelevances and sentimental allusions. Speaking generally one may say that realism became a substitute for the imagined truths and formal integration which the primitives in their innocence could alone conceive. The work of El Greco is like a voice crying in the wilderness against the tyranny of perspective. The impressionists began to see the light but it was left to the post impressionists to realize that to simplify and distort are two great artistic virtues. Whoever doubts all this let him go to the Royal Academy where the illusionists predominate. They are out of touch with the vital streams of art which are now gaining force after prolonged desiccation. It is significant that in the modern movements perspective is being eliminated although design is not a flat pattern. No doubt the perfection of chromophotography although without a free selection of subject, will enable us to view the art since the thirteenth century in its true relations or relative proportions as we strive to view all our medical problems.

Medical Golf

The Manchester and District Medical Golfers Association held its annual competition for the challenge cup at Wilms low on June 9. Dr N. R. Jeffery (Whitefield) was the winner of the cup with a net return of 71 playing from sixteen strokes allowance. Dr W. L. Hunter (Hale) was the winner of the Walter gold medal for the best gross score of the day and also the runner up's prize presented by the captain Dr T. M. Bride. The Walter silver medal awarded for the best gross score among players with handicaps of ten or more was won by Dr G. Ferguson (Oldham) with a score of 84. Dr R. W. Fairbrother of the home club went out in 35 strokes and won the prize for the best outward half and Dr W. S. Nunan (Selford) won the prize for the best homeward score also with 35.

Savory and Moore Ltd 61 Welbeck Street London W1 have been appointed sole distributors in the United Kingdom of the products of E. R. Squibb and Sons manufacturing chemists of New York.

JUNE 19, 1937

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

482 Post anginal Streptococcal Septicaemia

C. H. BIETH (*These Paris*, 1937, No. 261) records five cases in patients, aged from 13 to 30, of septicaemia following an attack of sore throat, the streptococcal nature of which was shown by a blood culture. The condition presented the following characteristic features. There was an interval of varying duration between the initial pharyngeal affection and the stage of septicaemia, there were few physical signs, apart from a usually moderate splenomegaly, in contrast to the severe constitutional disturbance accompanied by high fever and shivering, secondary visceral and articular localizations were rare, and there was a tendency to relatively rapid spontaneous recovery. Therefore, in the presence of any sore throat accompanied by some constitutional disturbance, especially in a young adult, the possibility of septicaemia should be considered and a blood culture taken.

483 Malingering

W. SCHÖNFELD (*Derm. Wschr.* April 3, 1937, p. 417) believes that because the malingerer's methods are not sufficiently widely known many cases are unrecognized. The simplest method adopted by malingerers is that of producing ulceration, usually below the knee, by the application of irritants or the subcutaneous injection of paraffin, turpentine, benzine, etc. Cases are on record in which conscripts, beggars, and patients awaiting compensation have simulated by these means leprosy, favus, scurvy, crabs, tuberculosis, and pemphigus. The production of "haemorrhage" from the genito-urinary tract by the ingestion of dyes, balsam of Peru, or rhubarb, or by injection of blood into the bladder, or by inflicting trauma to the urethral mucous membrane, is another favourite method. Malingerers sometimes make use of a hydrocele by injecting air or fluid into the scrotum or by the external application of turpentine or irritation by wasp stings. Simulation of venereal disease became a fine art in all armies in the war. One German author estimated that 5 to 7 per cent. of all cases were malingerers. Chronic gonorrhoea is more easy to simulate than the acute form because of the ease with which the latter is detected bacteriologically. Use is made of acids, alkalis, soap, and tobacco juice in the production of a discharge. Chancres occur after the application of irritant ointments or plant juices, "condylomata" may be produced by cantharidin plasters, "tertiary syphilis" by alkali burns. Orchitis and epididymitis have been caused by the subcutaneous injection of paraffin and oil paint. Schönfeld points out that the causes of malingering vary with changing need—beggars in the Middle Ages, avoidance of conscription in the war, compensation cases to-day—and that it is therefore the duty of all doctors to become acquainted with simulated disease in all branches of medicine.

484 Infectivity of Old Tuberculosis

P. BIETH (*Disch. Tuberk.* May, 1937, p. 115) has undertaken a special study of a very common form of pulmonary tuberculosis—that in which physical signs and the radiological picture are indicative of open tuberculosis, but in which no tubercle bacilli are demonstrable on microscopic examination of the sputum frequently repeated over several years. The author classifies these cases in two groups according to whether there has or has not a sputum-positive history much earlier in the disease. In the first group, which included twenty-

two cases, there were eight in which animal tests were positive, although tubercle bacilli were not demonstrable by other means. In none of these twenty-two cases could any evidence be found of other persons in the neighbourhood having been infected by them. In the second group, which included eighteen cases, tubercle bacilli had never been found in the sputum, not even quite early in the disease. Animal tests in all these cases proved negative. Most of the patients in the first group were elderly, the average duration of their disease having been sixteen years. The amount of the sputum varied from time to time and was seldom appreciable. Foul breath and clubbed fingers were lacking, and there was little or no change in the clinical picture from year to year. One of the most important public health problems raised by this type of case is the chances it offers of spreading tuberculosis, the author has come to the conclusion that however dangerous these patients may have been to their surroundings early in the disease, their infectiousness must now be considered as greatly reduced. Hitherto he has treated such patients from an administrative point of view as open cases of tuberculosis, but with the conviction that their infectiousness is only slight he has come to regard isolation in an institution as hardly necessary.

485 Pulmonary Aneurysm

A. PORTO (*O. Hospital Rio de Janeiro*, April, 1937, p. 351), who records an illustrative case of aneurysm of the trunk of the pulmonary artery, illustrates the rarity of this condition by the following statistics. A Costa found only one example in 20,000 necropsies. Crisp and Nicolaiew found only two in a collection of 557 cases of pulmonary aneurysm. Pissot in his Paris thesis of 1920 was able to collect only five examples from the world's literature. Porto's case was that of a man aged 62, a syphilitic in whom the clinical diagnosis of pulmonary aneurysm was confirmed by x-ray examination.

486 Hemiplegia Caused by Cerebral Tumours

J.-A. CHAVANY and A. PLACA (*Presse méd.*, April 14, 1937, p. 569) review the subject of hemiplegia caused by benign or malignant tumours of the brain, and base their conclusions on forty-five cases which were verified anatomically or at operation. They find that in many cases cerebral tumours give rise to symptoms of increased intracranial pressure, and it is necessary to make a diagnosis as regards the location of the growth. If the pyramidal tracts are affected there are early signs of motor involvement with irritation followed by paralysis, but there is no increase of pressure. In these cases diagnosis is difficult, as there is no pain in the head and examination of the fundus of the eye shows no abnormality. Radiography is of value particularly in cases of meningioma and angioma, which affect the bony structure. Hemiplegia may develop in four different ways. It may be progressive, and without excitomotor signs, it may be preceded by a phase of variable length, in which crises of Jacksonian epilepsy occur, it may have a sudden onset, or it may be complementary to signs of intracranial pressure. In the first instance the first symptom is hypotony followed by a progressive motor paralysis leading to hemiplegia. In these cases a diagnosis of malignant tumour of the brain is usually made with a grave prognosis. In cases in which Jacksonian fits occur the paralysis progresses slowly and headache is a common symptom. When the hemiplegia develops rapidly with loss of consciousness a vascular origin, such as softening of the brain, may be suspected. The motor loss reaches its maximum in several hours and subsides slowly. If the hemiplegia is due to a tumour, however, it remains unaltered for some time, but diagnosis between these two causes of the

condition is difficult. When intracranial hypertension is present at the same time as the hemiplegia a condition of stasis usually exists, with symptoms of headache and vomiting. Lumbar puncture should always be carried out in cases of suspected cerebral tumour, in order to avoid serious developments.

Surgery

487 Albee's Operation in Children

H BILLET (*Scalpel* Liège April 10 1937, p 450) who has performed Albee's operation in children for over ten years is convinced of its value. He believes it to be necessary in those cases of Pott's disease which run an abnormal course. The operation should be done not in the period of decline as in adults but in the active stage of the disease when other orthopaedic measures fail. He advises it in all cases complicated by abscess formation gibbosity and paraplegia after a preliminary period of complete rest in a plaster jacket until the tuberculous process has become quiescent. Billet always uses bone grafts taken from the patient himself. After operation the patient is immobilized for six months in a plaster corset lying at first on the abdomen later alternatively on his back and abdomen. In the later stages a celluloid corset is worn usually for one year until cure has taken place. When correctly treated, children are left with a supple spine. The author agrees that children with Pott's disease can be cured with non operative measures alone provided that they are under treatment from the beginning to the end of the condition, but in his experience such cases are the exception and it is with the others that he has had excellent results from operation. Billet asserts that the part which the bone graft plays is not purely mechanical, but is biological. He bases his assertion on the fact that Albee's method promotes a cure far more rapid than that obtained by other measures. In many of his cases surgical intervention achieved success when the patients under other therapy were going downhill. In one of his most successful cases Billet was forced to remove the entire graft two months after operation through a fistula which refused to heal. This affords proof to the author of the biological part played by the graft.

488 Whitehead's Operation for Piles

A HERMANNSDORFER (*Med Welt* March 27 1937, p 423) regrets that recent reports have tended to favour the clamp-cautery ligature operation for piles as against Whitehead's operation. The latter, he says is indispensable for the complete ring of haemorrhoids especially when there is prolapse of the anal mucosa the incontinence bleeding and strictures which have been found to follow Whitehead's operation are due to technical errors. It is important (1) to precede the operation by two days fluid diet and the administration of 15 minims of tr opii the night before but to omit purgative measures on the day of operation, (2) to avoid manual or instrumental stretching of the sphincter (3) to incise the mucosa not the skin (4) to insert a tube which should be left for five days after operation, (5) to avoid a motion of the bowels for ten to twelve days by giving tincture of opium in large doses. The introduction of bougies should be practised for several weeks after operation if the resection of a long cylinder of mucosa has been necessary or if the incision has not united primarily. In Hermannsdorfer's series of forty seven cases primary union followed in forty two there was one case of secondary haemorrhage and all those patients who could be traced were satisfied with the result—although a few reported slight difficulty in the retention of watery stools. Ectropia it is stated does not follow unless the operation is wrongly combined with excision of external haemorrhoids and the suture of skin to mucous membrane.

1296 a

489 Operations on the Pulmonary Apex

A OMODEI ZORINI (*Ann Ist Carlo Forlanini* February 1, 1937, p 1) records nine illustrative cases of operative treatment of tuberculous cavities of the pulmonary apices. The operations included simple apicolysis, apical plombage, and posterior apical thoracoplasty, and were performed at the Carlo Forlanini Institute in Rome. Simple apicolysis which was practised only in forty four patients with early cavities of the apex, especially those complicated by haemoptysis, gave good results in 45 per cent. Apical plombage, which has many drawbacks, was carried out in seventeen cases, but good results were obtained in only two. The operation can be used with advantage however in cases with localized stationary cavities of the apex, in obstinate haemoptysis due to adherent apical cavities as a complementary operation to thoracoplasty and in some cases of bilateral apical cavities. According to the writer posterior thoracoplasty is the best method for the treatment of destructive apical processes and must be accompanied by resection of the first two vertebral transverse processes and of the rib below the lower limit of the cavity.

Therapeutics

490 Vitamin B in Insulin Shock

R FREUDENBERG (*Wien klin Wschr* April 23 1937, p 535) draws attention to the parallel between vitamin B₁ deficiency and insulin shock. Experimentally it has been shown that in both conditions there is a lessened intake of oxygen in the grey matter of the brain. Insulin shock therapy in schizophrenia has hitherto been attended by a mortality of 1.6 per cent. In lethal cases the administration of dextrose orally or intravenously has failed to arouse the patient from his coma. Errors of technique have been held responsible for these cases—namely too frequent administration of shocks, too long duration of the coma etc. Freudenberg has found that the administration of vitamins B₁ and B₂ and adrenal cortex hormone has succeeded in interrupting coma in non reversible cases of insulin shock. Patients who previously had wakened with 33 per cent dextrose solution in quantities of 70 to 140 ccm and then failed to do so with 50 per cent dextrose solution (400 ccm), were roused in twenty to thirty minutes by the administration of 800 units of betaxin or yeast emulsion. In other cases it was possible to lessen the hypoglycaemic state before the administration of dextrose. The author claims that the administration of vitamins B₁ and B₂ is a valuable therapeutic agent in making insulin shock therapy safe.

491 Staphylococcus Toxoid in Treatment

W A TIMMERMAN (*Nederl Tijdschr Geneesk* April 17, 1937 p 1725) records his observations on the use of staphylococcus toxoid in various conditions caused by staphylococci, with the following results. In thirty-eight cases of recurrent furunculosis the results were good. In twenty one cases of different forms of acne three showed considerable improvement directly after treatment, nine showed no effect four were moderately and four considerably improved later only one was completely cured. Of five cases of sycosis barbae three were more or less improved, one was cured, and one unaffected. In four cases of osteomyelitis no definite improvement occurred. The initial dose should be small and the doses should be increased slowly a careful watch being kept for local, focal and general reactions.

492 CO₂ Baths in Cardiovascular Disease

W LUEG and H KUHN (*Med Welt* April 24, 1937 p 563) are convinced from a long experience at Bad Nauheim of the psychical benefit to patients suffering from cardiovascular disease of CO₂ baths. Such patients they point

out do not suffer from disease of a single organ, but from damage to the entire personality, and change of environment and balneological treatment appeal to them more than the administration of drugs. CO₂ baths owe their effect to three factors: (1) Immersion of the body in the bath compresses the superficial veins and skin capillaries and induces a centripetal blood flow. The tonus of the heart muscle is strengthened. The static pressure of the bath puts a moderate strain on the circulatory system. It may with advantage in certain cases be lessened by lowering the water column, and by prescribing 'three-quarter' or 'half' baths. (2) The CO₂ spring at a temperature of 35° C gives rise to a pleasantly warm sensation, in contrast to ordinary water at the same temperature. This is due to the insulating action of the fine gas bubbles which settle over the entire skin. The part of the body below the water becomes bright red in colour owing to capillary engorgement. (3) CO₂ is diffused through the skin. At 45° C it gives rise to a lowering of the blood pressure, a slowing of the pulse, an increase of the pulse volume and diuresis. CO₂ baths strengthen the action of digitalis, but cannot be substituted for it. Baths are indicated in cases of heart disease with full or adequate compensation, in cases of 'senile' or 'nervous' heart and in arteriosclerosis. They are absolutely contraindicated in angina pectoris, in cases with a tendency to embolus or thrombus formation, in those with kidney trouble or in febrile cases. Heart failure is not of itself necessarily a contraindication. A course of balneological treatment consists of twelve to fifteen baths with one- to two-day intervals of rest. In each case it must be preceded by a complete clinical examination. The dosage may be regulated by ordering full, half or three-quarter baths.

Laryngology

493 Vitamin C Deficiency in Pharyngitis

M. BARR (*Deutsch. med. Wschr.* May 7, 1937, p. 741) suggests that in most cases of pharyngitis it is impossible to link it up with some definite aetiological factor such as an infectious disease or a poison (lead, nicotine, alcohol, poisonous gases, dust, etc.). Treatment has hitherto been mainly local and symptomatic and it has not been wholly successful. The case which first made the author associate pharyngitis with vitamin C deficiency was that of a woman, aged 38, who on account of intractable vomiting was kept for several days on a much reduced diet. There followed a severe and extensive pharyngitis. Suspecting vitamin C deficiency the author subjected her to the Harris test. The Harris test depends on the identity of vitamin C with ascorbic acid, and on the fact that when there is a lack of vitamin C in the body this acid is retained and not excreted in the urine until this deficiency has been made good. Since this test proved positive the author prescribed a synthetic preparation of vitamin C by the mouth and by injection, supplementing this treatment by a vitamin-rich diet. Thirty-five other cases of pharyngitis were also investigated, and as a result the author attaches more and more importance to the Harris test as a guide to rational treatment in such conditions. He concludes with the generalization that pharyngitis is not a nosological unit but merely a symptom-complex of the most varied aetiologies, and he does not consider that his cases are sufficiently numerous yet to justify any dogmatic claim that his therapeutic successes depended entirely upon his aetiological speculations.

494 Bacteraemia after Tonsillectomy

J. J. HILL (*Nederl. Tijdschr. Geneesk.* May 15, 1937, p. 211) reports on the work of Okell and Elliot on the effect of extra-oral tooth extraction carried out aseptically on 220 children after removal of tonsils. In twenty-four out of 100 children bacteraemia was observed immediately after tonsil

lectomy, whereas before the operation only three gave positive cultures, which were then attributed to focal infection. In another series of 120 children thirty-nine showed a bacteraemia immediately after operation, but four hours later only three showed a positive blood culture. The cultures usually consisted of streptococci, mostly belonging to the viridans groups, or of the haemolytic type. Pneumococci were found less frequently, and staphylococci in only one case.

495 Bronchial Catheterization and Bronchspirometry

P. FRENCHNER and S. BJÖRKMAN (*J. Laryng.* April, 1937, p. 233) define bronchial catheterization as a technical process which makes it possible to analyse the exchange of respiratory air from separate portions of the lungs. A small size bronchoscope is passed into a bronchus. The last 2 to 3 cm of the bronchoscopic tube carry a rubber membrane which can be inflated through a fine tube when the instrument is in place. The inflated rubber membrane occludes the bronchus. The air collected from the proximal end of the bronchoscopic tube measures the gaseous exchanges which take place in that portion of the lung which lies beyond the occlusion. Bronchspirometry is a further development of the method, and allows a volumetric determination and gaseous analysis of the respiratory air of each lung separately. The instrument used is a double bronchoscope with two separate tubes. One tube opens at the distal end with an obturator near the tip. The bronchoscope is passed until the distal obturator lies in the left main bronchus between the carina and the origin of the upper lobe bronchus. The air from this tube indicates gaseous exchanges in the left lung. The other tube opens more proximally just above the carina, and there is a second obturator a little below the glottis which makes an airtight occlusion there. The air from this tube therefore comes entirely from the right lung. Both outlet tubes of the double bronchoscope are connected by rubber tubes to two separate spirometer systems. These are specially designed suction pumps which can take respiratory air from the right and left lung simultaneously, and register volume, oxygen consumption and carbon dioxide production. The ventilation of the lungs is registered for five to seven minutes, and during this time the patient makes one maximum inspiration and one maximum expiration. The bronchspirometric method will prove of great value in elucidating many obscure problems in the functional physiology and pathology of the lungs. In healthy persons it has been proved that the right lung has a greater share in the total function of the lungs than has the left. Before deciding to perform a pneumothorax or a thoracoplasty on one lung it is advisable to study the functional capacity of the opposite lung.

496 Sulphur Dioxide in Epidemic Colds

A. G. RAWLINS (*Arch. Otolaryng.* Chicago, February, 1937, p. 119) with the majority of observers, accepts the following data on the causation of the common cold: (1) No definite organism has been proved responsible. (2) Visible bacteria are probably secondary invaders. (3) There is considerable evidence that colds are due to an invisible unculturable filterable agent of some kind. The period of incubation is from one to three days, and the period of immunity from three to four months. Many so-called colds are flare-ups of chronic posterior sinusitis. Such conditions did not come into the scope of the author's investigation, neither did epidemic streptococcal infections of the throat. The author's brother, a professor of plant pathology, working on filterable viruses which attack plants, found that these viruses do not behave towards ordinary antiseptics as do visible bacteria; 70 per cent alcohol and 1 in 1000 solution of mercury bichloride had little effect in destroying these viruses. However, low concentrations of sulphur dioxide (0.6 to 1.5 per cent) readily destroyed these plant viruses, and also the virus of foot and mouth disease. Rawlins conceived the idea that

sulphur dioxide might likewise destroy the filterable virus of the common cold if this antiseptic could be applied to the infected area in the early stage of the disease. This can be done easily by inhaling a concentrated solution of sulphurous acid, as this liquid gives off sulphur dioxide in large quantities. In a recent winter epidemic treatment with sulphur dioxide was tried on eighty patients who were in the first stage of what appeared to be an epidemic cold. Of these fourteen received no relief. 66 stated that they were completely cured on the first or the second day after treatment. On the third and fourth days of a cold the results were practically negative. The patient is given a three-ounce bottle half filled with a saturated solution of sulphur dioxide. He inhales the gas from the bottle for ten minutes three times during the first day. Inhalations need not be deep, only sufficient to fill the nose and mouth cavity is necessary. By closing the mouth the gas is forced into the nasopharynx. Sulphur dioxide is a harmless gas, as has been shown in chemical factories where workmen are exposed to these fumes.

497 Peritonsillar Abscess

W HENSLE (*Dtsch med Wschr*, March 19, 1937, p 489) reports his experiences in the municipal hospital of Mannheim between 1927 and 1935 with 421 cases of peritonsillar abscess. In 244 cases a bacteriological examination was made of the pus usually obtained by exploratory puncture before operation. In 207 cases haemolytic streptococci were found in pure culture, and in seven cases in association with anaerobic streptococci in three cases with staphylococci, once with *B. coli* and once with pneumococci. While the sex distribution of the patients was even it was remarkable how many of them were between 20 and 30. The abscess burst spontaneously in 119 cases, and in twenty-one cases septicaemia followed. The treatment of this complication by ligation of the internal jugular vein was followed by the patient's recovery in only five cases. This meagre success could be traced to the delay in admitting the patients to hospital after they had had several rigors and pulmonary abscesses had formed. The nineteen deaths represented a comparatively high mortality of 4.5 per cent. due to delay in admission to hospital and consequent delay in operation. Though the author discounts the risks of piercing the ascending pharyngeal artery in the course of lancing a peritonsillar abscess, he prefers to open it bluntly with Hartmann's polypus forceps. The wide opening of the forceps after its entry assures a free escape of the pus.

Obstetrics and Gynaecology

498 Vitamin C in Pregnancy

A BUCHER (*Munch med Wschr*, May 7, 1937, p 734) was able to demonstrate that there is a lack of vitamin C in the urine of pregnant women. For this demonstration he used the dichlorophenol indophenol test. The pregnant woman requires approximately 100 to 300 milligrammes of vitamin C each day. This is easily supplied by a diet rich in fresh fruit and vegetables. But in some instances it may be necessary to supplement the diet by synthetic vitamin C. In pregnant and nursing women treated in this way no dental caries has occurred, stopped teeth and the gums remained equally healthy. The administration of vitamin C had further a favourable effect on the body generally.

499 Short wave Treatment in Eclampsia

J ENIMERICH (*Zbl Gynäk*, May 15, 1937, p 1165) gives the results of the application of short-wave diathermy in a number of cases of eclampsia. He used a valve-emitter, a wave length of 6 metres and an intensity of 300 to 350 watts. He treated the kidneys, liver and head. Generally speaking relief was afforded in a number of cases but it cannot be considered to have solved the problem of

eclampsia and of the pre-eclamptic state. In a few instances the treatment resulted in an aggravation of the condition, it is probably contraindicated in patients with a tendency to convulsions, but influences favourably eclamptic coma.

Pathology

500 Coagulation of Haemophilic Blood

A J PATEK, jun. and F H TAYLOR (*J clin Invest*, January, 1937, p 113), by acidifying with 1 per cent. acetic acid, Berkefeld filtered normal citrated plasma, have isolated a globulin-like substance which promotes clot formation in haemophilic blood. Approximately 500 to 700 mg were obtained from 100 ccm of plasma. This "globulin substance" was effective both fresh and after drying in the cold *in vacuo in vitro* and when given intravenously was thermolabile as to its clot-promoting activity, insoluble in water at a pH of 6.5 but soluble in physiological saline. It passed through a Berkefeld filter, but was not ultrafilterable. The optimum pH range for its precipitation was 5.9 to 6.4. A comparable yield of a similar precipitate could be obtained from haemophilic plasma but had very little effect in hastening the clotting of haemophilic blood. The globulin substances from normal and haemophilic plasmas were equally effective in clotting a calcium fibrinogen system. The inference, therefore, is that the difference between normal and haemophilic blood is due either to a qualitative difference of the globulin or to other substances associated with the globulin fraction of the plasma.

501 Activation of Prontosil

E A BLISS and P H LONG (*Johns Hopk Hosp Bull*, February 1937, p 149) have tested *in vitro* the effect on streptococci of prontosil soluble when reduced with cysteine hydrochloride. Subcultures of two strains of β haemolytic streptococci were made in (a) broth and prontosil soluble, with cysteine hydrochloride (b) broth and prontosil soluble, (c) broth and cysteine hydrochloride (d) broth alone. Inhibition of growth occurred only in (a) in which also the colour of the prontosil solution was discharged, showing that reduction had taken place. Reduction was never immediate but increased gradually during incubation. It was quicker and more complete in broth than in serum broth, in which inhibition of growth of the streptococci was not nearly so good as in simple broth. Colourless (reduced) prontosil solution had a therapeutic activity in mice with experimental peritonitis comparable to what would be expected from a solution of para amino benzene sulphonamide of the same concentration. The authors express the belief that the bacteriostatic substance in reduced prontosil solution is para amino benzene sulphonamide produced by the reduction and splitting of the azo group of prontosil soluble.

502 Biological Assessment of Male Sex Hormone

H KUN and O PECZENIK (*Wien klin Wschr*, April 2, 1937, p 439) recall that male sex hormones have been tested either by the modification produced in the secondary sex characters of birds or by the increase in the size of the prostate and vesiculae seminales produced in castrated rats or guinea pigs. The quantitative test which they have perfected consists in the injection of the hormonal preparation to be tested, in graduated doses into castrated rats and the measurement of the minimal dose which will restore the occurrence of ejaculation following electrical stimulation of the rump by a current of 30 volts. Testosterone androstendiol and androsterone are effective in descending order. Kun and Peczenik confirm the finding that the activity of some of the male hormones is greatly increased by the simultaneous administration of the female sex hormone folliculin.

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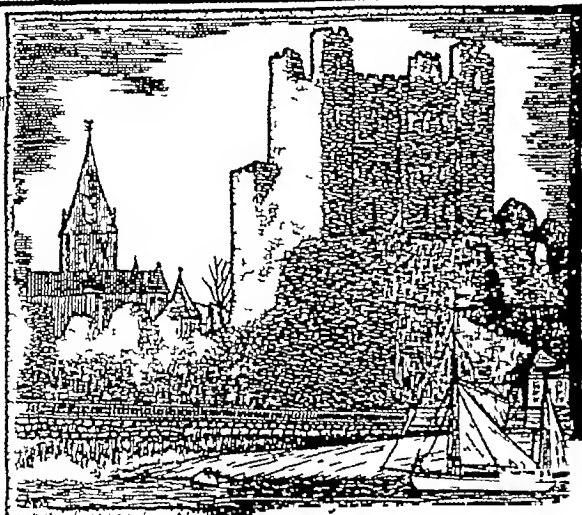
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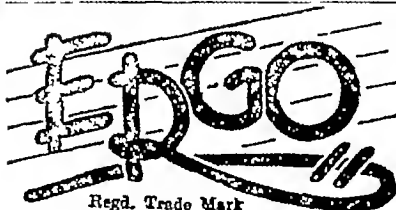
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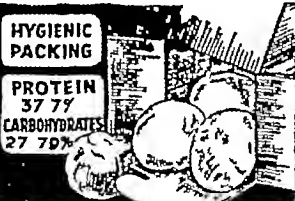
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all the medical and nursing staffs of the
hospital. The names of the patients are
arranged in alphabetical order, and the
names of the patients who are under the
care of the hospital are arranged in
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patients who are under the care of the
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the patients who are under the care of
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For terms and further particulars apply to the Medical Superintendent (Telephone No. 7356 and 2357 Northampton) who can be seen in London by appointment.

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Telephone No. 6207 Barnwood.

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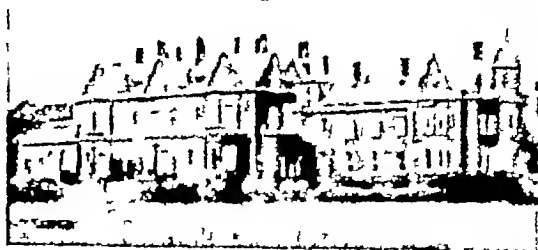
A PRIVATE HOME for the treatment of Gentlemen suffering from Mental and Nervous Illness, including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act 1930. Bracing Hill country. See Medical Directory p. 23-8. Apply to the Medical Superintendent. Phone 10 P.O. Church Stretton.

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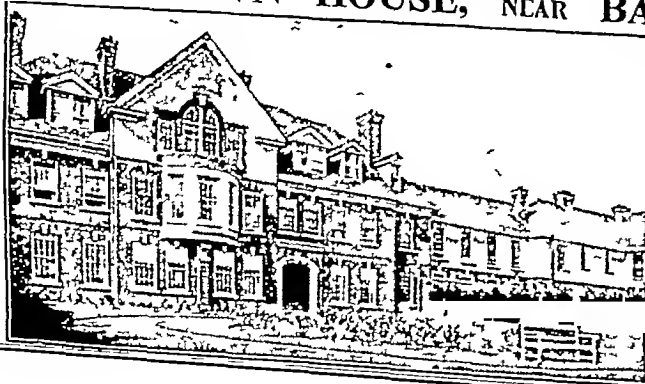
The only extra charge is that for a complete alimentary x-ray examination or for x-ray therapy.

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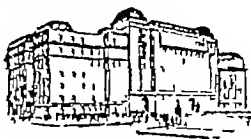
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Telephone RODNEY 2641 2642.

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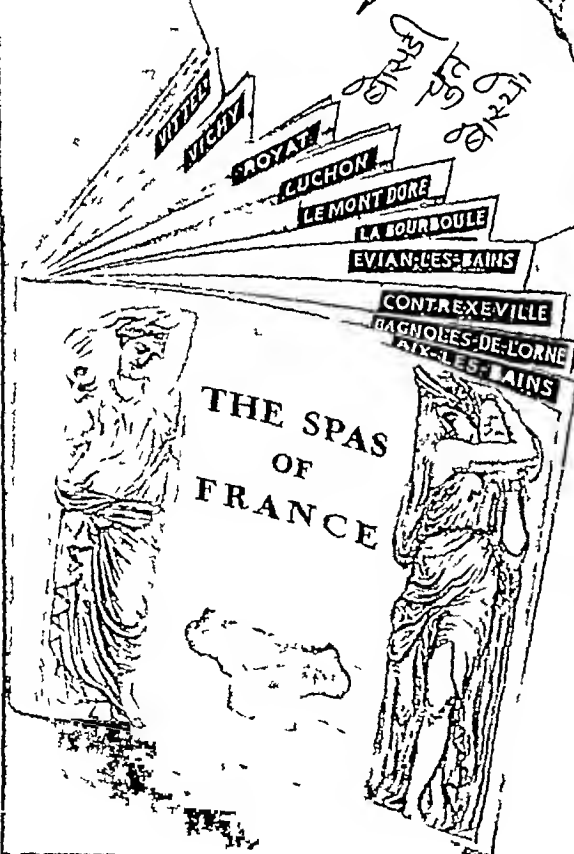
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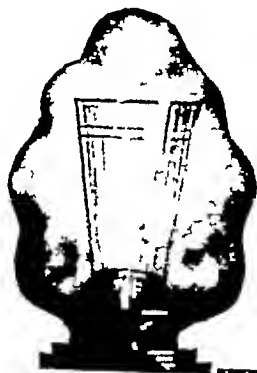
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A private Home for the cure of and treatment
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Voluntary and Temporary Patients received under
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Large grounds 400 ft. above sea HOME for
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Upper Woburn Place near B.M.A. Headquarters.
Accommodates 235 Visitors. Modern Comforts
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HIGHER MEDICAL QUALIFICATIONS

Are you desirous of obtaining one of the special higher qualifications?

Diploma in Anaesthetics
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Diploma in Radiology
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All Higher Medical and Surgical Degrees and Diplomas

You can qualify for any of the above by our Courses of Combined Postal and Practical Courses. Write at once stating your requirements to the

Secretary

MEDICAL CORRESPONDENCE COLLEGE,

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WE SPECIALISE IN POST-GRADUATE COACHING FOR ALL EXAMINATIONS

Send Coupon below for Free Guide

Name

Address

Examination in which interested

UNIVERSITY OF LONDON EXAMINERSHIPS, 1938

The Senate announce the following vacant Examinerships for the year 1938. Except when otherwise stated, Examiners will act in all Examinations in which the subject is included.

Final and Higher Examinations for Medical Degrees

MD Hygiene
Medicine
Obstetrics and Gynaecology
Final Examination for Medical Degrees
General Biology
Chemistry
Physics

Second Examination for Medical Degrees
Anatomy (Science and Medical Exams)
Chemistry

ASSOCIATE EXAMINERS

Applications will also be invited for Associate Examiners in Medicine, Obstetrics and Gynaecology, Pathology and Surgery. A separate application form must be used for Associate Examinerships and the word "Associate" must be written on it. Application Form for Forms if more than one Examinership is applied for and particulars of the remuneration and duties can be obtained from the External Registrar.

Candidates must send in their names to the External Registrar, A. Clow Ford M.B.E., B.A., with any attestation of their qualifications they may think desirable on or before Monday, July 5th, 1937. (Envelopes should be marked "Examinerships").

The Senate desire that no application of any kind be made to individual members.

If testimonials are submitted one copy only of each is required. In no case should original testimonials be submitted. If more than one Examinership is applied for a separate and complete application must be forwarded in respect of each Examinership. The appointments will be made by the Senate in November. Applicants who desire that the result should be communicated to them are requested to enclose a stamped and addressed envelope with their application.

S. J. WORSLEY

Acting Principal

University of London W.C.1
June 1937

F.R.C.S. (Edin.)

POSTAL and ORAL COURSES.

Full details of above and Private Tutoring—
11 C. Drury, F.R.C.S. Surgeon's Hall, Edinburgh—

CITY OF LONDON MATERNITY HOSPITAL

(Incorporated by Royal Charter)
CITY ROAD LONDON E.C.1

Midwifery Training School

PRACTITIONERS and MEDICAL STUDENTS admitted to Hospital Practice with operative Midwifery and Obstetrical complications—nearly 2,000 patients annually. Fees £16 16s per month or £2 8s per fortnight (inclusive of board-residence).

PUPILS trained as Midwives in accordance with C.M.B. regulations. Reduced fees—under Ministry of Health Scheme. Sister Tutor on Staff. Post-graduate Courses in Anaesthesia. Phone: Clerkenwell 5171

UNIVERSITY OF LONDON KING'S COLLEGE

FACULTY OF MEDICAL SCIENCE

The Medical Faculty of this College of the University gives instruction in the subjects of Medical Science for all the usual Preliminary and Intermediate Examinations in Medicine, Surgery and Dentistry. Through its associated hospitals, students of the College have clinical facilities of over 1,000 beds.

The Medical Faculty of the College provides a general University education in touch with other Faculties, classes of which medical students are permitted to attend. There are many College societies, clubs and functions in which students of all Faculties have opportunity of meeting each other. The College has an athletic ground at Mitcham with a large and modern pavilion.

The First Year subjects are taught in the large Departments of the Faculty of Science and those for the Second and Third Years in the new Medical Department. This includes the Hablestree Department of Anatomy and an extension to the Department of Physiology recently erected at a cost of £70,000. These new buildings and those of recent years provide the College with a completely new and modern Medical Department which embodies the newest ideas in laboratory construction and equipment.

Valuable Scholarships and Prizes are awarded on the results of examinations held annually.

The hostel for men students (The Plasmas, Champion Hill, S.E.5) contains accommodation for 80 students. The hostel for women students is at 58, Queensborough Terrace, Bayswater.

For detailed prospectus of the Medical and Dental Courses and for further information apply to the Dean of the Medical Faculty or to

S. T. SHOVELTON M.A.

Strand W.C.2

Secretary

UNIVERSITY OF DUBLIN

SCHOOL OF PHYSIO TRINITY COLLEGE

The usual three weeks Post-graduate Course for General Practitioners will be held this autumn from Monday, September 20th, to Friday, October 8th. The course will include clinical instruction in Surgery (including Orthopaedics), Medicine (including Neurology, Cardiology, Fevers, Children's Diseases and Skin Diseases), Obstetrics and Gynaecology and Diseases of Eye, Ear, Nose and Throat. Instruction will be given each afternoon in the Medical School in Clinical Pathology, Bacteriology, Physiology and Biochemistry. There will also be demonstrations on the use of Radium and lectures on Medicine and Therapeutics. Fee for the course five guineas.

For further particulars apply to—

Professor DAVID S. TORRENS,

School of Physic, Trinity College, Dublin

STAMMERING SPEECH DEFECTS

BEHNKE METHOD. Estab. 1880. Cases now resident treated at 39, Earls Court Sq. S.W.5 and in residence in the Summer holidays at Miss BEHNKE's house on the Chilterna. Treatment consists of education and treatment of stammering and other speech defects. "Times."

Thoroughly physiological principles. — *Lancet*.
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Stammering, Cleft Palate Speech, Lispings
3/9 of Miss BEHNKE, 39, Earls Court Sq. S.W.5

Preliminary Examinations

The COLLEGE OF PRECEPTORS holds Preliminary Examinations for Medical and Dental Students in London and at Provincial Centres in March, June, September and December. For Regulations apply to the Secretaries, College of Preceptors, Bloomsbury Square, London W.C.1

AN EXAMINATION IN ORTHOPTICS

will be held in London on JULY 14th and 21st. Entrance fee three guineas, payable in advance. Schools represented upon the Orthoptic Board are to send names of candidates to—

Sec. DR THOPTIC BOARD
RDYAL WESTMINSTER OPHTHALMIC HOSPITAL, as soon as possible

UNIVERSITY EXAMINATION POSTAL INSTITUTION

17 RED LION SQ., LONDON W.C.1

FOUNDED IN 1882

by the late E. S. WYVEMOUTH M.A. (Lond.)

POSTAL DR. DRAL PREPARATIONS FOR ALL MEDICAL EXAMINATIONS

SOME SUCCESSES

M.D. (Lond.)	1901-36 (9 Gold Medallists during 1913-36)	412
M.S. (Lond.)	1901-36 (including 4 Gold Medallists)	24
M.B., B.S. (Lond.)	Final 1918-36 (Completed Exam)	251
F.R.C.S. (Eng.)	Primary Final	188
1918-36	Final	183
M.R.C.P. (Lond.)	1919-36	270
D.P.H.	(Various) 1906-36 (Completed Exam)	342
F.R.C.S. (Edin.)	1918-36	63
M.R.C.S., L.R.C.P.	Final 1919-36 (Completed Exam)	587

M.D. Various By Thesis Many successes
Preparation for the above, also for Medical Preliminary and all examinations leading up to M.R.C.S. L.R.C.P. or M.B. of various Universities also for M.R.C.P. (Edin.), D.P.M., D.D.M.S., D.T.M. & H., D.L.O., D.C.H., D.A., D.M.R.E., M.M.S.A., L.M.S.S.A., D.C.O.G. and some exams, of Dominions Universities.

ORAL CLASSES

M.R.C.P., M.D., Primary and Final F.R.C.S., F.R.C.S. (Edin.) also Final M.B., B.S. and M.R.C.S. L.R.C.P. Museum and Microscope Work. Also Private Tutoring.

MEDICAL PROSPECTUS (48 pp.)

CONTENTS: The method and the cost of entering the Medical Profession. Particulars of all Medical Examinations, Postal Courses and Oral Classes. Suggestions for the Higher Medical Examinations. Suggestions for the Higher Surgical Examinations. Suggestions for the Special Diploma Examinations. Refresher Courses. Openings for Women. Hints for writing theses.

Medical Prospectus gratis along with list of Tutors etc. on application to the Principal, 17 Red Lion Sq., London, W.C.1 (Telephone Holborn 6315.)

DIPLOMA IN PUBLIC HEALTH

The Royal Institute of Public Health

The Course of instruction can be commenced at any time. Special provision is made for students who can give only part time to the work.

A prospectus and further particulars can be obtained from the Secretary.
Telephone: Terminus 4788—6206
23 Queen Square (Oxford Street)
London, W.C.1

DIPLOMA IN OPHTHALMOLOGY

DIPLOMA IN RADIOLOGY DIPLOMA IN LARYNGOLOGY AND OTOLARYNGOLOGY

Short Intensive Revision Courses Oral and Postal in preparation for these Diplomas

For full details write Secretary, Medical Correspondence College, 19 Welbeck Street, W.1

BRITISH POSTGRADUATE MEDICAL SCHOOL

(UNIVERSITY OF LONDON).

An Intensive Refresher Course for General Practitioners will be held in the fortnight commencing 28th June, as follows

1937	10.30 to 1.0	Conducted by—	2.0 to 4.30	Conducted by—
Monday 28th June	Principles of the Examination of Patients.	Dr A. E. CLARK KENNEDY M.A., M.D. FRCP	Hæmorrhoids, Fistula and Fissure in Ano	Sir CHARLES GORDON WATSON K.B.E. C.M.O. FRCS.
Tuesday 29th June	Diabetes	Dr R. S. ATKIN D.Phil. FRCP	The Management of Pregnancy and Labour	Mr A. J. WRIGHT M.D. FRCS.
Wednesday 30th June	Local Anaesthesia in General Practice.	The Staff of the School.	Infectious Diseases	Dr C. H. R. HARRIS M.D., D.I.H. North Eastern Hospital St. Ann's Road N. 15
Thursday 1st July	Infections and Injuries of the Hand and Wrist	Mr Cecil P. G. WAKELEY D.Sc. FRCS FRSE.	Heart Diseases in General Practice	Dr DONALD HALL M.D., F.P.C.I.
Friday 2nd July	Difficult Labour Prontosil in Obstetrics.	Mr ALFRED BOURNE, M.A. FRCS F.C.O. Dr MEAVE KENNY M.B. B.S. M.C.O.G.	Diseases of the Breast	Mr CECIL ROWNTREE, FRCS.
Saturday 3rd July	Eye Conditions in General Practice.	The Staff of the Royal London Ophthalmic Hospital City Road E.C.1	—	—
Monday 5th July	Common Gynaecological Conditions	Dr CHASSAR MOIR, M.D. FRCS F.C.O.G.	The Diagnosis and Management of Tuberculosis	Dr ALICE WINGFIELD M.D., M.R.C.P.
Tuesday 6th July	The Acute Abdomen.	Mr W. H. C. ROMANIS M.A. FRCS FRSE.	Peptic Ulcer	Dr J. J. CONYBEARE, M.C. M.D. FRCP.
Wednesday 7th July	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children, Great Ormond Street W.C.1	Children's Diseases in General Practice.	The Staff of the Hospital for Sick Children Great Ormond Street
Thursday 8th July	Common Diseases of Throat, Nose and Ear	The Staff of the Central London Throat, Nose and Ear Hospital	Diagnosis of Nervous Diseases	The Staff of the National Hospital, Queen Square.
Friday 9th July	Chronic Rheumatism	The Staff of the Red Cross Clinic for Rheumatism	Retention of Urine.	Mr VICTOR W. DIX M.A., M.R.C.I. FRCS.
Saturday 10th July	Psychiatry in General Practice.	Professor E. MAROTTA FRCP F.R.C.S. at Maudsley Hospital	—	—

Early application is recommended as only a limited number can be admitted. Fee £55 0

Similar courses lasting a fortnight will commence on the following dates —
20th September 18th October 15th November

Detailed programme and any further information can be obtained from the Dean British Postgraduate Medical School Ducane Road W 12.

EDINBURGH POST-GRADUATE COURSES IN MEDICINE

IN CONNECTION WITH THE UNIVERSITY AND ROYAL COLLEGES 1937

The POST-GRADUATE COURSES to be held this year comprise

(1) A COURSE IN OBSTETRICS AND GYNAECOLOGY from July 12th to July 31st. Fee £5 8s.

(2) A GENERAL PRACTITIONERS' COURSE from August 16th to September 11th. Fee £10 10s for whole Course, £6 6s for two weeks.

(3) A GENERAL SURGICAL COURSE from August 16th to September 11th. Fee £10 10s for whole Course, £6 6s for two weeks.

(4) A COURSE ON INTERNAL MEDICINE from October 18th to December 10th. Fee £10 10s for whole Course, £6 6s for two weeks.

In addition to the above, Courses in the following Subjects will be held at various periods of the year. Fee £15 15s.

INTERPRETATION AND SIGNIFICANCE OF MODERN DIAGNOSTIC

METHODS Fee £3 3s

DISEASES OF THE BLOOD Fee £3 3s

ENDOCRINOLOGY Fee £3 3s

DISEASES OF THE NERVOUS SYSTEM Fee £3 3s

UROLOGY Fee £10 10s

X-RAY PHYSICS AND ELECTRO-TECHNICS Fee £3 3s

ULTRA VIOLET RADIATIONS AND THEIR USES Fee £3 3s

OPHTHALMOSCOPY Fee £4 4s

UROLOGICAL SURGERY AND TREATMENT OF FRACTURES Fee £3 3s

NEUROLOGICAL SURGERY Fee £2 2s

DISEASES OF NOSE, EAR AND LARYNX (Royal Infirmary) Fee £10 10s

DISEASES OF EAR, NOSE, AND THROAT (Ear and Throat Dispensary) Fee £4 4s

OPERATIVE SURGERY OF THE EAR Fee £2 2s

VENEREAL DISEASES Fee £10 10s

SURGICAL PATHOLOGY Fee £4 4s

ORTHOPAEDIC SURGERY Fee £4 4s

CLINICAL MEDICINE INCLUDING CHILD LIFE AND HEALTH Fee £5 5s

CLINICAL SURGERY Fee £4 4s

MODERN METHODS IN ANAESTHESIA Fee £3 3s

Further particulars may be had on application to the Hon. Secretary Post-Graduate Courses in Medicine, University New Buildings Edinburgh

Post-Graduate Teaching, West London Hospital.

Continuous Clinical Instruction daily from 10 a.m. to 4 p.m. — Post-Graduates may enrol at any time for any period from 1 week to 3 months — Special facilities for 'Study Leave', and for those wishing to take a course under the "Grant-aided Scheme for Post-Graduate Study by Insurance Practitioners" — Anaesthetic Courses — Clinical Assistantships — Annual Membership Tickets at Special Terms available for General Practitioners who wish to attend the Hospital Practice at irregular intervals

Prospectus from the DEAN, West London Hospital, Hammersmith, W 6

POST-GRADUATE COURSES

Open only to Members

Annual subscription, £1 1s

HEART AND LUNGS Week-end (Victoria Park Hospital all day Sat. and Sun. July 3rd and 4th) PROCTOLOGY (St Mark's Hospital all day Sat. and Sun. July 10th and 11th) DERMATOLOGY (Hospital for Diseases of the Skin Blackfriars afternoons, July 12 to 23)

Apply FELLOWSHIP OF MEDICINE, 1, Wimpole St.

Institute of Pathology and Research

ST MARY'S HOSPITAL, LONDON, W 2

A Course of Lectures on **PATHOLOGICAL RESEARCH IN ITS RELATION TO MEDICINE** has been arranged for the **SUMMER SESSION**. These Lectures will be given in the Lecture Theatre of the Bacteriological Department of the Institute, on **TUESDAY AFTERNOONS** at 5 p.m. The final Lecture of the series will be the following—

JUNE 22nd

WILLIAM EWART OYE, M.D.
(Director Imperial Cancer Research Laboratories.)

Subject
Recent Work on Cancer

Syllabus supplied by the Lecturer—

During the early period of experimental cancer research—1902 to 1915—investigation waited upon the natural occurrence of tumours in animals. Since 1915 when two Japanese pathologists demonstrated that malignant new growths can be started by applying coal tar to the skin research has been largely occupied with the study of agents which possess this power of bringing about malignant transformation of normal cells—carcinogenic agents. Great progress has been made in this field of study. Chemically pure carcinogenic compounds have been prepared and many of them are related structurally to substances which occur naturally in the body. The ovarian hormone oestrone is itself carcinogenic.

Numerous experimental observations on cancer lead inevitably to the conclusion that the factors which confer upon a normal cell the property of continuous and autonomous growth reside within the cell and cannot be attributed to agents acting on the cell from without. The nature of the intrinsic cellular change which confers upon a cell the property of malignancy has been the subject of innumerable investigations by able workers in every civilised country and has been even more a subject for speculation.

The aetiology of cancer presents two entirely different aspects: first the nature of the intrinsic cellular change; secondly the conditions acting from without upon a normal cell which precede and bring about the intracellular change. The first may be called the proximate cause of cancer; the second the remote causes. Carcinogenic agents, chemical and physical are remote causes; evidence tending to show that viruses play an essential part as the proximate cause is growing. This evidence will be discussed.

These Lectures are open to all members of the Medical Profession and to all Students in Medical Schools without fee.

ST MARY'S HOSPITAL MEDICAL SCHOOL, W.2 (University of London)

THE WINTER SESSION WILL BEGIN ON OCTOBER 1st 1937

The Medical School provides courses in Preliminary Intermediate and Final Subjects and Students can join at once after matriculation. SITUATION—Between a large population providing clinical material and one of the best residential districts thus enabling students to live in close proximity to their work.

NEW BUILDINGS—The new buildings which cost £250,000 are now in use.

CLINICAL UNITS IN MEDICINE AND SURGERY—Certain members of the medical and surgical staff devote their whole time to teaching and research.

NEARLY 1,000 BEDS available for teaching—additional clinical material being provided by affiliation to an Infirmary and other Institutions.

ENTRANCE AND RESEARCH SCHOLARSHIPS to the value of £1,700 are awarded annually. APPOINTMENTS—ranging in value up to £750 per annum open to students after qualification.

For further particulars and illustrated prospectus apply to the School Secretary
C. M. WILSON (MC) M.D. FRCP
Dean

SURGEONS' HALL, EDINBURGH ANATOMY

The VACATION CLASSES commence on AUGUST 3rd and terminate SEPTEMBER 29th. Lectures and Demonstrations covering the entire subject and including Embryology are given three days.

Names can be enrolled on early application to
CHAS. R. WHITTAKER FRCS FRSE.
Lecturer

ROWETT RESEARCH INSTITUTE, ABERDEEN

Applications are invited for the following TEMPORARY RESEARCH APPOINTMENTS viz—

(1) Medical Graduate (Male) to ASSIST IN RESEARCH ON ASSESSMENT OF STATE OF NUTRITION OF CHILDREN. The person appointed will be required to work at various centres in Scotland and England. A recent graduate who has held Hospital appointments or has had some training in paediatrics and who intends entering public health service or specialising in paediatrics would be suitable for the post.

Salary £3-£45 per month according to qualifications and experience.

(2) BIOCHEMIST to ASSIST IN RESEARCH in the Physiology Department of the Rowett Institute and in the Metabolic Ward of Aberdeen Royal Infirmary. The person appointed must be a graduate in Science or Medicine.

Salary at the rate of £300 per annum. Further particulars may be obtained from E. O. BRUCE M.A., Secretary The Rowett Research Institute, Bucksburn, Aberdeenshire to whom applications for the appointments must be made by July 1st.

ROYAL COLLEGE OF SURGEONS OF ENGLAND

LICENCE IN DENTAL SURGERY

Notice is hereby given that the SECOND PROFESSIONAL EXAMINATION will commence on FRIDAY JULY 16th 1937. Candidates are required to give at least twenty-one days notice of their intention to present themselves for the Examination to the Director of Examinations Examination Hall 8/11 Queen Square London, W.C.1 from whom all particulars relating thereto may be obtained.

HORACE H. REV
Director of Examinations

HULL CORPORATION HEALTH DEPARTMENT

BEVERLEY ROAD INSTITUTION (HOSPITAL)

ASSISTANT MEDICAL OFFICERS

The Corporation of Hull invite applications from registered Medical Practitioners of either sex under the age of 40 years, for appointment as Assistant Medical Officers at the above named Hospital for a period of one year.

Salary is at the rate of £350 per annum together with board residence and laundry. The Hospital Section contains 400 beds, and is equipped with X Ray and Ultra-Violet Light Departments.

In the case of one appointment preference will be given to candidates with experience in medicine and in the treatment of mental diseases. In another experience in surgery will be considered an additional qualification.

A form of application together with conditions of appointment and a list of duties may be obtained from the undersigned to whom completed applications should be returned not later than 10 a.m. on Monday July 5th.

NICOLAS GEBBIE, M.D.
Medical Officer of Health

Health Department,
Gulldalshill Hall
June 14th 1937

CITY OF CARDIFF

CITY LODGE HOSPITAL

JUNIOR RESIDENT MEDICAL OFFICER

Applications are invited for the post of Junior Resident Medical Officer (male) at City Lodge Hospital. The Hospital has 600 beds and admits all recent acute surgical cases. Special facilities are available for the study of midwifery.

The appointment will be for one year and the person appointed may be required to undertake duty at other hospitals of the Council in emergency.

The salary will be, at the rate of £150 per annum with full residential emoluments.

Applicants, stating age, qualifications and experience, with copies of three recent testimonials, endorsed "Junior Resident Medical Officer" must be sent to the Medical Officer of Health City Hall Cardiff so as to reach him not later than June 26th 1937.

City Hall
Cardiff
June 8th 1937
D. KENVYN REES
Town Clerk.

EPSOM COLLEGE ROYAL MEDICAL FOUNDATION

ANNUAL GENERAL MEETING JUNE 18TH, 1937

RESULT OF ELECTION

At the Meeting of the CONJOINT COMMITTEE, held on May 26th, 1937 the following Candidates were elected to FOUNDATION SCHOLARSHIPS a PENSIONERSHIP and an ANNUITY—

FOUNDATION SCHOLARSHIPS
ADIE, William A. C. BRIDGER, Peter J. D.
BERRY Oswald MILNE, Dennis G.
ROBINSON Neville A.

AN ORDINARY PENSIONERSHIP of £30 p.a. together with a DR. STRONG Pensionership of £10 p.a.

HUTTON Mrs. Bertha L.

A MORGAN ANNUITY of £24 p.a. together with a HIGGETT Pensionership of £10 p.a.
HITCHINS Miss Fanny V.

RECOMMENDATIONS to the Council for GRANTS in the following cases were made:

(a) From the BOWEN FUND Income
Mrs. Parry to assist in the education of her son Anthony £30
Mrs. Currie to assist in the education of her son, John L. £24
(b) From the PROVIDENT FUND
Mrs. Waterworth to assist in the education of her son, Peter £24

THE CONJOINT COMMITTEE further decided to make GRANTS as under from the SHERMAN BIGG FUND—

Mrs. Candy to assist in the education of her daughter £24
Mrs. Dawson to assist in the education of her three daughters £30
Mrs. Sunderland to assist in the education of her daughter £24
Mrs. Walker to assist in the education of her daughter £24
Mrs. Andrew to assist in the education of her son £24
Major Austin to assist in the education of his son £24
Mrs. Salisille to assist in the education of her son £24
Mrs. Brown to assist in the education of her son £24
Mrs. Macbean, to assist in the education of her son £24
F. J. Oldershaw Esq. to assist in the education of his grand-son £18
Mrs. Scrogie to assist in the education of her son £24
Mrs. Treves, to assist in the education of her son £24
Mrs. Watkinson, to assist in the education of her son £24
Dr. E. H. O. Sankey, an unsuccessful applicant for a Pensionership £14
£326

RAYMOND H. P. CRAWFORD
Vice-Chairman of the Conjoint Committee
W. L. GIFFARD (Major)
Secretary

COUNTY BOROUGH OF DUDLEY

DEPUTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly qualified Medical men registered in the Medical Register as holders of a Diploma in Sanitary Science, Public Health or State Medicine for the above appointment.

The duties entail a full-time appointment 50 per cent. being devoted to conducting a Venereal Disease Clinic and 50 per cent. to Public Health activities. These latter include, principally Maternity and Child Welfare work and such other duties as may be requested by the Medical Officer of Health. During the absence of the Medical Officer of Health the Deputy will be the responsible head of the Department.

The salary offered is £750 per annum rising by two increments of £25 annually to £800. A deduction of 5 per cent. will be made from the salary in accordance with the Local Government and Other Officers Superannuation Act 1924 which has been adopted by the Council and the appointment will be subject to passing the Council's Medical Examination in connection therewith.

Applications, stating age and full particulars of Post Graduate experience, together with the names of three persons to whom reference can be made should be received by the undersigned not later than Saturday morning June 26th 1937.

GEO. C. V. CANT
The Council House Dudley Town Clerk.
June 4th. 1937

INDIAN MEDICAL SERVICE

RECRUITMENT OF EUROPEAN OFFICERS

Applications are invited from Medical Men for Permanent Commissions in His Majesty's Indian Medical Service. The terms offered include a gratuity of £1,000 on retirement after six years' service, or of £2,500 after 12 years' service, together with free return passages, for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

British subjects of pure European descent who are under 32 years of age and who are registered under the Medical Acts in force in Great Britain and Northern Ireland are eligible to apply.

CAREERS

The Indian Medical Service offers a permanent career with wide opportunities of medical experience, including clinical, preventive, specialist, and research work. At the beginning of his career an officer is employed on the military side, which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant-Colonel, and by selection to the ranks of Colonel and Major-General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side from which appointments are made to Civil Surgeoncies, which are established at the principal civil centres to provide for the medical needs of Civil Officials and for general medical administrative purposes, to specialist (for example, public health and bacteriological) services, to research posts, and to professorships at the Medical Schools.

RATES OF PAY

Years of Service	Rank	Basic Pay Rs. per mensem.	Overseas Pay £ per month	Total £ per annum
1	Lieutenant.	450	15	585
2	Captain.	500	25	750
3	"	550	25	795
4	"	550	25	795
5	"	600	25	840
6	"	600	30	900
7	"	700	30	990
8	"	700	35	990
9	"	700	35	1050
10	"	800	35	1050
11	Major	800	40	1140
12	"	800	40	1200
13	"	800	40	1200
14	"	800	40	1200
15	"	800	40	1200
16	"	800	40	1200
17	"	950	40	1335
18	"	950	40	1335
19	"	950	40	1335
20	"	1100	40	1470
21	"	1100	40	1470
22	Lieut.-Col.	1350	40	1695
23	"	1350	40	1695
24	"	1350	40	1695
25	"	1500	40	1830
	"	1500	40	1830

Note—(1) The rupee is at present stabilised at a rate equivalent to 1s 6d.
(2) An officer promoted to the rank of Lieut.-Colonel before completion of 20 years' service will receive pay at the rate of Rs. 1200 per mensem (basic) plus £40 per month overseas pay.

Extras.—In addition to the above rates various allowances are admissible for a large number of special appointments on both the military and the civil side which may be held by members of the Indian Medical Service. Special high rates of pay are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Candidates possessing certain higher medical qualifications or holding the Diploma in Public Health may be granted an antedate in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate. Persons holding or about to hold resident posts at recognised hospitals

may be seconded in those posts for a period. The maximum period of antedate, secondment, or antedate and secondment combined, admissible under this paragraph, is limited to 18 months.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £75 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers, military or civil, and officers holding certain special appointments, officers are not debarred from taking private practice, so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals and adequate rates of leave pay are provided. Extra leave (known as study leave), which may not exceed 12 months in all during an officers' service, may be granted to officers desirous of pursuing special courses of study of a post-graduate nature. During such leave study allowance, at present fixed at the rate of 12s a day in the United Kingdom, £1 a day on the Continent of Europe, and £1 10s a day in the United States of America and Canada is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pensions are as follows—

After 17 years' service for pension	Per annum
18	£372 0s
19	£400 0s
20	£428 0s
21	£465 0s
22	£502 0s
23	£539 10s
24	£576 10s
25	£614 0s
26	£651 0s
27	£697 10s
	£744 0s

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India, subject to the payment of messing charges. Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot, lasting approximately three months, prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the UNDER SECRETARY OF STATE FOR INDIA, MILITARY DEPARTMENT, INDIA OFFICE, LONDON, S.W.1. The Selection Committee will meet at the India Office in July next, and the selected candidates will be required to join a course of instruction commencing on September 1st, prior to sailing for India about December 1937. Applications should be submitted as soon as possible.

ROYAL AIR FORCE MEDICAL SERVICE

Applications are invited from medical men for appointment to commissions in the Medical Branch of the Royal Air Force for entry in September, 1937

Candidates must be of pure European descent. They must be British Subjects, the sons of British Subjects and registered under the Medical Acts

Candidates must be under 28 years of age and will be selected after interview by a selection board without competitive examination

Hospital appointments held since qualifying will, under certain conditions, qualify candidates for antedate of commission up to a maximum of one year, the age of entry may, if necessary, be increased by a period equal to the "antedate"

Selected candidates will be appointed to short service commissions (for 3 years extendible to 5 years) followed by 4 years' service in the Reserve, and will be eligible to be considered for Permanent Commissions during their second or third year of service. Officers not selected for permanent commissions receive gratuity as follows, on transferring to the Reserve —

On completion of 3 years—£400

On completion of 5 years—£1,000

Copies of the regulations for entry and conditions of service, including rates of pay and allowances, also form of application, may be obtained on application from —

The Secretary,
Air Ministry (DMS),
Adastral House,
Kingsway, W C 2

Completed applications from intending candidates for the vacancies in September, 1937, must be received in the Air Ministry not later than the 15th of July, 1937

ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in October, 1937

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate study

Copies of the regulations for entry and conditions of service, including rates of pay and allowances, may be obtained from the Medical Director-General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than August 31st, 1937

COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

JUNIOR RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £250 per annum with board lodging and laundry. Candidates must be registered Medical Practitioners, who have held resident appointments in a general hospital.

The appointment, which will be subject to medical examination, is for a period of six months with the option of renewal for a further period of six months if desired and on the recommendation of the Medical Superintendent, and is subject to one month's notice on either side. At the expiration of one year's service, the successful candidate if considered satisfactory in all respects will be eligible, upon recommendation of the Medical Superintendent and subject to confirmation by the Council for promotion to the post of Assistant Medical Officer. If not so appointed he will leave the Council's service.

The officer appointed will work under the direction of the Medical Superintendent and will devote his whole time to his official duties.

Applications stating age, qualifications and experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than June 26th. Application forms are not provided. Envelopes must be endorsed Junior Assistant Medical Officer North Middlesex County Hospital. Relationship to any member or officer of the Council must be disclosed in the application.

Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z.
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
June 3rd 1937

WEST SUFFOLK COUNTY COUNCIL

APPOINTMENT OF COUNTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly registered Medical Practitioners (Male) holding a Certificate or Diploma in Public Health for the above whole-time appointment. Salary £1,000 per annum plus travelling allowance.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to the other statutory enactments relating to the office and the successful candidate will be required to pass a medical examination.

Particulars of appointment and forms of application may be obtained from the undersigned by whom applications accompanied by copies of not more than three recent testimonials must be received not later than July 5th 1937.

Canvassing in any form direct or indirect will be disqualified.

L G H MUNSEY
Clerk of the County Council
Shire Hall Bury St Edmunds
June 12 1937

SOMERSET COUNTY COUNCIL

ASSISTANT MEDICAL OFFICER

The Committee invite applications from qualified medical men for the post of ASSISTANT MEDICAL OFFICER. In addition to school medical work the duties will include some maternity and child welfare and venereal treatment work. Experience in the modern methods of diagnosis and treatment of venereal diseases is necessary. Experience in child guidance work is recommended. Salary £500 rising by annual increments of £25 to £700. The appointment will be made subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Canvassing will be disqualified. Applications by July 2nd 1937 to the undersigned from whom all particulars and an application form can be obtained.

W G SAVAGE,
County Medical Officer of Health
County Health Department
County Hall Taunton.

BRITISH RED CROSS SOCIETY

CLINIC FOR RHEUMATISM

Peto Place Marylebone Road N.W.1

The British Red Cross Society invite applications for the appointment to the Clinic for Rheumatism Peto Place Marylebone Road N.W.1 of an HONORARY DENTAL SURGEON. Candidates should be medically qualified and on the Staff of a Dental School.

Applications should be sent in not later than July 11 addressed to:
The Secretary of the Medical Board
Clinic for Rheumatism
British Red Cross Society
14 Grosvenor Crescent
S.W.1

COUNTY COUNCIL OF MIDDLESEX

NORTH MIDDLESEX COUNTY HOSPITAL, EDMONTON

ASSISTANT MEDICAL OFFICER

Applications are invited for the above appointment. Salary £350 per annum with board lodging and laundry or a cash allowance at the rate of £100 per annum. If the officer appointed prefers to reside outside the hospital. Candidates must be registered Medical Practitioners who have held the post of both House Physician and House Surgeon at a General Hospital and have had considerable all round experience.

The appointment which will be subject to medical examination is for a period of six months with the option of renewal for a further period of six months if desired and on the recommendation of the Medical Superintendent and is terminable by one month's notice on either side. Pensionable staff.

The officer appointed will work under the direction of the Medical Superintendent and will devote his whole time to his official duties. The hours of duty are 10 to 6 daily with Saturday afternoons and Sundays free.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than June 26th. Application forms are not provided. Envelopes must be endorsed Casualty Officer North Middlesex County Hospital. Relationship to any member or officer of the Council must be disclosed in the application. Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z.
Middlesex Guildhall, Clerk of the County Council
Westminster S.W.1
June 3rd 1937

COUNTY BOROUGH OF SMETHWICK

SENIOR ASSISTANT MEDICAL OFFICER OF HEALTH

The Council invite applications from qualified medical men for the post of SENIOR ASSISTANT MEDICAL OFFICER OF HEALTH CLINICAL TUBERCULOSIS OFFICER and DEPUTY MEDICAL SUPERINTENDENT at ST CHAD'S HOSPITAL.

The salary will be at the rate of £740 per annum rising subject to satisfactory service by annual increments of £25 and one of £12 10s to a maximum of £937 10s per annum. If married the successful candidate will in addition be provided with a small modern flat close to the municipal hospital for which a nominal inclusive charge of £50 per annum will be made. If unmarried he will be provided with board and lodging at the hospital. In respect of which his salary will be reduced by £150 per annum.

Applicants must be registered medical practitioners possessing the Diploma of Public Health or similar qualification.

The officer appointed will have clinical charge of the Council's Tuberculosis scheme. He will be in clinical control of the municipal hospital under the supervision of the visiting consultants and will assist the Medical Officer of Health in his administration. He will also be expected to undertake work in connection with the School Medical Service and the Smethwick and Oldbury Joint Isolation Hospital. He will work under the direction of the Medical Officer of Health and will be expected to assist him in other duties from time to time as directed.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and the selected candidate will be required to pass a medical examination. Forms of application may be obtained from the undersigned to whom applications endorsed Senior Assistant Medical Officer of Health and accompanied by copies of three recent testimonials must be delivered out later than first post on July 3rd 1937.

Canvassing directly or indirectly will disqualify. Council House, Smethwick, FRANK CHAPMAN, Town Clerk.
June 11th 1937

THE WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS

KING EDWARD VII MEMORIAL SANATORIUM HERITFORD HILL NEAR WARWICK

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER (man or woman) at the Memorial Sanatorium near Warwick of 2.5 beds.

The salary will be at the rate of £250 per annum with board lodging and laundry in addition. The successful candidate will be appointed for six months. There are three other medical officers at the sanatorium.

Applications with copies of testimonials should be forwarded direct to the Medical Superintendent at the Sanatorium to reach him by not later than Wednesday June 23rd 1937.

Shire Hall, Warwick, L. EDGAR STEPHENS, Clerk of the Joint Committee.
June 14th 1937

COUNTY BOROUGH OF DONCASTER

ASSISTANT MEDICAL OFFICER

Applications are invited for the appointment of an Additional Assistant Medical Officer (woman).

The duties of the appointment will be chiefly in connection with the Maternity and Child Welfare and School Medical Services but in addition the person appointed will be required to carry out such other duties as the Medical Officer of Health may assign to her.

The salary will commence at from £400 to £550 according to experience and will increase annually by £25 to £700 per annum.

The appointment will be held subject to three months' notice on either side and to the following conditions—

(1) The officer appointed must be a registered medical practitioner below the age of 45 years and must devote the whole of her time to the duties of the office.

(2) She must hold a recognised qualification in Public Health and have previous experience in Diseases of Children and in the treatment of Venereal Diseases. In addition she should either have held a previous approved appointment as a Medical Officer of an Ante Natal Clinic or have had at least three years' experience in the practice of her profession including special experience of practical midwifery and ante natal work.

(3) She will be required to reside within the Borough.

(4) The appointment will terminate on marriage.

(5) The successful candidate will be required to undergo a medical examination the appointment being subject to the provisions of the Local Government and Other Officers Superannuation Act 1922.

Applications on forms obtainable from the undersigned must be received by him together with copies of not more than three recent testimonials not later than June 30th 1937. Relationship to any member or senior officer of the Council must be disclosed in the application.

Canvassing in any form will be a disqualification.

R. WATSON
Medical Officer of Health
Public Health Offices Wood Street
Doncaster June 8th 1937

CITY OF PORT OF SPAIN

APPOINTMENT OF A MEDICAL OFFICER OF HEALTH

The Port-of-Spain City Council invite applications for the post of Medical Officer of Health for the City of Port-of-Spain.

The duties of the office are as set forth in the bye-law made by the Central Board of Health and published in the Trinidad Royal Gazette of October 24th 1917 page 1975-77.

Every applicant must be or entitled to be a member of the Medical Board of Trinidad and shall be the possessor of a Diploma of Public Health Sanitary Science or State Medicine registered or entitled to be registered in Great Britain and Ireland.

The office is a whole time one and pensionable under the provisions of the Municipal Corporations (Pensions) Ordinance No. 29 of 1936. The salary attached to the post is £800 per annum rising by equal annual increments of £25 to £1,000 with a travelling allowance of £75 a year.

The person appointed will be required to furnish a bond in the sum of £100 for the due performance of his duties.

Applications stating age qualifications and experience should reach the undersigned at the Town Hall Port-of-Spain Trinidad B.W.I. not later than July 31st 1937.

The Town Hall
Port-of-Spain
Trinidad B.W.I.
April 29th 1937

E. PRADA
Town Clerk.

CITY OF LIVERPOOL

Cleaver Sanatorium for Children Heswall Cheshire

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited for a full-time Resident Medical Officer at the Cleaver Sanatorium for Children Heswall Cheshire (200 Beds).

The appointment is for a term of one year at a salary of £300 per annum together with residential allowance.

Candidates who must be fully qualified and registered should have previous hospital experience especially of tuberculosis.

Applications to be made on forms obtainable from the Medical Officer of Health Municipal Annex Liverpool to be endorsed Resident Assistant Medical Officer and returned to the undersigned so as to be received not later than Wednesday June 30th 1937.

Canvassing members of the City Council will be considered a disqualification. Municipal Buildings, Dale Street. W. H. BAINES

HIS MAJESTY'S COLONIAL SERVICE COLONIAL MEDICAL SERVICE

A vacancy exists for an ASSISTANT MEDICAL SUPERINTENDENT at the CENTRAL MENTAL HOSPITAL, TANJONG RAMBUTAN in the FEDERATED MALAY STATES

Qualifications—Candidates must be British subjects of European parentage under 33 years of age and must have had at least two years experience as an Assistant Medical Officer in a County City or Borough Mental Hospital in Great Britain or Ireland. Possession of medical qualifications registrable in the United Kingdom and a Diploma in Psychological Medicine is essential.

Salary—£840 a year rising by annual increments of £35 to £1,100 a year.

Quarters—Furnished quarters are provided at a small rental.

Passages—Free passages will be provided both for an Officer and his family on first appointment and when proceeding on or returning from leave.

Terms of Appointment—The appointment is pensionable subject to a probationary period of three years in the first instance.

Duties—The Officer will be required to assist the Medical Superintendent in the treatment of patients maintenance of discipline, etc. in the Mental Hospital. He may be required to give lectures and clinical teaching on mental diseases to students of the College of Medicine, Singapore.

Further particulars and forms of application may be obtained from the Director of Recruitment (Colonial Service) 2, Richmond Terrace Whitehall London S.W.1

COUNTY BOROUGH OF OLDHAM. MUNICIPAL HOSPITAL. RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from Registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £200 per annum with board residence and laundry. Candidates should be nominated.

The appointment will in the first instance be for a period of six months. The successful applicant however will be eligible for reappointment for a further period of six months.

The Hospital comprises 375 beds with facilities for training experience in medicine, surgery midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health Town Hall Oldham and should be returned endorsed "Resident Assistant Medical Officer" as soon as possible but not later than Monday June 28th 1937.

Town Hall JOSEPH J. WILLIAMS LL.D.
Oldham. Town Clerk
June 3rd 1937

NOTTINGHAMSHIRE COUNTY COUNCIL PUBLIC HEALTH DEPARTMENT ASSISTANT SCHOOL MEDICAL OFFICER (MALE)

Applications are invited from duly qualified and registered Medical Practitioners for the post of Assistant School Medical Officer.

Candidates must possess a Diploma in Public Health and must have had at least three years experience since qualification.

The salary will be at the rate of £50 per annum rising by annual increments of £25 to £700 with travelling allowances in accordance with the County Council's Scale.

Forms of application and conditions of the appointment may be obtained from me and applications accompanied by copies of not more than three recent testimonials, should be forwarded to the County Medical Officer, Shire Hall Nottingham not later than June 26th 1937.

Shire Hall A. TVEEGALE NEAVEY
Nottingham. Clerk of the County Council
June 8th 1937

CITY OF LEEDS KILLINGBECK SANATORIUM. ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from registered medical practitioners (males) for the post of ASSISTANT RESIDENT MEDICAL OFFICER at the Tuberculosis Sanatorium Killingbeck (24 Beds).

Applicants must be unmarried and preference will be given to those who have held a General Hospital appointment. The appointment is for one year and the present Salaries Scale of the Corporation provides for a salary of £250 together with board residence and laundry.

Form of application may be obtained from the undersigned. Applications endorsed "Assistant Medical Officer Killingbeck" together with copies of three recent testimonials must be received at the Health Department 1, Market Buildings Vicar Lane Leeds, 1 not later than 10 a.m. on Saturday July 3rd 1937.

Candidates in any form either directly or indirectly will be a disqualification.

J. JOHNSTONE JERVIS,
Medical Officer of Health.

COUNTY BOROUGH OF GATESHEAD

GATESHEAD MENTAL HOSPITAL, STANNINGTON NORTHUMBERLAND APPOINTMENT OF ASSISTANT MEDICAL OFFICER.

The Visiting Committee of the Gateshead Mental Hospital invite applications from Medical Men for the appointment of Assistant Medical Officer at the Gateshead Mental Hospital, Stannington. The salary will be at the rate of £350 per annum rising by annual increments of £25 each to a maximum of £450 per annum and a further £50 per annum will be paid if the successful candidate possesses the D.P.M.

Furnished apartments will be provided with board and washing and for the purposes of superannuation will be valued at £150 per annum. Candidates who should be unmarried and not exceeding 35 years of age must be registered under the Medical Act, and preference will be given to candidates possessing the D.P.M. and who have held the post of House Surgeon or House Physician at a General Hospital.

The appointment will be subject to the provisions of the Asylum Officers Superannuation Act, 1909.

Applications, which should give full details of the candidate's experience and should contain the names and addresses of three persons to whom reference may be made (copy testimonials are not required) should be received by the undersigned not later than June 30th 1937 endorsed "Gateshead Mental Hospital Assistant Medical Officer".

J. W. PORTER
Town Hall Clerk to the Visiting Committee.
Gateshead. June 14th 1937

CITY OF BIRMINGHAM SEELY OAK HOSPITAL (320 Beds) JUNIOR MEDICAL OFFICERS (Male)

Applications are invited from fully qualified Medical Practitioners for the widest selection of posts of Junior Medical Officers (Male) at the Seely Oak Hospital, Birmingham. The appointments will be for periods of six months in the first instance but may be extended at the end of that time for further periods of not exceeding six months.

Salary at the rate of £200 per annum and full residential emoluments.

The Officers appointed will be required to refund to the Council all fees, allowances and emoluments (other than the foregoing) received by them. Further particulars may be obtained from the Medical Superintendent at Seely Oak Hospital to whom applications stating age, experience and qualifications with copies of recent testimonials should be forwarded not later than Wednesday June 23rd 1937.

F. H. C. WILTSHIRE
Town Clerk
The Council House, Birmingham.
June 1937

BARRY URBAN DISTRICT COUNCIL. ACCIDENT AND SURGICAL HOSPITAL.

Applications are invited for the post of RESIDENT SURGICAL OFFICER to commence duties on September 1st 1937.

Salary at the rate of £350 per annum rising by two increments of £50 per annum to £450 together with board and lodging the appointment to be terminated by three months notice on either side.

Candidates who must be capable of performing major surgical operations will be required to assist in carrying out the X-ray work of the Hospital and to act under the direction of the Medical Superintendent and Surgeon. There is a Resident House Surgeon on the staff.

Preference will be given to applicants holding higher surgical qualifications.

Applications stating age and full particulars with regard to experience with copies of three recent testimonials to be forwarded to Dr. E. I. Davies, Medical Officer of Health Public Health Offices Barry Glam. so as to reach him not later than July 17th 1937.

T. D. HOWELLS
Clerk to the Council.
Council Offices Barry
June 15th 1937

COUNTY BOROUGH OF HUDDERSFIELD ST LUKE'S HOSPITAL. RESIDENT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for above appointment, which is for one year. Salary £230 per annum with board residence and laundry.

Applications stating age, training qualifications and experience should be forwarded to the Medical Officer of Health Huddersfield as soon as possible.

SAUEL PROCTER Town Clerk
Town Hall Huddersfield
June 1937

ERITH (Amended Advertisement) URBAN DISTRICT COUNCIL. ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER.

The Council of the Urban District of Erith invite applications from Medical Practitioners of not less than three years standing in their profession for the above appointment.

The commencing salary will be £500 per annum. Annual increments of £25 will be given to a maximum salary of £700 per annum.

The appointment is subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922 and the person appointed will be required to pass a medical examination.

The appointment will be determinable by three months written notice on either side and will also be subject to the Council's Standing Orders, Regulations and Resolutions governing staff.

The appointment is a whole time one. The duties will consist mainly of work in the School Medical Department but will include, also duty in any section of the Health Services of the Council.

Experience in the certification of mental defectives, in ante-natal care, and the possession of a registrable qualification in Public Health will be considered additional recommendations.

Applications accompanied by copies of not more than three recent testimonials must be made on Forms obtainable from the Medical Officer of Health Council Offices Erith to whom they should be returned to reach him not later than June 28th 1937 endorsed "Assistant Medical Officer of Health".

Canvassing either directly or indirectly will be disqualifying.

DOUGLAS S. TWIGG
Council Offices, Erith. Clerk to the Council
June 3rd, 1937

COUNTY BOROUGH OF SMETHWICK ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from qualified medical men (single) for the combined post of Assistant Medical Officer of Health and Assistant School Medical Officer.

The salary will be at the rate of £350 per annum rising subject to satisfactory service by annual increments of £25 to a maximum of £550 per annum together with board laundry and residence at the Isolation Hospital which are valued for superannuation purposes at £150 per annum.

The Officer appointed will be required to work under the general supervision and control of the Medical Officer of Health and School Medical Officer and will be required to render assistance in the general work of the department. The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922, and the selected candidate will be required to pass a medical examination.

Forms of application may be obtained from the Medical Officer of Health Public Health Department Hales Lane Smethwick to whom applications endorsed Assistant M.O.H. and S.M.O. and accompanied by copies of three recent testimonials must be delivered not later than first post on Saturday July 3rd.

Canvassing directly or indirectly will be disqualifying.

Council House, FRANK CHAPMAN
Smethwick. Town Clerk.
June 16th 1937

BOARD OF EDUCATION

Applications are invited for appointment to certain VACANCIES in the MEDICAL STAFF of the Board which will occur next winter and spring.

(a) One vacancy for a MEDICAL OFFICER (woman) in January 1938.

(b) One vacancy for a MEDICAL OFFICER (man) in April 1938.

Applicants for these vacancies must be Medical Practitioners, preferably between thirty and forty years of age with a University Medical Degree or a Diploma in Public Health or in Child Health and experience of the School Medical Service.

(c) One vacancy for a MEDICAL OFFICER (man or woman) with a qualification in Dental Surgery in January 1938.

For this vacancy applicants must be Medical Practitioners, preferably between thirty and forty years of age with a qualification in dental surgery and experience of the School Dental Service.

Officers will be required to reside in London or such other area as may be determined by the Board. The appointment will carry the normal Civil Service conditions as to pension holidays, etc.

The present scale of salary is £738 by annual increments of £30 to £1100 per annum. In special circumstances the minimum salary may be advanced where a candidate has special knowledge and experience.

Further particulars together with application forms, which must be returned completed not later than Saturday July 24th 1937 may be obtained on application in writing to the Director of Establishments, Board of Education Whitehall London S.W.1

URBAN DISTRICT AND PORT OF BARRY

Appointment of **DEPUTY MEDICAL OFFICER OF HEALTH**, **DEPUTY PORT MEDICAL OFFICER** and **ASSISTANT SCHOOL MEDICAL OFFICER**

Applications are invited from registered Medical Practitioners (male) for the post of Deputy Medical Officer of Health to the Council (Urban Authority and Port Sanitary Authority) and Assistant School Medical Officer.

Salary £500 per annum rising by annual increments of £25 to a maximum of £700 per annum.

Applicants whose age must not exceed 40 years must hold the Diploma of Public Health and have had experience in Maternity and Child Welfare work. School Medical work and refraction work.

The person appointed will be required to devote the whole of his time to the duties of the office and to act under the direction of the Medical Officer of Health.

The appointment will be subject to the approval of the Board of Education and the Minister of Health and will be determinable by three months' notice on either side. The appointment will also be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and the successful applicant will be required to pass satisfactorily a medical examination.

Forms of application may be obtained from Dr. E. J. Davies, Medical Officer of Health, Public Health Department, Barry Glam, to whom applications together with copies of three recent testimonials should be sent not later than July 17th 1937.

T. D. HOWELLS

Clerk to the Council

Council Offices, Barry

June 15th 1937

CARMARTHENSHIRE COUNTY COUNCIL.

APPOINTMENT OF ASSISTANT COUNTY MEDICAL OFFICER OF HEALTH

Applications are invited from registered medical practitioners for the post of whole-time Assistant County Medical Officer of Health (male). Special experience in Maternity and Child Welfare, School Medical Service, and general public health work is required. Applicants must not be over 35 years of age and must possess the Diploma in Public Health.

Salary £500 per annum rising by annual increments of £25 to a maximum of £700 per annum plus travelling expenses in accordance with County Scale. The post is subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922, and to the successful candidate passing a medical examination.

The successful candidate who will be under the direction and control of the County Medical Officer of Health will be required to reside at Carmarthen and to carry out such duties as may from time to time be imposed upon him by the County Medical Officer. The duties for the present will comprise those in connection with the School Medical Service, but general public health work will be allocated later on and the appointment will be determinable by three months' notice in writing.

A form of application can be obtained from the undersigned which must be returned together with copies of three recent testimonials not later than July 17th 1937.

County Offices

Carmarthen

June 14th 1937

DANIEL JOHNS

Clerk of the County Council

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN

(Usually known as the Children's Hospital)

St. Michael's Hill.

APPOINTMENT OF OUTPATIENT PHYSICIAN

The Election Committee of this Institution are prepared to receive APPLICATIONS for the appointment of an HONORARY PHYSICIAN to the OUTPATIENT DEPARTMENT.

Candidates must be Graduates in Medicine of a University in Great Britain or Ireland.

Applications stating age, qualifications, and experience accompanied by testimonials must be sent to the undersigned on or before July 2nd.

REGINALD C. THOMAS, F.R.C.S.

June 14th 1937

Secretary

ROYAL SALOP INFIRMARY

Shrewsbury

Applications are invited from fully qualified and registered gentlemen for the appointment of **RESIDENT HOUSE SURGEON**.

The appointment is for six months in the first instance, subject to reappointment for a further period of six months if desired.

Salary at the rate of £150 per annum with board and lodging etc.

Applicants stating age, qualifications, and experience together with copies of three recent testimonials, to be sent to the undersigned immediately.

June 14th 1937

J. W. NOBLE, Secretary Superintendent.

BIRKENHEAD EDUCATION COMMITTEE

ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited for the position of ASSISTANT SCHOOL MEDICAL OFFICER at a salary of £500 per annum rising by annual increments of £25 to a maximum of £700. The post is designated under the Local Government and Other Officers Superannuation Act, 1922.

The duties will mainly consist of the inspection and treatment of children attending schools in the Borough.

Applicants must be duly qualified Medical Practitioners with experience and must hold the Diploma of Public Health.

The post will carry with it the designation of Assistant School Medical Officer and Assistant Medical Officer of Health.

The person appointed will be required to reside within the Borough.

Canvassing either directly or indirectly will be regarded as a disqualification.

Particulars of the appointment and form of application may be obtained from Dr. D. Morley Matheson, Medical Officer, 9 Hamilton Square, Birkenhead, and applications must be delivered before June 30th 1937 to

G. B. DEMISEY

Director of Education

Education Offices, Hamilton Square, Birkenhead

BOROUGH OF BERNONDSSEY

ASSISTANT TUBERCULOSIS OFFICER

Applications are invited from fully qualified and registered medical practitioners for the position of ASSISTANT TUBERCULOSIS OFFICER. The salary will be at the rate of £600 per annum rising by two annual increments of £50 to £700 per annum and be subject to deductions under the Council's Superannuation Acts. The person appointed will be required to devote the whole of his time to the work of the Council and to act under the supervision of the Medical Officer of Health. Particulars of duties which will include engaging in public health propaganda work can be had on application to the Medical Officer of Health. The selected candidate will be required to pass satisfactorily a medical examination. Forms of application may be obtained from the undersigned to whom applications must be delivered not later than the first post on Friday July 2nd 1937. Canvassing directly or indirectly will be disqualifying.

FRANCIS J. R. MOUNTAIN

Municipal Offices, Town Clerk.

Spa Road, Bernondssey S.E. 16

June 17th 1937

BIRKENHEAD AND WIRRAL CHILDREN'S HOSPITAL.

Woodchurch Road, Birkenhead

RESIDENT MEDICAL OFFICER. The Board invite applications for the post of Second Resident Medical Officer for a period of three or nine months from July 1st 1937. Compensation at the rate of £90 p.w. with board, residence and laundry.

The hospital is a recognized Training School for Sick Children's Nurses.

Applications together with copies of testimonials to be addressed to the Hon. Secretary at the Hospital not later than June 26th 1937.

SWANSEA GENERAL AND EYE HOSPITAL.

(336 Beds)

HOUSE SURGEON wanted. Gentleman single. Salary £150 per annum with board, residence and laundry. Appointment for six months. Duties to commence early July.

Applications stating age, nationality, qualifications and experience together with copies of three recent testimonials to be forwarded to the under signed.

O. C. HOWELLS

Secretary Superintendent.

HEREFORDSHIRE GENERAL HOSPITAL.

HEREFORD (150 Beds)

Immediate applications are invited for the posts of (a) **RESIDENT SURGICAL OFFICER** (male) and (b) **HOUSE PHYSICIAN** (male).

Salary at the rate of £140 and £100 respectively per annum with board, residence and laundry. Applications stating age and qualifications together with copies of three recent testimonials should be sent to the undersigned.

T. W. UPTON

Secretary

MANCHESTER EAR HOSPITAL.

Grosvenor Square, All Saints

The Board invite applications for the post of **RESIDENT HOUSE SURGEON** (31 Beds). Salary £120 per annum. Candidates must be duly qualified and registered. Applications with copies of four recent testimonials to be forwarded to Mr. Reginald S. Milford (Hon. Sec., Manchester Ear Hospital) c/o Mr. W. J. Eilam, 17 Brattonrose Street, Manchester 2.

UNIVERSITY COLLEGE OF SOUTH WALES AND MONMOUTHSHIRE.

COLEG PRIFATHROFAOL DEHEUDIR CYMRU A MYNWY

The Council of the College invites applications for the appointment of an ASSISTANT LECTURER in the DEPARTMENT OF ANATOMY, at a salary of £500 per annum.

Further particulars may be obtained from the undersigned by whom three copies of application (which need not be printed) must be received not later than July 7th 1937.

LOUIS S. THOMAS

University College, Cardiff Registrar

June 14th 1937

COUNTY COUNCIL OF MIDDLESEX.

VISITING DENTAL SURGEON

Applications are invited from fully qualified and registered dental surgeons for the appointment of Visiting Dental Surgeon at West Middlesex County Hospital, Isleworth.

The dentist appointed will be required to attend several sessions per week each approximately 2½ hours. Remuneration will be at the rate of £2 2s per session. The appointment which does not carry any superannuation rights will be held during the pleasure of the Council and terminable by one month's notice on either side.

Applications, stating age, qualifications, and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than July 3rd. Relationship to any member or officer of the Council must be disclosed in the application.

Application forms are not provided. Envelopes must be endorsed: Dental Surgeon West Middlesex County Hospital.

Canvassing directly or indirectly will be a disqualification.

C. W. RADCLIFFE, Z.

Clerk of the County Council

Middlesex Guildhall, Westminster SW1

June 11th 1937

GROSVENOR SANATORIUM ASHFORD KENT

236 Beds—Four Resident Medical Officers.

Applications are invited from fully qualified men for the appointment of **RESIDENT HOUSE PHYSICIAN**. The appointment is for a period of at least six months at a salary of £100 per annum with board, lodging and laundry.

Previous experience not necessary. Applications stating age, qualifications, nationality and accompanied by copies of recent testimonials to be sent to the Acting Medical Superintendent.

DISTRICT INFIRMARY

ASHTON UNDER LYNE.

(General Hospital 200 Beds)

CASUALTY HOUSE SURGEON (Male) required for June 26th. Applicants must have had previous experience.

Salary at the rate of £180 with the usual residential emolument.

Applications to be sent to FRANK OLIVER

General Superintendent and Secretary

EAR AND THROAT HOSPITAL

BIRMINGHAM 3

SECOND HOUSE SURGEON wanted (Resident). Must be fully qualified and with clinical experience. Salary at the rate of £150 per annum with full board and residence.

Duties to commence as soon as possible.

Facilities for training for D.L.O. Applications and testimonials to be forwarded to the undersigned immediately.

W. H. LOMAS

Secretary

NORTH LONSDALE HOSPITAL

BARROW IN FURNESS (152 Beds)

Appointment now vacant. Required immediately. **RESIDENT CASUALTY OFFICER** (Male).

Applications are invited for the above position from fully qualified Practitioners experienced in the administration of anaesthetics. Salary £150 per annum with board, residence and laundry. Applications stating age, qualifications, experience and nationality accompanied by copies of three recent testimonials, should be sent to the Secretary immediately.

LONGTON HOSPITAL STOKES-ON-TRENT

(50 Beds)

HOUSE SURGEON (male or female) required. Commencing salary £160 with board, residence and laundry plus certain fees.

Applications, with copies of recent testimonials and stating nationality, to be sent immediately to the Chairman of Directors, Longton Hos.

THE PRINCE OF WALES'S HOSPITAL, DEVONPORT PLYMOUTH (Formerly Royal Albert Hospital Devonport) 64 Beds

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £120 per annum with board residence and laundry.

Duties to commence immediately. Appointment is tenable for six months and is subject to renewal or promotion to the senior position when this post becomes vacant.

Applicants must be registered under the Medical Acts.

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned forthwith.

FRANK ROWE
Secretary

June 14th 1937

THE PRINCE OF WALES'S HOSPITAL, GREENBANK ROAD PLYMOUTH. (Formerly South Devon and East Cornwall Hospital)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN. Salary £120 per annum with board residence and laundry. Appointment is tenable for six months and is subject to renewal. Duties to commence immediately.

The Hospital is officially recognised for the surgical practice required before admission to the final Fellowship Examinations of the Royal Colleges of Surgeons and Physicians of England.

Applicants must be registered under the Medical Acts. Applications stating age and qualifications, with copies of three recent testimonials to reach the undersigned forthwith.

ARTHUR R. CASH
Gen Supt and Secretary

THE CORBETT HOSPITAL STOURBRIDGE. (94 Beds and Special Departments)

APPLICATIONS are invited for the post of HOUSE SURGEON which is now vacant.

The appointment will be for a period of six months terminable by six weeks' notice carries a salary at the rate of £100 per annum with board laundry etc.

The Hospital has a Specialist Visiting Staff and Resident Surgical Officer and a House Physician. Applications giving full details of qualifications and experience, accompanied by three copies of testimonials should be addressed to the undersigned forthwith.

W. G. H. WESTON
Secretary

The Corbett Hospital Stourbridge.

QUEEN'S HOSPITAL, BIRMINGHAM (A Medical School)

Applications are invited for the post of RESIDENT ANAESTHETIST to commence duties on July 1st.

Salary £70 to £100 p.a. (according to experience and previous Hospital Resident appointments) together with board, apartments and laundry. Applications should be sent to the undersigned accompanied by three recent testimonials not later than June 19th.

P. CROCKER
House Governor

Birmingham June 10th 1937

ROYAL HAMPSHIRE COUNTY HOSPITAL, WINCHESTER (167 Beds)

HOUSE SURGEON

Applications are invited from fully qualified men for the above post to take up duties on July 1st next. Six months' appointment. Salary £125 per annum with board residence and laundry.

Candidates, who must be of British Nationality to make application to the undersigned on an early date enclosing copies of three testimonials.

HERBERT MASLEN
Secretary

June 14th 1937

THE ROYAL INFIRMARY SHEFFIELD (500 Beds)

The Board of Management invite applications for the post of CASUALTY OFFICER.

The appointment will be tenable for the period of six months from July 1st next. Salary £140 per annum with board and residence. Applications with copies of testimonials to be sent to the undersigned forthwith.

H. KINGSLEY PEARCE,
General Supt. and Secretary

June 10th 1937

THE KIDDERMINSTER AND DISTRICT GENERAL HOSPITAL

JUNIOR HOUSE SURGEON (Male) required. Salary £100 per annum with residence, board and laundry. Applicants with not more than three testimonials to be sent to the Secretary Miss Susan Smith South Cliff Kidderminster.

SCUNTHORPE AND DISTRICT WAR MEMORIAL HOSPITAL (150 Beds)

Appointment of ORTHOPAEDIC SURGEON and SURGEON in charge of FRACTURE CLINIC

Applications are invited for the post of SURGEON in charge of the Orthopaedic Department and Fracture Clinic. Applicants must possess the Diploma of Fellow of one of the Royal Colleges of Surgeons of Great Britain or Ireland and/or the Degree of Master of Surgery of a British or Irish University. Experience in Orthopaedic Surgery and the treatment of fractures is essential.

The selected candidate will be entirely responsible for the treatment of orthopaedic and fracture cases, and will be at liberty to practise as a Consulting Orthopaedic Surgeon.

The candidate appointed will be paid an honorarium of £700 per annum. Applications together with copies of recent testimonials to be sent to the undersigned not later than June 30th 1937.

ARTHUR E. MAW
Secretary

KENT AND SUSSEX HOSPITAL TUNBRIDGE WELLS (204 Beds)

Applications are invited for the post of HOUSE SURGEON AND CASUALTY OFFICER. Salary £150 per annum with board residence and laundry in the Hospital.

The Hospital is approved by the University of London for the purpose of the M.D. and M.S. Examinations and includes the following Departments:

Medical, Surgical, Ear, Nose and Throat, Ophthalmic, Orthopaedic, Gynaecological, X-ray and Electro-therapeutic, Massage, Pathological, Venereal Diseases, etc.

Applications stating qualifications together with Certificate of Registration and copies of not more than three recent testimonials, should be sent to the undersigned as soon as possible.

TOM B. HARRISON
Superintendent Secretary

June 7th 1937

THE ROYAL EYE HOSPITAL Pevensey Road Eastbourne

Non-Resident HOUSE SURGEON required to commence duties July 26th 1937.

Salary £100 per annum and allowance in lieu of board-residence £175 per annum.

Applications stating age, qualifications and Ophthalmic experience together with recent testimonials should reach the undersigned as soon as possible.

Before engagement candidates have to be interviewed by the Hon. Surgeon from whom further particulars could be obtained in person.

H. BYGRAVE,
Hon. Secretary

SOUTH EASTERN HOSPITAL FOR CHILDREN SYDENHAM S.E.26 (100 Beds.)

Recognized by the Examining Board for post graduate study for the Diploma of Child Health. Applications are invited for the post of RESIDENT MEDICAL OFFICER, male or female (two vacancies). The appointment will be for six months from July 1st. Honorarium £100 per annum with board residence, and laundry.

Applications by letter only stating age, qualifications and experience with copies of three testimonials, should be sent to Dr W. A. BELLAMY, 24 Silverdale Sydenham S.E.26 to be received on or before Monday June 21st.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL

Applications are invited for the posts of HOUSE SURGEON (Two Male, unmarried) at this Hospital's country branch at Brockley Hill, Stanmore, Middlesex. 278 Beds (160 cases of surgical tuber culosis).

Salary £140 per annum with board quarters and laundry. The appointments are for six months. Duties to commence one on August 1st and one on September 1st. Applications with copies of testimonials should be sent to the Secretary, 234 Great Portland Street, London W.1 not later than July 6th.

LIVERPOOL HAHNEMANN HOSPITAL, HOPE STREET

Applications are invited for the post of RESIDENT MEDICAL OFFICER to the above Hospital which falls vacant on July 1st next. Only one R.M.O. kept.

Duties include occasional anaesthetics assisting at operations, general ophthalmic, and aural. Appointment is for six months renewable. Salary at the rate of £170 per annum.

Knowledge of homeopathy desirable but not essential.

Applicants are to state nationality and previous experience and enclosing copies of testimonials, to the Registrar.

CANTERBURY CITY MENTAL HOSPITAL, Stone House Canterbury

Applications are invited for the post of ASSISTANT MEDICAL OFFICER at the above Hospital. Salary £380 per annum rising by annual increments of £25 to £450 per annum together with the usual emoluments of board, lodging, laundry and attendance valued for superannuation purposes at £102 per annum. In addition a further £50 per annum will be paid for the D.P.M.

There is a furnished house available on the estate for a married man and ample opportunity for study.

The appointment will be subject to the provisions of the Asylums Officers Superannuation Act 1909 and may be terminated by one calendar month's notice on either side.

Applications, with copies of three recent testimonials to be sent to the Medical Superintendent not later than June 30th 1937.

CASSEL HOSPITAL FOR FUNCTIONAL NERVOUS DISORDERS Swaylands, Faversham Kent.

Applications are invited for the post of MEDICAL DIRECTOR. Candidates, who must be of the male sex, are requested to send their application and state age, qualifications, and experience. They should send not more than three recent testimonials or references.

Salary £1,200-£1,500 a year with house, light and other emoluments. The appointment is terminable on three months' notice on either side. (The Hospital has 64 beds and there are 3 assistant physicians and a resident medical officer.)

Applications should be sent to Dr T. A. Ross, 32, Devonshire Place W.1.

E. FAROUKH BUZZARD
(Chairman of the Medical Committee)

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL (280 Beds)

Applications are invited for the following appointments:

One CASUALTY OFFICER
One RESIDENT ANAESTHETIST and HOUSE SURGEON to the Ear, Nose and Throat Department.

For the six months commencing July 1st 1937 at a salary of £150 per annum with board lodging and laundry. Candidates must be male and unmarried.

Applications, accompanied by not more than three testimonials should be sent to the undersigned at once.

HY TRUSSON
House Governor and Secretary

NORFOLK AND NORWICH HOSPITAL, NORWICH (417 Beds)

Applications are invited for the following posts on the Resident Staff:—

GENERAL HOUSE SURGEON
HOUSE SURGEON TO ORTHOPAEDIC DEPARTMENT

CASUALTY OFFICER
Salary for each post £120 per annum with board residence and laundry.

Candidates (Male) must be unmarried and must possess registered qualifications.

Applications stating age, nationality etc. together with copies of testimonials should reach the undersigned not later than Tuesday June 29th 1937.

FRANK INCH
House Governor and Secretary

ANCOATS HOSPITAL, MANCHESTER.

HOUSE SURGEON required for the Ear, Nose and Throat Department and to act as House Physician to one of the Honorary Physicians. Appointment for six months, as from July 1st. Salary at the rate of £100 per annum with board residence and laundry.

Applications stating age, previous experience qualifications etc. with copies of three recent testimonials to be forwarded to the undersigned on or before Wednesday June 23rd.

By Order of the Board
HERBERT J. DAFFORNE
General Supt. and Secretary

ADDENBROOK'S HOSPITAL, CAMBRIDGE.

Applications are invited for the post of RESIDENT ANAESTHETIST and EMERGENCY OFFICER (Male). The appointment will be for three months from July 17th 1937. Salary at the rate of £130 per annum with board residence and laundry. Candidates who must be unmarried and duly registered are requested to forward their applications stating age, qualifications etc. together with copies of not more than four recent testimonials to the undersigned on or before Wednesday June 30th 1937.

J. A. BEARDSALL
Secretary-Superintendent

DEVONSHIRE ROYAL HOSPITAL. (A National Hospital for Rheumatism and Allied Diseases.)

HOUSE PHYSICIAN (Male)
Salary £150 rising to £175 after three months service (and prospects of promotion to Resident Medical Officer) with board residence and laundry

Candidates must be fully qualified and registered. The appointment is for a minimum period of six months from July 1st, 1937 and may be extended for a further period of six months.

Applications, endorsed House Physician status, are experience and qualifications together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained.

Considerable orthopaedic experience is available and the appointment offers special facilities for any gentleman preparing a thesis or wishing to undertake special work, as the Hospital contains all the necessary laboratory and other facilities for research.

Canvassing will disqualify.
By Order of the Committee of Management
A. PRESTON TURNER
General Superintendent and Secretary

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL (220 Surgical and Medical Beds)

RESIDENT SURGICAL OFFICER

Applications are invited from fully qualified men for the above post.

Candidates must have had previous Resident Appointments. The appointment is for twelve months. Salary at the rate of £300 per annum with board apartments and laundry.

Applications stating age, together with copies of three recent testimonials should be sent to the undersigned on or before Thursday June 4th.

HOUSE SURGEON

Applications are invited from fully qualified men for the above post.

The appointment is for six months. Salary at the rate of £150 per annum with board apartments and laundry.

Applications stating age, together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

June 14 1937
G. SUNNUCK
Supt and Secretary

CHILTENHAM GENERAL AND EYE HOSPITALS

Recognised for the F.R.C.S. D.L.O. and D.O.M.S. Examinations

The Board of Management invite applications for the post of **HOUSE PHYSICIAN (male)** at the General Hospital.

Candidates must be unmarried, have a registered qualification in Medicine and Surgery, and produce evidence that they are qualified to administer anaesthetics.

Salary £140 p.a. with board lodging and laundry.

Applications with copies of testimonials to be sent in sealed envelopes marked **House Physician** to the undersigned by June 26th 1937.

J. CUMMING SMITH F.R.C.S.
Secretary
The General Hospital, Cheltenham
June 14th 1937

COVENTRY AND WARWICKSHIRE HOSPITAL COVENTRY

Main Hospital 307 Beds
Convalescent Hospital 40 Beds

Applications are invited for the following positions:

RESIDENT HOUSE SURGEON £140 per annum
CASUALTY OFFICER £10 per annum.
HOUSE PHYSICIAN £10 per annum with board Residence and Attendance. Candidates must be duly qualified and registered.

Applications stating age and enclosing copies of recent testimonials, should be sent to the undersigned immediately.

(Miss) **R. HOOPER** Secretary

CUMBERLAND INFIRMARY, CARLISLE. (Over 100 Five Male R.M.O.s)

REQUIRED AT ONCE Male **HOUSE SURGEON** Special Departments (Eye, Ear, Nose, Throat, and Skin Cases). Appointment to September 1st 1937.

Applications are invited. Previous experience not a requisite.

Salary at the rate of £155 per annum. Candidates must be fully qualified and registered. Applications with copies of testimonials should be sent to the undersigned immediately.

J. G. HOVATT
Secretary

ROYAL HALIFAX INFIRMARY (250 Beds)

Hospital recognised by the Royal College of Surgeons (England)

Wanted a **FIRST HOUSE SURGEON** (male, unmarried). Candidates must be duly qualified and registered. The appointment will be for four months ending October 31st 1937. Preference given to candidates holding the qualification of F.R.C.S. Salary including all services required in connection with Paying Patients Ward, £200 per annum with residence, board and laundry.

The Resident Staff consists of Resident Surgical Officer and three House Surgeons. The Hospital contains 250 beds including Maternity Department and Paying Patients Block. There is also a Pathological Laboratory, a large Eye, Ear, Nose and Throat Department, Radiological Department, and Radium Clinic.

Particulars of the duties may be obtained from the undersigned to whom applications stating age, nationality etc., together with copies of testimonials, should be sent.

June 14th 1937
A. MIDDLEY
Secretary

ROYAL MANCHESTER CHILDREN'S HOSPITAL

Pendlebury near Manchester (230 Beds)

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer. Salary £150 per annum. The appointment is for a period of six months commencing August 1st 1937. Candidates must be unmarried and duly registered. Previous Hospital experience essential.

Applications stating age, and accompanied by copies of not more than three recent testimonials, to be sent to the undersigned not later than Saturday July 3rd. Canvassing directly or indirectly may disqualify.

By Order
H. HEARDMAN
Secretary

ROYAL MANCHESTER CHILDREN'S HOSPITAL

Pendlebury near Manchester (230 Beds)

RESIDENT HOUSE SURGEON

Applications are invited for the post of Resident House Surgeon for a period of six months commencing August 1st 1937. Salary £100 per annum. Candidates having previous experience in the administration of anaesthetics will be given preference.

Applications stating qualifications and past experience together with testimonials to be sent to the undersigned not later than Saturday July 3rd 1937. Canvassing, directly or indirectly may disqualify.

By Order
H. HEARDMAN
Secretary

GENERAL HOSPITAL, NOTTINGHAM

(386 Beds)

A **HOUSE SURGEON** is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out Patient Department. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry. Candidates are desired to send applications stating age, qualifications and experience, together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible.

PETER M. MACCOLL
House Governor and Secretary

GENERAL HOSPITAL, NOTTINGHAM

(386 Beds)

A **RESIDENT CASUALTY OFFICER** (male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry. Candidates are invited to send applications stating age, qualifications and experience together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible. Application for appointment as House Physician or House Surgeon will be favourably considered after six months service in the Casualty Department.

PETER M. MACCOLL
House Governor and Secretary

DARLINGTON MEMORIAL HOSPITAL

(200 Beds)

Applications are invited for the post of **HOUSE SURGEON** for the Out Patient, Casualty and Orthopaedic Dept. Male, British fully qualified. Salary £100 per annum with board residence and laundry. Applications, stating age, full particulars of qualifications and experience together with copies of three recent testimonials, to be addressed to the undersigned.

ARTHUR RIDDLE, A.C.S.
Secretary-Superintendent.

HULL ROYAL INFIRMARY

Applications are invited for the following posts (male) —

(1) **SECOND HOUSE PHYSICIAN** vacant now salary £150 per annum. The post is recognised by the University of London for the M.D. Branch 1 (Medicine) Examination.

(2) **HOUSE SURGEON** to the Ophthalmic and Ear, Nose and Throat Departments vacant now salary £150 per annum. The post is recognised for the clinical work required in the regulations for the D.O.M.S. and D.L.O.

The holders of the above posts receive residence, board and laundry.

The appointments will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications giving age, particulars of experience and nationality together with copies of recent testimonials should be addressed to the undersigned.

May 31st 1937
R. J. CARLESS,
House Governor

NUNEATON GENERAL HOSPITAL.

(100 Beds.)

RESIDENT SURGICAL OFFICER

Resident Surgical Officer required to commence duty on July 8th 1937. The post will be held for 12 months in first instance, and the holder will be eligible for re-election for two further periods of 12 months. Salary at the rate of £275 p.a. for the first period together with board residence and laundry. The vacancy is open to candidates of either sex and is particularly suitable to one desiring to specialize in surgery or gynaecology. Preference will be given to Fellows of a Royal College of Surgeons. Applications giving details of experience and enclosing copies of three recent testimonials to be received before June 26th by the Secretary Medical Board General Hospital Nuneaton.

NUNEATON GENERAL HOSPITAL.

Applications are invited from practitioners of either sex for the post of **HOUSE SURGEON** vacant July 8th 1937. Salary £150 p.a. together with board residence and laundry. Candidates must enclose with their application two copies of recent testimonials and these must be received before June 26th by the Secretary Medical Board General Hospital Nuneaton.

THE ROYAL INFIRMARY SUNDERLAND

(290 Beds)

RESIDENT SURGICAL OFFICER (Male) required immediately. Applicants must be Fellows of a Royal College of Surgeons or reading for that diploma. The appointment will be for one year renewable thereafter every six months at the discretion of the Board of Management, with a maximum period of three years. Salary £250 per annum rising to £300 after one year's service with Board Residence and Laundry.

The surgical appointments are recognised by the Royal College of Surgeons of England for the six months training required of candidates before admission to the Final Examination for the Fellowship.

Applications, stating age, training qualifications and experience and accompanied by copies of testimonials to be sent to the undersigned.

G. W. PATTISON
Assistant Secretary

THE ROYAL INFIRMARY SUNDERLAND

(290 Beds.)

CASUALTY OFFICER required immediately. Salary at the rate of £150 per annum with board residence, laundry etc. The successful applicant will be required also to act as House Surgeon to the Ear, Nose and Throat Department.

Applications stating age and qualifications and accompanied by copies of testimonials to be sent to the undersigned.

The surgical appointments are recognised by the Royal College of Surgeons of England for the six months training required of candidates before admission to the Final Examination for the Fellowship.

G. W. PATTISON
Assistant Secretary

DISTRICT INFIRMARY, ASHTON-UNDER-LYNE.

200 Beds

A **HOUSE SURGEON** is required to commence duties on July 15th next. Six months appointment, which may be renewed. The staff comprises a Resident Surgical Officer and three House Surgeons.

Salary at the rate of £150 per annum with board residence and laundry.

Applications with testimonials to be sent at once to the undersigned.

FRANK OLIVER,
General Superintendent and Secretary
June 14th 1937

NORTH RIDING INFIRMARY MIDDLESBROUGH (General Hospital 143 Beds Three Residents)

Wanted SENIOR HOUSE SURGEON to take up duties July 1st. Candidates must be male unmarried and of British nationality. Preference will be given to applicants who have held a previous hospital appointment.

The present Casualty Officer is a candidate for the post and applicants are requested to state whether they wish to apply for the Casualty Officer's post salary £150 in the event of him being appointed.

Salary is at the rate of £175 per annum with board residence and laundry.

Applications stating age qualifications and experience together with copies of three recent testimonials should be sent to the undersigned forthwith.

GERALD A. KENYON
Secretary Superintendent

NORTH RIDING INFIRMARY MIDDLESBROUGH (General Hospital 143 Beds Three Residents)

Wanted THIRD HOUSE SURGEON male (Medical work forms part of duties).

Candidates must be unmarried and of British nationality. Appointment will be for not less than six months and renewable. Salary is at the rate of £140 per annum with board residence and laundry.

Applications stating age qualifications and experience together with copies of three recent testimonials should be sent to the undersigned forthwith.

GERALD A. KENYON
Secretary Superintendent

PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY

Applications are invited for two of the posts of HOUSE SURGEON with duties to Male, Female and Children's Surgical Wards. Vacant on July 1st next. Six months appointment.

Salary at the rate of £150 per annum with board residence and laundry.

Applications stating age qualifications and experience to be forwarded as soon as possible to Mr. John Olsson Superintendent and Secretary Royal Infirmary Preston.

The above posts are recognised by the Royal College of Surgeons as surgical practice in connexion with the Final Examination for the Fellowship.

ROYAL UNITED HOSPITAL BATH.

HOUSE PHYSICIAN required immediately. Resident Staff of two House Physicians and three House Surgeons.

Duties include some Casualty. Salary £150 per annum board residence and laundry.

The appointment is for six months and candidates must be male, unmarried and of British nationality.

Applications with copies of three testimonials to be addressed to the undersigned at once.

May 31st 1937

J. LAWRENCE MEARS
Secretary Superintendent

BURSLER HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL. Tunstall, Stoke-on-Trent.

Applications are invited for the post of RESIDENT HOUSE SURGEON salary £175 per annum with board residence and laundry. The appointment is for six months in the first instance; reappointment may be applied for.

Applications stating age and experience with copies of three recent testimonials to be sent to the undersigned immediately.

C. E. LOWNDES
Secretary

BEDFORD COUNTY HOSPITAL

Wanted SECOND HOUSE SURGEON to take over his duties on June 21st for a term of not less than six months. Salary at the rate of £170 per annum.

He must be fully qualified male unmarried Bachelor of Medicine and Bachelor of Surgery.

Applications, stating age and nationality qualifications together with three recent testimonials, to be sent to the Hon. Secretary Hon. Medical Staff Committee.

CONSUMPTION SANATORIUM BRIDOE OF WEIR

HOUSE PHYSICIAN wanted, male. Apply Medical Superintendent stating age and experience and enclosing testimonials. Appointment for six months at £60 per annum, renewable by mutual agreement at £250 per annum. 200 beds. Full equipment for all forms of Modern Treatment.

ROTHERHAM HOSPITAL

Wanted, Special HOUSE SURGEON to assist in the OPHTHALMIC and EAR, NOSE AND THROAT DEPARTMENTS and ADMINISTER ANAESTHETICS. Salary £120 per annum, with board residence and laundry (130 beds).

Applications, with copies of three recent testimonials to be sent to the Secretary G. W. ROBERTS 8 Moorgate Street, Rotherham.

EAST SUFFOLK AND IPSWICH HOSPITAL. (350 Beds) 8 Residents

Applications are invited for the following posts: CASUALTY OFFICER to commence August 1st; HOUSE SURGEON TO THE ORTHOPAEDIC AND FRACTURE DEPARTMENT August 1st; HOUSE SURGEON TO THE GENERAL SURGEON AND GENTITO-URINARY SURGEON on or about July 1st.

The Hospital is recognised by the Royal College of Surgeons in respect of the latter post. Salary for each office at the rate of £144 per annum with board apartments and laundry.

Applications from British male candidates together with copies of three recent testimonials to be sent to the undersigned.

The Hospital ARTHUR GRIFFITHS
Ipswich
May 29th 1937 Secretary

DURHAM COUNTY HOSPITAL. (100 Beds)

MALE HOUSE SURGEON required duties to commence July 1st, 1937.

Salary at the rate of £150 per annum with board residence and laundry. Appointment for six months subject to renewal for similar period.

Applications stating age, experience and nationality accompanied by three recent testimonials should be addressed to the undersigned immediately.

June 3rd 1937

MANSFIELD AND DISTRICT GENERAL HOSPITAL (140 Beds)

The Board of Management of the above Hospital invite applications for the post of HOUSE SURGEON (male). Duties to commence June 15th 1937. Salary at the rate of £150 per annum, with residence, board and laundry. The appointment is for six months and is renewable. The Staff consists of Resident Surgical Officer and two House Surgeons.

Applications stating age qualifications and nationality accompanied by not more than three recent testimonials to be sent to the undersigned.

C. J. ADAMS
Secretary

MIDLAND HOSPITAL Easy Row BIRMINGHAM (50 Beds)

Applications are invited for the post of HOUSE SURGEON. Duties to commence July 7th. Salary £200 per annum with board residence and laundry. Applications stating when at liberty age, qualifications together with copies of recent testimonials, to be addressed to the undersigned.

OLIVE FURNEAUX
Secretary

MONTAGU HOSPITAL, MEXBOROUGH. (113 Beds)

RESIDENT HOUSE SURGEON (Lady) required. Commencing salary £120 per annum with board residence, laundry and excellent experience.

Applications stating age qualifications when at liberty and accompanied by three testimonials to — JOHN N. DRAKE, Secretary-Superintendent.

KETERING AND DISTRICT GENERAL HOSPITAL.

Applications are invited for the post of HOUSE SURGEON and HOUSE PHYSICIAN (male). Salaries £175 and £150 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months. Applications stating age and nationality and qualifications, together with copies of three testimonials to be sent to the undersigned as soon as possible.

G. W. JACKSON
Secretary Supt

THE WEST NORFOLK AND KINGS LYNN GENERAL HOSPITAL. (112 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post which becomes vacant on July 1st next. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist.

The post is for six months in the first instance—offers valuable experience in both In-patient and Out-patient work.

Applications, with copies of recent testimonials should be sent to the undersigned as early as possible.

JOSEPH E. SEARJEANT F.R.C.S.
House Governor and Secretary

THE CHILDREN'S HOSPITAL SHEFFIELD (140 Beds)

HOUSE SURGEON required IMMEDIATELY. Salary £100 per annum with board residence and laundry. Candidates male and unmarried who must possess registered qualifications should forward applications stating age nationality etc., together with copies of three recent testimonials to the undersigned.

I. H. G. GARTLAND
Superintendent and Secretary

THE OLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION OLOUCESTER

(225 Beds. Five Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN (males). The salary for each post is at the rate of £150 per annum with board residence and laundry.

The appointments are for six months, which may be extended for similar periods by re-election from time to time.

Applications, stating age, qualifications experience, and nationality with copies of not less than three recent testimonials should be sent to the undersigned.

The elected candidates will be required to enter upon their duties at once.

F. J. SYMONS
Secretary

June 10th 1937

NORTHAMPTON GENERAL HOSPITAL. (293 Beds)

There is a vacancy for a HOUSE SURGEON immediately. The appointment will be made to September 30th and the successful candidate will be eligible for re-election for a further period of six months.

The salary will be at the rate of £150 per annum with board residence and laundry.

Candidates who must be duly qualified and registered must be males and of British nationality.

Applications stating age, qualifications etc. with copies of three testimonials, must reach the undersigned not later than the first post on Wednesday June 23rd.

P. SOURCE
Assistant Secretary

June 7th 1937

BIRMINGHAM AND MIDLAND EYE HOSPITAL (114 Beds)

Applications are invited from duly qualified Medical Practitioners for the post of HOUSE SURGEON at the above Hospital.

Salary £130 per annum (rising to £150 at the end of six months satisfactory service) and £10 laundry allowance.

The Resident Staff consists of a Resident Surgical Officer and three House Surgeons.

Applications with testimonials and evidence of registration must be received not later than Thursday June 24th next.

Church Street
Birmingham 3

J. W. PEARCE,
General Superintendent

PONTEFRAC T GENERAL INFIRMARY (York)

JUNIOR RESIDENT MEDICAL OFFICER (male unmarried) duly qualified registered Medical Practitioner.

Commencing salary £150 per annum with residence board and laundry.

The appointment to date for six months from July 1st 1937.

Applications stating age with testimonials and nationality to be sent to the undersigned at once.

DAVID J. RICHARDS
Secretary Superintendent

ROYAL DEVON AND EXETER HOSPITAL EXETER (260 Beds)

HOUSE SURGEON (MALE)

Applications are invited for this post, which becomes vacant on June 30th.

The appointment is for six months, but candidates are eligible for re-election.

Salary at the rate of £150 per annum with board lodging and washing.

Applications, giving particulars as to age and qualifications together with copies of three recent testimonials should be sent to the undersigned on or before Monday 21st inst.

S. S. COLE
Secretary and Manager

June 7th 1937

ROYAL SUSSEX COUNTY HOSPITAL BRIGHTON (Beds 272. Six R.N.O.s)

CASUALTY HOUSE SURGEON (Male) required July 1st 1937. Salary £120 per annum with board residence and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Acts.

They must be unmarried and when elected under thirty years of age.

Applications, with copies of recent testimonials to be forwarded to the undersigned.

L. L. W. LANCASTER-GAYE,
Secretary-Superintendent

VICTORIA HOSPITAL, BLACKPOOL. (180 Beds)

HOUSE PHYSICIAN (Male) required immediately.

Duties will include charge of ophthalmic cases. Appointment for six months salary at the rate of £200 per annum with board residence and laundry.

Applications with copies of three recent testimonials should be sent immediately to GENERAL SUPERINTENDENT.

APPOINTMENTS—Important Notice.

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumsheugh Gardens, Edinburgh)

(a) British Islands

Town or District.	Town or District.	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE—(contd)	CONTRACT PRACTICE—(contd)
ABERTYSSVG MEDICAL AID SOCIETY (Medical Officer)	LWYNYPYA CLYDACH VALE, PENYGRAIG OLANORGAN (Ilorkmeys Medical Scheme)	OAKDALE MON (Medical Officer for Medical Aid Association)
BLACKPOOL AND FYLDE FRIENDLY SOCIETIES COUNCIL (Medical Officer)	NIID-RHONDDA MEDICAL AID SOCIETY (Assistant Medical Officer)	OGMORE VALLEY OLANORGAN (Ilorkmeys Medical Aid Society) (Ilorkmeys Medical Scheme)
OILTACH GOCH OLANOROAN (Ilorkmeys Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	PUBLIC HEALTH
		FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested **not to apply** for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1

Town or District.	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch.
NEW SOUTH WALES (All Friendly Society Appointments)	The Medical Secretary New South Wales Branch 135 Macquarie St. Sydney N.S.W.	VICTORIA (All Institute or Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall Albert St. East Melbourne, Victoria	WESTERN AUSTRALIA (Contract and Lodge Practices)	Hon. Sec. Western Branch British Medical Association "Shell House," 205 St. George's Terrace Perth Western Australia
QUEENSLAND (Brisbane Associate Friendly Societies Institute)	The Hon. Sec. Queensland Branch British Medical Association B.M.A. House, 225 Wickham Terrace Brisbane B.17				

June 16, 1937

By Order of the Council

G C ANDERSON, Medical Secretary

WEST HAM MENTAL HOSPITAL GOODMAYES ILFORD ESSEX.

Applications are invited for the post of **MALE JUNIOR ASSISTANT MEDICAL OFFICER** not over 33 years of age, unmarried for the above Hospital.

The commencing salary is at the rate of £350 per annum rising by annual increments of £25 to a maximum of £450 together with emoluments consisting of apartments board laundry and attendance valued for superannuation purposes at £150 per annum. The person appointed will also be paid in addition to his salary the sum of £50 per annum on obtaining the Diploma of Psychological Medicine.

The appointment is subject to six months probation and to the provisions of the Asylums Officers Superannuation Act 1909 Class I and to a satisfactory medical examination.

A knowledge of bacteriological work will be an advantage.

Applications stating age and experience, accompanied by copies of three testimonials, must reach the Medical Superintendent not later than June 29th 1937.

MANCHESTER ROYAL INFIRMARY RESIDENT CLINICAL PATHOLOGIST (MALE)

The Board of Management of the Manchester Royal Infirmary invite applications for the above post vacant on August 16th 1937. Applicants must hold a medical and surgical qualification and be registered. The appointment is for one year.

The duties are whole-time working under the Director of the Clinical Laboratory and being responsible for all urgent pathological laboratory work.

Salary £140 per annum with board-residence and allowance for laundry.

Applications with testimonials and stating age, to be sent to the Chairman of the Medical Board not later than June 1st, 1937.

By Order

W. R. TINOALE,
General Supt. and Secretary

June 10, 1937

BURY INFIRMARY (LANCS) (143 Beds)

RESIDENT SURGICAL OFFICER (MALE)

Applications are invited for the above post from those holding the Fellowship of one of the Royal Colleges of Surgeons.

The appointment is for a term of one year with provision for an extension of a further twelve months, and the successful candidate will be expected to commence duties at the beginning of July.

Salary will be paid during the first twelve months at the rate of £300 per annum and will be increased to £350 per annum during the second twelve months in the event of an extension of the appointment being agreed upon. In addition to this salary the post includes the provision of board residence and laundry.

Applications, stating age, qualifications and nationality together with copies of three recent testimonials are to be addressed to the undersigned and should be forwarded as soon as possible, endorsed "R.S.O."

H. WILKINSON
Superintendent

COUNTY MENTAL HOSPITAL, LANCASTER

Applications are invited for the post of **ASSISTANT MEDICAL OFFICER** (Lady) age. Commencing salary £500 rising by annual increments of £25 to £600 with further increase on promotion subject to a deduction of 3 per cent. under the Asylums Officers Superannuation Act. There are no emoluments.

The selected candidate will be required to live in the Hospital and she will be provided with board lodging etc. for which a charge of £150 a year is made.

The possession of a Diploma in Psychological Medicine will entitle the Officer to an additional £50 per annum.

Applications, giving full particulars with testimonials (copies only) should be forwarded at once to the Medical Superintendent.

THE ROYAL HOSPITAL, WOLVERHAMPTON (Incorporated under Charter)

The Board of Management invite applications for the post of **HONORARY ASSISTANT Gynaecologist** and **HONORARY ASSISTANT** may if he desires undertake also the duties of the (salaried) post of Surgical Registrar and will be required to confine his private work to consulting surgical and gynaecological practice only.

It is the intention of the Board that when a vacancy is declared for an Honorary Surgeon or Honorary Gynaecological Surgeon the holder of the post now advertised should have the opportunity of applying but may only be appointed to one of these posts and if so appointed will be required to practice in that subject only.

Applications should be sent to the undersigned, from whom further particulars may be obtained.

Wolverhampton W. H. HARPER
June 16th 1937 House Governor & Secretary

ANCOATS HOSPITAL MANCHESTER

CASUALTY OFFICER required. Appointment for twelve months as from July 1st. Salary £250 per annum with luncheon and tea provided. Applicants should have passed their primary Fellowship examination. Hours of duty 9 a.m. to 5 p.m. Saturdays to 1 p.m.

The successful applicant will be expected to do locum for the Resident Surgical Officer at every alternate week-end and at scheduled times as required. He shall reside outside the Hospital excepting when taking the Resident Surgical Officer's alternate week-ends.

Applications stating age, experience, qualifications etc., together with copies of three recent testimonials, to be forwarded to the undersigned on or before June 23rd.

By order of the Board
HERBERT J. DAFORNE,
General Supt. and Secretary

(Appointments continued on p. 55)

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WANTED — ASSISTANT MALE, WITH some experience. Salary commencing £416 plus car allowance (own car). End of July.—Address, No. 4647 B.M.A. House, Tavistock Square, W.C.1

WANTED ASSISTANT SINGLE ENGLISH or Scotch for large Panel and Private Practice in East London. Salary for first 12 months £140 with rooms provided a surgery. Good references essential. Excellent prospects for man wishing to settle. Suit recently qualified.—Address No. 46 4 B.M.A. House Tavistock Square W.C.1

WANTED ASSISTANT (SINGLE) FOR GOOD-CLASS country practice. Live in. Able to do minor surgery and midwifery. Good social amenities.—Address No. 4631 B.M.A. House Tavistock Square W.C.1

WANTED ASSISTANT EITHER SEX FOR mixed practice in Lancs town. Accommodation and attendance at branch surgery. Good salary and car allowance to suitable person.—Address, No. 4637 B.M.A. House Tavistock Square W.C.1

WANTED AT ONCE INDOOR ASSISTANT Young unmarried man British and an abstainer. Midland City. Comfortable home. Work light. Salary £3.5 p.a. Car with chauffeur provided for professional use.—Address, No. 4625 B.M.A. House Tavistock Square, W.C.1

WANTED—A YOUNG OUTDOOR ASSISTANT for branch Surgery small seaside town and country practice in West Wales.—Further particulars. Address, No. 4610 B.M.A. House Tavistock Square W.C.1

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WANTED IMMEDIATELY—INDOOR AND outdoor ASSISTANTS for town and country Practices, with and without view to Partnership. Good salaries offered. State full particulars.—British Medical Bureau 33 Cross Street Manchester 2

WANTED IMMEDIATELY OUTDOOR ASSISTANT male own car for mixed Practice in South Wales. Salary £350 per annum, plus £10 car allowance and partly furnished house. British nationality.—Address, No. 4394 B.M.A. House, Tavistock Square, W.C.1

WANTED IMMEDIATELY YOUNG SINGLE male, reliable ASSISTANT for large and interesting industrial practice within half an hour of Piccadilly Circus and ten minutes of the open country. Initial salary £31. per annum and all found with an increase as soon as he proves his capabilities. Usual bond Dispenser kept.—Address No. 4441 B.M.A. House, Tavistock Square, W.C.1

WANTED INDOOR ASSISTANT MALE OR female (British) for country practice North of England. Able to drive car. Salary £300 all found and small car provided.—Address No. 4519 B.M.A. House Tavistock Square W.C.1

WANTED IN PLEASANT LANCASHIRE town outdoor ASSISTANT preferably Scots. Would suit recently qualified graduate. Salary £400. Applicants please state nationality, age, and religion.—Address No. 3553 B.M.A. House, Tavistock Square W.C.1

WANTED MALE MARRIED ASSISTANT for practice near Birmingham. Good house provided and good salary to suitable applicant. Allowance for own car usual bond references.—Address No. 4634 B.M.A. House Tavistock Square, W.C.1

WANTED—OUTDOOR ASSISTANT EARLY July in a pleasant rural district, N. Wales (small town with Hospital) must be able to drive car. Work light.—Address, No. 4611 B.M.A. House Tavistock Square W.C.1

WANTED OUTDOOR ASSISTANT (MALE) country practice Shropshire. Must own car £400 plus £50 car allowance. Irish Scots or English. Photo refs. to Address, No. 4670 B.M.A. House, Tavistock Square W.C.1

WANTED PERMANENT EXPERIENCED ASSISTANT under 30. Panel practice near Birmingham £400 all found. Light work, car provided comfortable home good prospects and ample scope for conscientious temperate man to show initiative and acquire partnership.—Address, No. 4419 B.M.A. House Tavistock Square, W.C.1

ASSISTANT REQUIRED FOR GENERAL practice W. London suburb near Wembley male to live in bachelor principal age 36. Practice growing fast. Share for keen man in near future. Previous experience G.P. preferred but not essential. Salary £300 per annum with keep and certain extras.—Address, No. 4643 B.M.A. House, Tavistock Square W.C.1

ASSISTANT WANTED FOR MIDDLE CLASS surgical and paed. Practice in Lancashire. Good salary and prospects offered to good amateur keen on midwifery.—Address, No. 4444 B.M.A. House Tavistock Square W.C.1

INDIAN DOCTOR REQUIRES ASSISTANTSHIP OR LOCUM in London or country. Ex H.S. Experienced G.P. Can drive.—Address No. 4605 B.M.A. House Tavistock Square W.C.1

OUTDOOR ASSISTANT REQUIRED FOR old-established and expanding country practice in East Midlands. Recently qualified unmarried man preferred. Salary £400 and £50 car allowance. A share in the practice by mutual agreement after three to six months. For further particulars apply—J. Cammille A.G.A., 44 Silver Street, Lincoln.

PART TIME ASSISTANTSHIP IN LONDON
wanted by medical woman, aged 40 North of river preferred—Address No 4629 B.M.A. House Tavistock Square W.C.1

PART TIME ASSISTANTSHIP OUTDOOR OR
other PART TIME WORK required in London from end July by well-qualified woman—Address No 4606 B.M.A. House Tavistock Square W.C.1

RELIABLE OUTDOOR ASSISTANT RE
quired by partnership in West London suburb Partly furnished house. Dispenser kept. Salary £350 Full particulars re age, experience religion etc., to Address No 4649 B.M.A. House Tavistock Square W.C.1

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4 weeks, wife and 1 or 2 children Small Devon. Car expenses. Night work almost nil—Address No 4544 B.M.A. House Tavistock Square W.C.1

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Birmingham fortnight from July 15th Work light—Address No 4618 B.M.A. House Tavistock Square, W.C.1

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required for holiday duties for approximately three months from July 11th 1937 at a fee of £15 per week inclusive of travelling expenses. Applicants stating age qualifications and experience, together with copies of three recent testimonials should be addressed and delivered to the Clerk of the Essex County Council County Hall Chelmsford not later than 10 a.m. on Tuesday June 2nd 1937

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One **CASUALTY OFFICER** (Male) immediately.
The appointments are for six months and candidates must be fully qualified and registered.
Remuneration at the rate of £150 per annum with board residence and laundry.
Applications stating age and experience with copies of testimonials, to be sent to the undersigned as soon as possible.
H. E. RYAN
Secretary and House Governor

BECKETT HOSPITAL AND DISPENSARY, BARNSELY

(153 Beds—Four Residents.)

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HOUSE PHYSICIAN Preferably one with Ophthalmic experience.
Salary in each instance £200 per annum with board residence and laundry.
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ARTHUR L. BOURNE,
Secretary-Superintendent

BRISTOL ROYAL INFIRMARY & BRISTOL GENERAL HOSPITAL (Amalgamated)

The Joint Radiological Committee invites applications for a **WHOLE-TIME LOCUM TENENS RADIO-DIAGNOSTICIAN** Salary at the rate of £500 p.a. Candidates are requested to send their applications, stating age and experience with copies of testimonials to the undersigned immediately from whom further particulars may be obtained.
THOMAS W. GREGG F.R.C.S.
Secretary
Bristol General Hospital

OLDHAM ROYAL INFIRMARY

Two **HOUSE SURGEONS**
One **CASUALTY OFFICER** AND **HOUSE SURGEON** to the Fracture Department.
Applications are invited for the above posts for a period of six months.
Salary at the rate of £175 per annum with board residence and laundry.
Applications stating age and experience and testimonials together with copies of three recent testimonials must be forwarded to the undersigned not later than June 24th 1937.
H. J. CLOUT
General Superintendent

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

CASUALTY AND OUT PATIENT OFFICER

Applications are invited from fully-qualified and registered medical men (only) for the above post salary at the rate of £150 per annum.

The Hospital contains 219 Beds including 40 for Maternity patients.

Candidates who must be single and who should previously have held Hospital appointments, should send applications accompanied by testimonials to the undersigned at once.

The appointment is for six months and will date from July 1st, 1937.

RAPHAEL JACKSON Major
Secretary

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

Applications are invited for the post of **ANÆSTHETIST** (Surgical) to the above Hospital. Applications accompanied by copies of testimonials from male candidates only should be forwarded to the undersigned on or before Wednesday June 30th.

The Anæsthetist will be required to attend on Thursday mornings at 9 a.m., and the appointment carries with it an honorarium of 50 guineas per annum.

RAPHAEL JACKSON Major
Secretary

A CTION HOSPITAL W 3

CASUALTY OFFICER (male, unmarried) required to commence duties July 1st, 1937 for a three months appointment, with a promotion to Resident Medical Officer for similar period if approved. Salary £150 per annum with board residence and laundry.

Candidates must be fully qualified and registered. Applications stating age, nationality and qualifications should be sent with copies of three testimonials to the Secretary and should arrive not later than June 23rd.

Acton Hospital **DONALD C. D. SWORD**
Guionbury Lane, Acton W.3
June 4th 1937
Secretary

MANSFIELD AND DISTRICT GENERAL HOSPITAL (140 Beds)

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C. J. ADAMS
Secretary

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JAMES BOOTHROYD
Secretary Superintendent

KINGS COLLEGE HOSPITAL

The Committee of Management invite applications for the post of **ASSISTANT NEUROLOGIST**. Applications with copies of three testimonials should be sent before July 10th to the House Governor Kings College Hospital Denmark Hill S.E.5 from whom particulars of the duties may be obtained.

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Applications upon forms to be obtained from the undersigned together with copies of three recent testimonials, must be received not later than Saturday July 3rd 1937.

Conveying is prohibited except as regards members of the Medical Staff of the Hospital who will advise on the applications.

GEORGE WATTS Secretary

BATTERSEA POLYTECHNIC

LONDON SW11

HYGIENE AND PUBLIC HEALTH DEPARTMENT

The Governing Body require the services of a WOMAN MEDICAL OFFICER with experience in Maternity and Infant Welfare to conduct classes for Health Visitors for one period a week (preferably Monday or Tuesday morning) beginning in September next. Salary two guineas per session. Applications should be submitted as soon as possible and in any case not later than June 25th 1937 to the Principal.

THE WILLESDEN GENERAL HOSPITAL,

Hatfield Road N.W.10

Applications are invited from fully-qualified and registered candidates (unmarried) for the appointment of a Resident Officer to hold the appointment of CASUALTY OFFICER for a period of three months from July 1st, 1937 followed by a six months appointment as HOUSE SURGEON (total nine months).

Salary at the rate of £100 per annum.

Applications to be received by the Secretary not later than first post on Tuesday June 22nd 1937. May 31st 1937.

THE HOSPITAL FOR WOMEN

Soho Square, London W.1

Applications are invited for the posts of HONORARY CLINICAL ASSISTANTS to the SURGEONS in charge of Out-patients. The appointments will be for attendance at one or two Out-patient Sessions per week for a period of six months commencing July 1st to December 31st, excepting the month of August. Sessions are held at 1.45 p.m. every week-day except Saturday. Applications must reach the undersigned by Saturday June 26th 1937.

J. P. HEMING Secretary

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REFRACTION OFFICERS

Applications are invited for the appointment of REFRACTION OFFICERS for a period of six months as from August 1st 1937.

The present holders are eligible for reappointment.

Candidates must be fully qualified Medical Practitioners and have had experience in Refraction work.

Applications with copies of testimonials to be sent to the Secretary from whom further particulars can be obtained on or before Monday June 28th 1937.

WESTMINSTER HOSPITAL

Broad Sanctuary SW1

A vacancy has been declared in the office of DENTAL SURGEON to this Hospital and the House Committee invites applications to be sent to the undersigned. Each candidate must be a Registered Medical Practitioner and duly qualified and registered as a dentist under the Medical Act. Each candidate will be required to transmit a certificate of his age and to submit 30 copies of his application with testimonials to the undersigned not later than Friday June 25th 1937 and to attend the meeting of the House Committee on Tuesday June 29th at 4.15 p.m.

By Order of the House Committee.

CHARLES M. POWER Secretary

ST MARY'S HOSPITAL W.2.

CASUALTY HOUSE PHYSICIAN

Applications are invited from duly qualified candidates for the post of CASUALTY HOUSE PHYSICIAN.

Candidates must have been House Physicians for a full period of office at this Hospital or at some other General Hospital approved by the Board. The salary is £150 per annum with board. The appointment is for six months, and the holder is eligible for reappointment for a second period.

Applications should reach the undersigned (from whom particulars of the office may be obtained) on or before June 23rd 1937.

W. PARKES House Governor

THE QUEEN'S HOSPITAL FOR CHILDREN

HACKNEY ROAD E.2.

An additional VISITING ANAESTHETIST is required. Candidates must be registered medical practitioners and should have had special experience in the administration of anaesthetics. Attendance required on Tuesday mornings and possibly for one or more additional sessions. A fee of one guinea per attendance will be paid.

Applications should be sent to the undersigned accompanied by copies of not more than three testimonials to arrive by July 1st.

CHARLES H. BESSELL Secretary

HOSPITAL OF ST JOHN & ST ELIZABETH.

60 Grove End Road N.W.8.

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (male). The post is recognised for the Degrees of M.D. London University. The appointment will be for six months from August 1st 1937. Salary at the rate of £100 per annum with full board.

Applications together with copies of three testimonials, should reach the undersigned by June 28th 1937.

F. DUDLEY HOBBS B.A. Secretary

HOSPITAL FOR TROPICAL DISEASES

The Committee of Management of the Seamen's Hospital Society invite applications for the appointment of OPTHALMIC SURGEON. Candidates should hold a Diploma in Ophthalmology and have experience of Ophthalmic work in the tropics.

The elected candidate will be appointed for twelve months but will be eligible for re-election.

Applications with copies of not more than three testimonials to be sent in on or before July 2nd to the Secretary Hospital for Tropical Diseases 25 Gordon Street W.C.1.

THE NATIONAL TEMPERANCE HOSPITAL

Hamstead Road N.W.1

Applications are invited for the following post — CASUALTY OFFICER (Male). Salary £120 per annum board residence and laundry allowance being provided.

The appointment is for a period of six months as from July 1st. Preference will be given to those who have held a Resident post. Candidates must submit applications stating qualifications age etc with copies of not more than three testimonials by Friday June 25th addressed to the Secretary.

THE HOSPITAL FOR SICK CHILDREN

Great Ormond Street London W.C.1

A RESIDENT MEDICAL OFFICER is required at the Country Branch Hospital, Tadworth Court, Tadworth Surrey on October 1st, 1937.

The appointment is tenable for six months but is renewable. Salary at the rate of £250 per annum. Candidates must be unmarried and possess a legal qualification to practise, and must have held a responsible resident appointment at a General Hospital.

Applications accompanied by copies of not more than three testimonials given specially for the purpose, must be delivered to the undersigned not later than Monday July 5th, 1937.

All Candidates must be in attendance to appear before the Joint Committee, at their Meeting on Wednesday July 7th 1937 at 4.45 p.m.

Forms of application and copies of the Rules are obtainable from the undersigned.

HERBERT F. RUTHERFORD Secretary

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road N.W.1

The Managing Committee invite applications from fully qualified medical women for the appointment of—

HONORARY ASSISTANT PHYSICIAN

Applicants must hold the M.D. degree and be members of the Royal College of Physicians. Duties to commence on appointment early in July. Candidates are requested to apply to the undersigned for particulars of the post and to forward before Friday July 2nd 1937 twelve copies of application with copies of three recent testimonials for the Managing Committee. It is also necessary to send a copy of application to each member of the Honorary Medical Staff (twenty-two).

JEAN R. MURRAY Secretary

ELIZABETH GARRETT ANDERSON HOSPITAL, Euston Road N.W.1

Applications are invited from qualified medical women for the following posts —

HOUSE PHYSICIAN FIRST and SECOND HOUSE SURGEONS OBSTETRIC ASSISTANT. The posts are for six months commencing August 1st, 1937. Remuneration at the rate of £50 per annum with board residence and laundry. Further particulars of the posts may be obtained from the undersigned to whom applications should be sent with copies of three testimonials not later than Wednesday June 30th 1937.

JEAN R. MURRAY Secretary

CHARING CROSS HOSPITAL

Applications are invited for the post of HONORARY CLINICAL ASSISTANT to the X-RAY and ELECTRO-THERAPEUTICS Department.

Candidates should have by preference the qualification of D.M.R.E.

Applications, together with copies of three recent testimonials should be sent to the undersigned not later than first post, Monday June 28th 1937.

GEORGE J. JONES Secretary

Charing Cross Hospital London W.C.2.

CHARING CROSS HOSPITAL

The Council invite applications for the post of HONORARY ORTHOPAEDIC SURGEON to the Charing Cross Hospital.

Candidates, who must be Fellows of the Royal College of Surgeons of England should send in their applications together with copies of three testimonials to the undersigned not later than first post, Monday June 28th, 1937.

GEORGE J. JONES Secretary

Charing Cross Hospital, London, W.C.2.

ST GEORGE'S HOSPITAL SW1

Applications are invited for the appointment of ASSISTANT PHYSICIAN at the above Hospital. He must be a graduate in Medicine and Surgery of a British University and a Fellow or Member of the Royal College of Physicians London, and registered according to the Medical Act, 1858. Applications accompanied by testimonials of recent date, should be sent to the Secretary on or before June 30th 1937.

JAMES M. CHURCHFIELD Secretary

June 9th, 1937

PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN

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HOUSE SURGEON (male) required immediately for six months. Salary at the rate of £120 p.a. for the first three months and £150 p.a. for the second three months with board residence and laundry. Applications, with copies of three recent testimonials, should be sent to the undersigned not later than Friday June 25th.

H. J. ELEY Secretary

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3. **DEVON**—Increasing PRACTICE, with good scope in favourite coast resort. £400 p.a. Panel 438. 2 years purchase. House sale or rent.
4. **SURREY**—Increasing PRACTICE, with panel 350. Over £600 p.a. Premium £650 or near offer.
5. **GLOUCESTERSHIRE**—Recently established PRACTICE in rapidly growing district, great scope. Panel and mid. refused. Over £10 per month. Premium £100 or offer.
6. **BRISTOL**—PARTNERSHIP with option of early succession, in increasing Practice. Total receipts £1 360 p.a. Large panel. Hall share at 2 years purchase. House rent.
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8. **MIDDLESEX**—PRACTICE in good part. Panel 1 600. £1 800 p.a. 2½ years purchase. House sale or rent.
9. **WEST OF ENGLAND**—OPHTHALMIC PRACTICE. Receipts about £1 200 p.a. Price £1 400. Great scope for increase.
10. **S. WALES**—Increasing PRACTICE in beautiful country district, easy reach of sea. £400 1st year. Small and increasing Panel. 1½ years purchase.

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1. **BIRMINGHAM** (within 50 miles thereof)—Good mixed PRACTICE with a panel of 1 000 upwards and receipts of from £1 500—£1 000 URGENTLY REQUIRED CAPITAL AVAILABLE.
2. **NORTH WEST MIDLANDS**—Good Mixed PRACTICE, with receipts from £1 500 upwards and substantial panel. PURCHASER OFFERS CASH.
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5. **SOUTH COAST**—Good mixed PRACTICE. Receipts well over £1 200 p.a. (auditor's figures). Panel 1 300. Good scope. Excellent house all services.
6. **BIRMINGHAM**—Old-established Panel and Private PRACTICE. Receipts at £1 244 p.a. Panel Fees £610. Good House.
7. **MIDLANDS**—Well-established Panel and good middle-class country PRACTICE. Receipts at £1 644 p.a. Panel 561. Excellent house all services.
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WILTS—COUNTRY—D.V. SHARE
worth about £1 100 p.a. Panel 700. Appts £150. Fees 3/6 to 10/6. House 5/6 bed garage tennis court, etc. For sale. Good Hospital Scope. Surgery—1.

MIDDX. SUBURB—ABOUT £500 P.A., increasing. Panel 350. Visits 5/ to 7/6. Premium £400. Small house to rent—2.

PROSPEROUS N.E. COAST TOWN—£2 000 p.a. Old-established. Panel 2 200. Appt £250. ½ share for disposal 2 years purchase—3.

LONDON E.—OLD ESTABLISHED, £14/1500. Panel 2 100. Medium house to rent at about £100 p.a. Premium £3 500 or offer—4.

N. KENT—OVER £700 P.A. PANEL about 500. Appts about £50 p.a. House (4 bed) rent £70. Premium £850 for quick sale—5.

MIDDLESEX—NUCLEUS ESTD 21 MTHS Receipts last year £350. Panel 70. Detached house, 3 bed etc. Rent £90 p.a. Premium £350—6.

SURREY TOWN—OVER £1,400 AND SCOPE. Small panel increasing. Premium £2 500 cash. Comfortable house (6 bed). Rent £90—7.

LEICS—SHARE WORTH ABT £1,500 p.a. Panel and mixed operating surgeon read prel. F.R.C.S. Premium 2 yrs purchase—8.

SOUTH COAST WITHIN 100 MILES—Average £1 200. Medium panel. Good fees. Good family house (5 bed) and good garden for sale—9.

SURREY TOWN—£500 p.a. Panel 160 and scope. Club £30. Fees 5/- Small house to rent. Premium £750 or near—10.

S. DEVON—NEAR COAST—OVER £1 000 p.a. rapidly increasing. Small panel. Premium 2 years purchase. 8/9 roomed house to rent—11.

HERTS—PROMISING NUCLEUS about £400 p.a. Panel 225. Premium £500. Good house garden and garage. Freehold £1 500—12.

HANTS—COAST TOWN—OLD-ESTAB. Vendor retiring. Nearly £1 200 p.a. Scope. Panel 1 192. Nice house garden etc. for sale or rent. Premium 1½ years purchase—13.

EAST YORKS—CLEAN TOWN—SHARE worth about £1 200 after preliminary Assistantship. Middle and working-class and panel of 2 600. Premium 2 years purchase. Choice of houses—14.

LONDON W.—SEMI-CONSULTANT and Electro-therapeutic PRACTICE. £700/£800 p.a. Old-estab. No panel. 2 appts. Fees 10/6 up. Good house 6/7 bed etc. and garage. 2nd floor could be easily sublet. Premium £500. House to rent or would suit—15.

S. WALES—£1 400 P.A., INCREASES 98 per cent. panel and contract. Very little midwifery. Good house, 5 bed 2 recep. surgery etc. Rent only £40 p.a. Premium £2 000 including drugs, fittings, etc.—16.

ESSEX SUBURB—ABOUT £880 P.A. Panel 720. Visits 3/6 surgery 2/6 up. House 4 bed garage and garden. Rent only £52 p.a. Premium £850 for quick sale—17.

SURREY—½ SHARE OF £2 100 P.A. in steadily increasing PRACTICE. Visits 2/6 Midy 42/- Large panel. Premium £1 350. Choice of houses to rent or buy—18.

LONDON S.E.—SUBURBAN GOOD class non-panel non-dispensary. Over £800 p.a. Fees 5/- up. Imposing corner family house to rent at £95 p.a. Premium £1 250—19.

URGENT SALE—KENT COAST—FAVOURITE RESORT. Very old-estab. Vendor retiring. Average over £600 p.a. Non-panel. Visits 21/- Good house, 6 bed. Sell or let. Premium £750 for quick sale—20.

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The Association has long been favourably known to the members of the Medical Profession as a thoroughly trustworthy and successful agency for the transaction of every description of Medical Scholastic and Accountancy business and the BRITISH MEDICAL ASSOCIATION has every confidence in recommending its members to consult The Manager in all transactions requiring the services of a Medical Agent. Members of the British Medical Association may take advantage of a reduced scale of charges applicable to them.

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In cases where the Bureau are sole Agents the commission in respect of any sale of goodwill book debts, furniture drugs fittings and other effects (excluding sales of any freehold or leasehold property or of practices effects, etc. outside Great Britain) is limited to a maximum fee of Fifty Pounds

FULL TERMS ON APPLICATION

Practices and Partnerships for Disposal

Full particulars sent free

- 1 SW OF ENGLAND—PARTNERSHIP in old established Practice averaging over £3,750 p.a. in attractive country town Panel 2,300 Visits 3/6 to £1 10s. Choice of two houses (one for sale the other to rent) Hospital and prospect of appointment Premium one third or two-fifths share at two years purchase
- 2 MIDLANDS—Old established PRACTICE in beautiful country district Cash Receipts last year £1,280 including appointments worth about £60 and a panel between 650 and 700 Visits 2/6 to £1 1s without medicine Nicely situated house (4 bedrooms, dressing room etc.) with nice garden and two garages Rent about £80 p.a. Premium two years purchase
- 3 S OF ENGLAND—PARTNERSHIP in old established Practice about £3,500 p.a. in small country town under 100 miles from London Panel over 2,000 Pleasantly situated house (5/6 bedrooms) garage and nice garden Premium two-sevenths share two years purchase
- 4 LONDON, N—Well-established PRACTICE averaging £450 p.a. in pleasant district Panel about 600 Well situated house on main road Rent about £65 p.a. Good scope—building going on Premium £600 or offer to include surgery fittings and drugs
- 5 LONDON (Western District)—PARTNERSHIP (after preliminary Assistantship) in middle-class non-dispensing Practice, about £4,800 p.a. in good residential neighbourhood Panel 300 only Visits 5/ to 10/6. Pleasantly situated house (5 bedrooms) to rent Share worth about £1,000 at first at two years purchase Applicant should be aged 28-35 married held hospital appointments and must be good anaesthetist
- 6 N WALES BORDER—PARTNERSHIP (with early succession) in old-established County Practice about £2,500 p.a. in important town No panel Surgery premises could be purchased or rented The private residence is available if required A share up to one half would be sold at first with early succession Premium two years purchase
- 7 CHANNEL ISLANDS—Old established mixed PRACTICE averaging £1,235 p.a. including appointments worth £90-£100 p.a. Visits 5/ to 10/ Midwifery refused but scope Convenient house in best residential quarter for sale or rent Partnership introduction up to six months Good schools Premium £2,000
- 8 DEATH VACANCY—ESSEX SUBURB—Receipts average nearly £850 p.a. Panel 423 Semi-detached house (4 bedrooms) Price £800 freehold Reasonable offer accepted
- 9 SW OF ENGLAND—PARTNERSHIP in mixed Practice in industrial district Receipts average over £3,200 p.a. Panel about 2,100 House (4-5 bedrooms) garage and small garden for sale Good hospital. Premium two-fifths share one and three-quarter years purchase Short preliminary Assistantship
- 10 LONDON SW1—SPECIAL PRACTICE for catarrhal conditions, nasal catarrh hay fever asthma etc. etc., about £1,000 p.a. in commanding position in Grosvenor Place Consultations 13 guineas Special terms for series of treatments Excellent accommodation to rent at £100 p.a. on lease Scope Premium one and a half years purchase
- 11 SEASIDE TOWN WITHIN AN HOUR OF LONDON—Very old-established PRACTICE Receipts

- average £625 p.a. Panel about 300 Nice detached house (5 bedrooms) with garage and garden for sale or rent Good scope Premium £1,000
- 12 SCOTLAND—Good class family PRACTICE, average income £1,300 Panel over 900 Also House for sale Reasonable premium
- 13 MIDDLESEX—NUCLEUS OF PRACTICE in growing district, about ten miles from London Receipts last twelve months £355 Panel 90 Modern detached house (3 bedrooms etc.) to rent Good scope Premium £350
- 14 SURREY—Very old-established PRACTICE doing over £1,550 in populated suburban area Panel 1,300 Visits 3/6 to 10/6 Rent of private residence (6 bedrooms dressing room etc.) garage and fair sized garden £80 p.a. Surgery close by for sale or rent Scope Premium two years purchase or near offer
- 15 N DEVON—PARTNERSHIP in old-established Practice averaging £2,050 p.a. in delightful country district Panel 1,350 Visits 3/6 to £1 1s House (6 or 7 bedrooms), garage and good garden Rent £60 p.a. Good hospital and scope for surgery Premium one third share £1,300 and up to one half later
- 16 RESIDENTIAL DISTRICT WITHIN 15 MILES OF LONDON—Old-established PRACTICE Receipts last year over £2,000 Panel about 1,600 Visits 3/6 to 10/6 Nice residence (4 bedrooms dressing room, etc.) good garage and garden for sale or rent
- 17 SE COAST—Very old-established upper-class non-dispensing PRACTICE, averaging £600 p.a. in residential part of popular seaside resort No panel. Visits 5/ to £1 1s and £2 2s No Midwifery Good house (6 bedrooms) for sale or rent Definite scope for increase Premium £750
- 18 LONDON (Western District)—PARTNERSHIP in Practice averaging about £3,550 p.a. including panel House containing 4 bedrooms etc. large garage and nice garden for sale One third share at first Premium two years purchase
- 19 MIDLANDS—Old established non dispensing PRACTICE in first-rate residential town Cash receipts average £1,640 p.a. Panel 560 House contains 6 bedrooms etc. garage and small garden Price £2,400 freehold Scope Hospital Premium £2,850
- 20 LONDON, S.W.—Old established good class non dispensing PRACTICE in neighbourhood of Victoria Receipts last year over £660 including an appointment worth £60 and panel of about 200 Visits range from 3/6 to £1 1s mostly 10/6 to 12/6 No Midwifery Nice flat (3 bedrooms) rent £275 p.a. on lease inclusive Scope Premium £1,200
- 21 E MIDLANDS—Old-established country PRACTICE, averaging nearly £650 p.a. in pleasant village Appointments worth over £150 and panel 500 Charming stone built house (6 bedrooms) with central heating, main electric light and power and water supply Large garage garden about 14 acres Price freehold £1,700 Scope Premium two years purchase
- 22 ESSEX—PARTNERSHIP in well established and steadily increasing practice in growing residential district within 12 miles of London Receipts past year £2,200 Panel about 1,150 Suitable house or other accommodation available One-third share at two years purchase further share later Good Cottage Hospital

British Medical Bureau

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Practices and Partnerships for Disposal (continued)

23 SURREY—NUCLEUS OF PRACTICE in one of the best outlying rapidly growing districts Receipts last year £280 Panel 87 Modern detached (specially built) house (4 bedrooms etc.), with garage and garden Price £1765 freehold Plenty of scope for energetic man Premium £300

24 LONDON—Well-established RADIOLOGICAL PRACTICE in thickly populated suburban district Receipts last three years averaged £1060 p.a. Fees range from 10/6 to £8 8s House containing 10 rooms would be sold for £800 or let at £50 p.a. on lease Good introduction Premium £1800

25 KENT—Old established and steadily increasing PRACTICE (in hands of Medical Woman) in rapidly developing district Receipts last year £680 No panel Visits mostly 5/- medicine extra Suitable residence could be obtained Excellent scope Premium £1000

26 W HAM—Old-established PRACTICE Receipts average £2,125 p.a., including appointments worth about £260 and a panel of 1800 Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance Garage and fair-size garden Rent £120 on lease Premium two years purchase

27 NE COAST—PARTNERSHIP (after preliminary Assistantship) in mixed Practice about £3,300 p.a. in seaport town Panel 2600 A suitable house could be obtained One third share at first to suitable man at two years purchase (or near offer) with option to increase to two-fifths in three years and to four-ninths later

28 S OF ENGLAND—Old-established PRACTICE in agricultural district about two miles from the sea Cash receipts, 1936 £995, including panel of 450 Fees 2/6 to £1 1s Medicine extra Good house (5 bedrooms 2 box rooms etc.) in half acre of ground with garage Central heating Electric light Price freehold £1,800 Scope for increase Premium £1700

29 S DEVON—Increasing PRACTICE of £1,000 in delightful country district Panel 260 Fees 7/6 to £2 2s House with 5 bedrooms garage and garden etc. to rent at £40 p.a. Scope Premium £2000 or near offer

30 LONDON, SW—Well-established PRACTICE (held by Medical Woman) in outlying suburban district Cash receipts average £960 p.a. No panel but scope if desired Purchaser could have use of surgery premises and living accommodation with services by arrangement Premium one and three-quarter years purchase

31 S COAST—PARTNERSHIP in very old-established good middle-class Practice £4690 p.a., in rapidly growing watering place Panel 4000 Visits range from 3/6 to £1 1s Suitable house obtainable Scope One fourth share would be sold at first at two years purchase

32 NE COAST—Old-established and easily worked middle and better working-class PRACTICE, averaging over £1,150 p.a., in seaport town No panel—a few contracting out patients Visits 5/- to 15/- Rent of consulting rooms, £26 p.a. A suitable residence could be obtained Good scope much building going on Premium £1,500 (Contents of consulting rooms—including X Ray plant and electrical apparatus—about £130)

33 W WALES—PARTNERSHIP in first-class country Practice near sea coast Good house available to rent Facilities for country sport and for golf tennis and bathing. Premium for share of £1,200 to £1500 one and a half years purchase Knowledge of Welsh desirable

34 N WALES—Old-established PRACTICE in growing district with beautiful surrounding country Receipts average £1,550 p.a., including over £800 from panel Visits 5/- to 15/- Nice private residence which can be bought or rented on lease Professional accommodation rented at £45 p.a. on lease Premium two years purchase or near offer Knowledge of Welsh an advantage, though not essential

35 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London Panel 400 increasing Semi detached house (2 bed and dressing rooms) with garage and garden to rent Scope for increase Premium £500

36 YORKSHIRE (NR)—Very old established and steadily increasing country PRACTICE, between £1400/£1,500 a year, including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden for sale Good schools and sport Scope Premium one and a half years purchase

37 WESTERN AUSTRALIA—Old-established PRACTICE averaging £1,235 p.a. in small town in centre of one of the best and most prosperous pastoral areas Brick built house (4 bedrooms) electricity and water Rented on lease Premium £640 sterling Two Hospitals in town

38 OPHTHALMIC PRACTICE in S Rhodesia—Locum Tenens required immediately with view to purchase Gross receipts 11 months ended March 31st 1937 £1,536 Possibilities of expansion for man with D.O.M.S. or D.O. and operative experience Good well-equipped Hospital

39 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village Cash Receipts last 12 months, £1,240 Panel over 500 Small expenses Detached house (5 bedrooms) with electric light main water etc. garage and garden for sale Premium £2100

40 EAST ANGLIA—PARTNERSHIP in old-established country practice about £3700 p.a. Easy distance of the coast Panel over 2000 House (6 bedrooms) electric light and main drainage garage and about 3 acres of land for sale freehold Premium two-fifths share two years purchase Partner must be married aged 35-40 Preliminary Assistantship

Purchasers for cash are available for Practices with Incomes of £1250 to £2000 p.a.
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A number of Assistantships can be offered to suitable applicants.

All communications to be addressed to The Manager

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The Offices are situated at 21 ALVA STREET Edinburgh being quite close to the West End of Princes Street, and within two minutes walk from the offices of the British Medical Association and Medical Insurance Agency Ltd., at 7 Drumsheugh Gardens.
Terms on which the business of the Branch is transacted will be submitted on application to the Branch Manager to whom all communications should be addressed

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The maximum commission payable on the sale of any Practice or Partnership in Great Britain placed exclusively in the hands of this Agency is £50 (fifty pounds) which sum covers goodwill drugs surgery fittings, fixtures and furniture instruments and book debts, but not house property Schedule of Terms will be forwarded on application.

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- 1 OUTLYING EASTERN SUBURB—Sound PRACTICE established over 40 years and averaging approximately £1 700 p.a. including Panel of about 2,200 patients. Suitable accommodation can be rented at 30/ per week. Premium £4 000
- 2 SUSSEX—VILLAGE PRACTICE NEAR COAST—Well-established Practice producing over £700 p.a. and capable of increase attractively situated within five miles of favourite seaside resort. Very nice house with ½ acre of garden, in excellent repair. Price for Practice and house, £3 100
- 3 LONDON—SOUTH EAST—Mixed-class PRACTICE held by vendor (who is retiring) many years. Gross cash receipts approximately £700 p.a. Suitable house on rent
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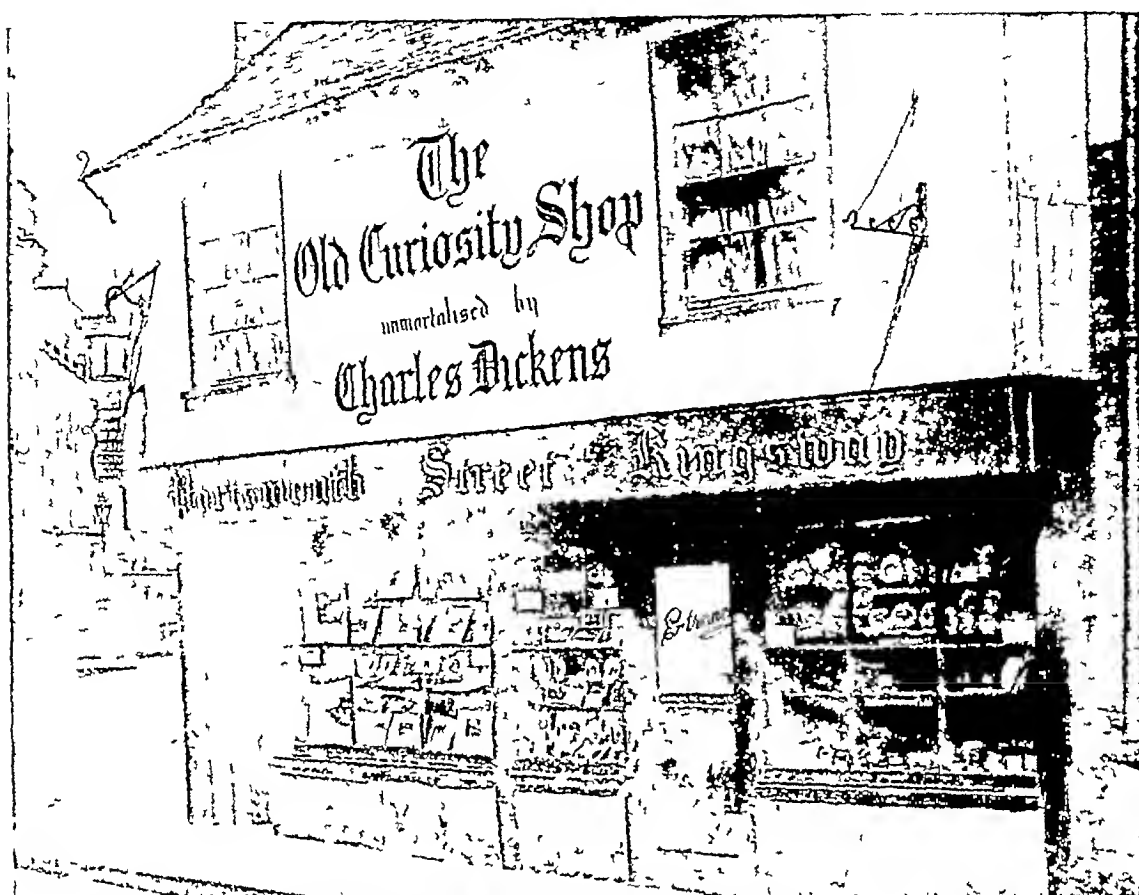
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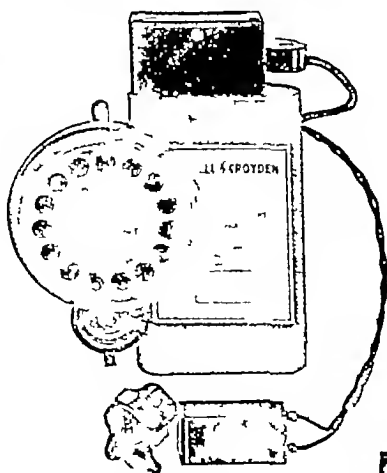
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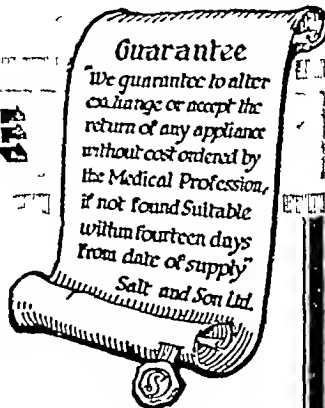
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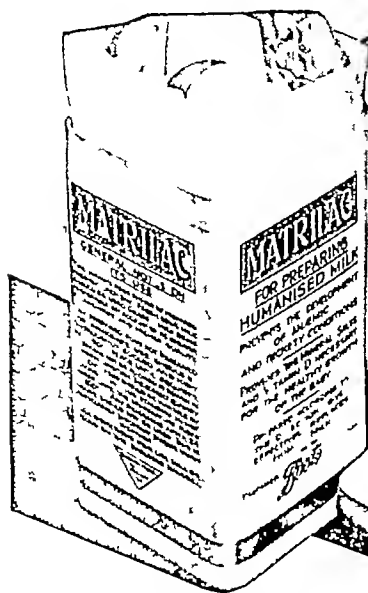
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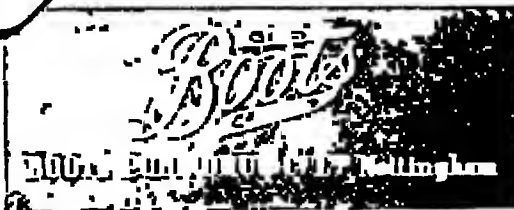
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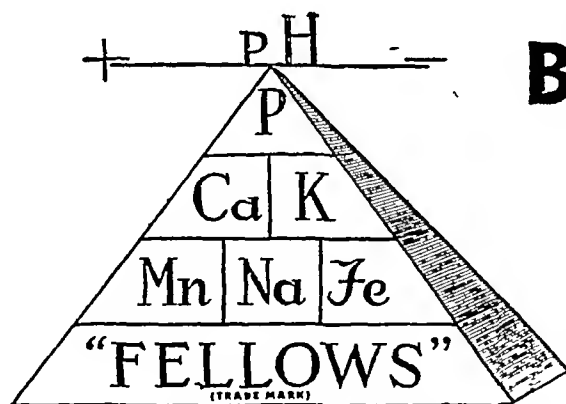
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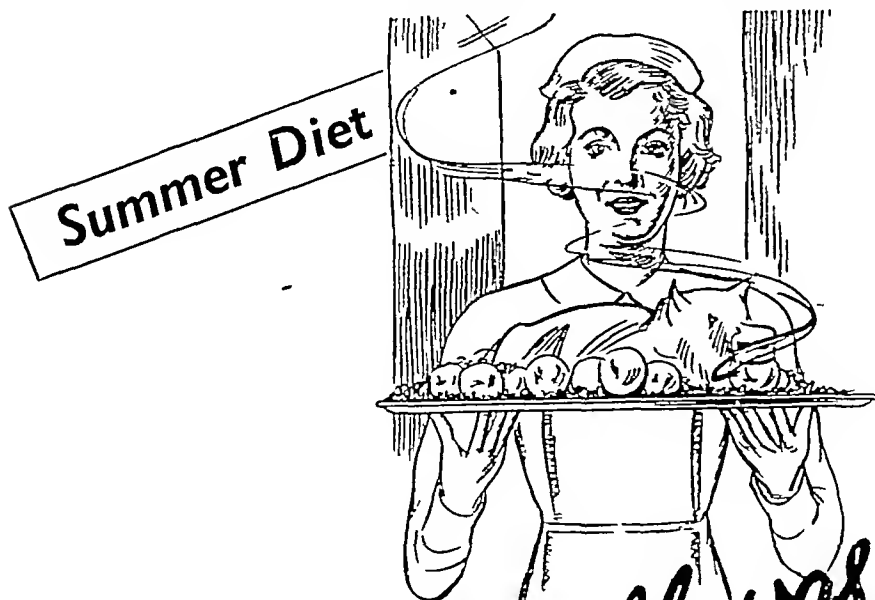
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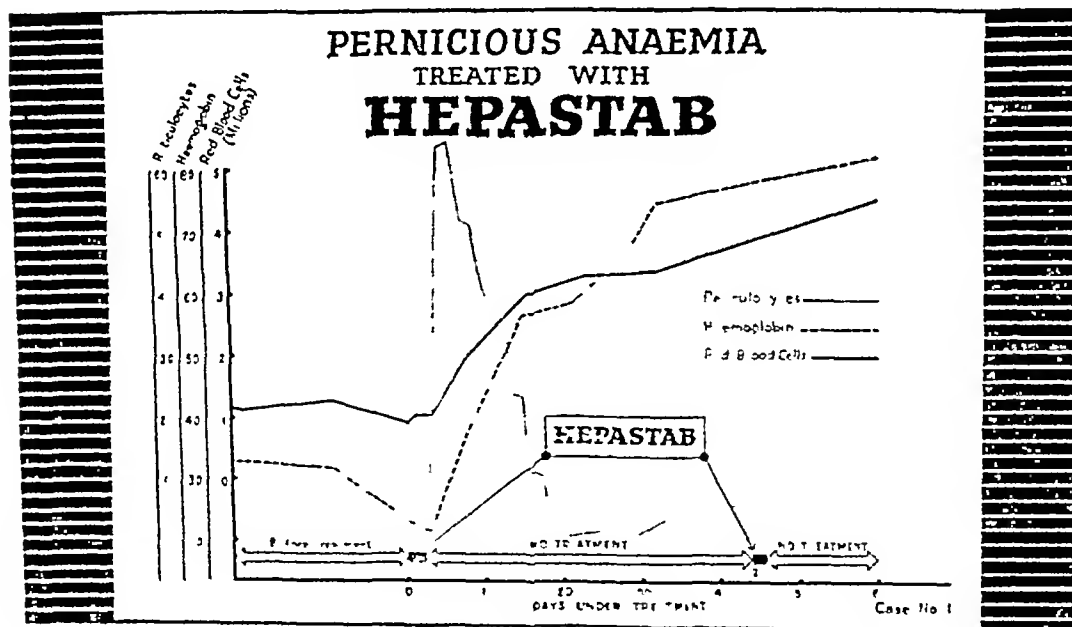
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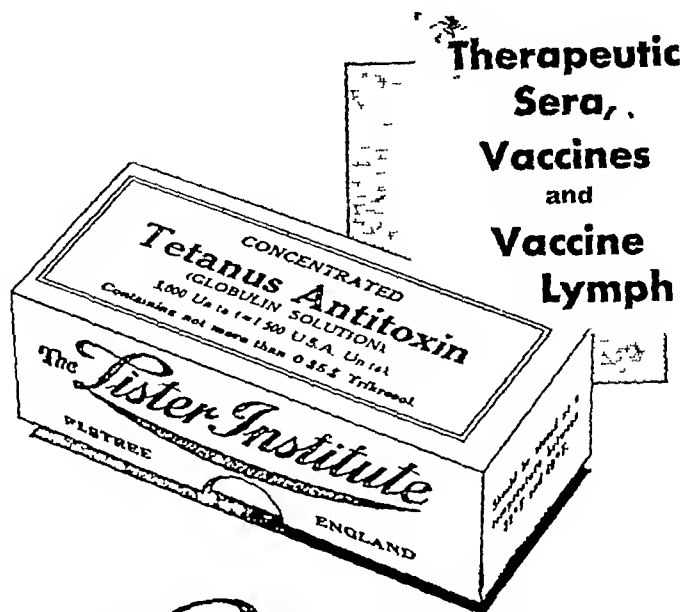
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BRITISH MEDICAL JOURNAL

LONDON SATURDAY JUNE 26 1937

SOME COMMON DISEASES OF THE RECTUM AND ANAL CANAL*

BY

A. LAWRENCE, ABFL, M.S. Lond., F.R.C.S.

Surgeon to the Gordon Hospital for Rectal Diseases, the Princess Beatrice Hospital, and the Woolwich Memorial Hospital; Senior Assistant Surgeon, Royal Cancer Hospital

The rectum is the terminal portion of the large intestine and its opening and closing are guarded by a special sense organ which is peculiar to man. Examination of the anal canal shows a change from the normal skin of the exterior—which extends upwards for about half an inch—into a more shiny, smooth area terminating about an inch from the surface in a series of small papillae which together make a wavy or dentate line. These papillae consist chiefly of nerve fibres and ganglion cells and are the nerve endings of the cerebrospinal nerves which supply this portion of the anal canal. The whole of this area is therefore very sensitive to pain and any irritation or inflammation leads not only to painful impulses but also to the irregular functioning of the subjacent sphincters. This region of the anal canal is called the pecten because the appearance created by the papillae and intervening Morgagnian sinuses resembles the teeth of a comb. Above this level the rectum is lined by columnar epithelium beneath which lies a large plexus of veins—the superior haemorrhoidal plexus. Enlargements of these veins with their accompanying arteries form internal haemorrhoids. This area of the anal canal together with the rest of the bowel is supplied by autonomic nerves which do not carry ordinary pain impulses. Beneath the skin of the anal orifice lies another extensive network of veins—the superficial haemorrhoidal plexus which less frequently becomes the seat of varicosities known as a vein, however, is common and causes a painful subcutaneous internal tumour.

Beside the papillae small pockets or crypts named after Morison form little sacs in which bacteria or small foreign bodies may lodge. Irritation of these or of the mouths of the sebaceous glands which open into them may give rise to tenositis or neuritis of the rectum and set up a disturbance of reflexes which call the patient's attention to his rectum and lead to a protracted function of the organ. It is a mistake to think of diseases which are peculiar to the rectum as occurring while diseases peculiar to the rest of the large intestine are absent.

of the bowel falls towards the examining finger and does not tend to drop away from the latter as is the case in the more usual left lateral or Sims's position. This leads to a more easy digital examination of a very important segment of the large intestine not necessarily through the lumen of the rectum but certainly through its wall. In addition the superior haemorrhoidal veins which drain the blood away from the pile-bearing area tend to be more compressed as they cross the brim of the pelvis and enlargements of the internal haemorrhoidal plexus are readily palpable in the right lateral position whereas they may be quite impalpable in the left lateral position.

If the examining finger is only passed into and out of the rectum little can be learned. The well lubricated finger should be inserted slowly into the anal canal and then rotated until the whole circumference has been carefully felt with the pad of the finger.

Digital examination should always be followed by inspection. The author's proctoscope† which carries its illumination in the handle has a fenestrum which occupies one third of the circumference of the distal third of the instrument and allows a clear view of one quarter of the anal canal at each insertion while at the same time the remaining three quarters are kept free from the field under inspection. For the inspection of the rectum beyond the anal canal a longer proctoscope or sigmoidoscope should be employed preferably after careful cleansing of the lower bowel with lavage. When pus or blood stained discharge is present in the rectum a specimen of this should always be removed for microscopic and bacteriological examination.

X-ray examination of the rectum is of very little value or of any value and is often poorly made. Cases of inoperable growth in the ampulla of the rectum are frequently seen in which a negative x-ray examination has been carried out some months before. For a suspected tumour a double barium enema of the rectum with the same fluid as a contrast medium should be employed.

round-cell infiltration in the neighbourhood of the pecten and the deposition of fibrous tissue. This pathological deposition of fibrous tissue which is also commonly found in other parts of the alimentary canal wherever sphincteric action occurs (especially when under the control of the will) was first described in the anal region by Mr Ernest Miles and named by him the pecten band, because, in established cases of internal haemorrhoids or in patients who have had a greater or lesser degree of anal spasm this band of fibrous tissue is formed immediately beneath the mucous membrane of the region described above as the pecten. Its presence leads to a malnutrition of the mucosa in this region and depending on its severity, to a degree of dysfunction in the act of defaecation, an increased straining, and further enlargement of the varicosities.

Fissure

The main force of the faecal mass during evacuation of the bowel is exerted on the midline of the anal canal posteriorly, and if, as a result of fibrous tissue lying beneath the mucosa in this position free movement of the mucosa on the underlying tissue is prevented then the mucous membrane becomes split and torn. Thus tearing down of one of the anal papillae occurs—in 99 per cent of cases in the midline posteriorly—and a small oedematous blob of mucous membrane may be seen at the lower end of the crack. Severe pain coming on immediately the bowels have moved, and lasting sometimes for many hours, is the common symptom. By carefully drawing the anal orifice open the lower end of the crack can be seen, together with the small tag of mucous membrane erroneously called for many years *sentinel pile*. As time goes on the edges of this crack assume the appearance of a chronic ulcer, in the base of which the fibres of the tissue forming the pecten band can often be seen. In its early stages fibrous tissue can be caused to be reabsorbed by the application of mercury. The most efficacious ointment for this purpose is one part of unguentum hydrarg. subchlor., *B.P.* combined with three parts of vaseline. This alone will often effect a cure provided the bowels are attended to and any piles which have caused the pecten band are dealt with. Combined with this ointment an analgesic should also be employed in order to relieve the patient's chief symptom and to allay spasm. Either percainal or nestosyl may be used in addition to or in combination with the mercury ointment. In more chronic cases incision of the fissure together with the fibres of the underlying pecten band will be found to be necessary. With much induration the edges of the fissure may have to be excised. Concomitant spasm of the anal sphincters may be alleviated by the intrasphincteric injection of 10 ccm of B.A.B.A., with 1 per cent percaine. Uncomplicated cases may often be treated as ambulatory patients. If large internal haemorrhoids accompany the condition then the patient should be put to bed and the whole condition radically dealt with by operation.

Piles

External—The plexus of veins lying immediately around the anal orifice seldom form external haemorrhoids by themselves. One or two small veins however frequently rupture especially in young muscular men and then form a small haematoma beneath the skin, which presents itself as a painful purple swelling immediately at the anal margin. For many years this has been known as a ruptured or thrombosed external pile. This description is quite incorrect as the condition is really a haematoma *an*. Patients are often seen in whom much discomfort has been caused by frequent attempts to push the haematoma

upwards into the anal canal, under the erroneous impression that the condition is a pile arising from within. All that is required is a small injection of a local anaesthetic, a radial incision, and a pressing out of the clot. The pain is relieved immediately by the operation, and careful cleansing for a few days, together with the application of an astringent antiseptic and analgesic ointment, as detailed above, effects a complete cure.

Internal—Internal piles are produced by dilatation of the branches of the superior haemorrhoidal artery and their accompanying venae comites. They occupy constant positions in their relation to the circumference of the anal canal, and correspond to the branches of the superior haemorrhoidal artery. Of these two occur on the right and one on the left, in the positions which may be described respectively as the right anterior, right posterior and left lateral quadrants of the anal canal. These, together with their accompanying veins, form the three primary piles which if present, may be found in these constant positions. Smaller branches, from the right posterior and left lateral vessels which seldom become enlarged before the age of 40, form secondary piles. From the right posterior vessels a pile may arise in the right lateral and the posterior aspects respectively of the anal canal. From the left lateral vessels piles may arise in the left posterior, the left anterior, and the anterior aspects. Careful digital and proctoscopic examination will reveal the exact number, degree, and position of any piles that may be present.

In their early stages the only symptom of piles may be a little blood with the action of the bowels. The dilatation of the veins produces a thinning of the overlying mucous membrane, which readily becomes eroded and allows small haemorrhages to occur. Sometimes a little sense of fullness in the anal canal is experienced. They are difficult to feel on palpation but are easily seen on proctoscopy. As the vessels dilate the mucosa becomes thickened, fibrosis occurs beneath its surface, and the piles become big enough to be extruded from the anal canal. In this, the second stage they are troublesome lead to irregularity of the action of the bowels come down with the straining of defaecation, but, on account of the changes of their surface do not tend to bleed. They usually go back by themselves, and, apart from a sense of discomfort, do not produce a great deal of disability. Both these stages of piles respond well to the injection treatment. At the Gordon Hospital for Rectal Diseases we have found that a large injection of 10 ccm of 5 per cent phenol in almond oil into the upper part of the pile gives the best results. Only one pile is treated at a time the remainder at weekly intervals, and then a period of four to six weeks is allowed to elapse before the case is reviewed to ascertain if further injection is necessary. Two points of technique are important. The dentate or pectinate line of nerve endings must be recognized and the injection given well above it, otherwise such severe pain will be experienced that the patient will never return for further treatment. Secondly the needle must be inserted obliquely and for not more than one centimetre, and if this is observed carefully no bad effects will follow.

The third stage of piles is when they have enlarged so much that even the thickened mucous membrane has again become thinned and multiple erosions occur on its surface. The piles themselves have become so large that they come down with each action of the bowels, and even with slight exertion. They do not return of their own accord and have to be pushed back, and even then cannot with ease be retained inside the anal canal. Through the

eroded surface of the mucous membrane infection among the veins and into the perianal lymphatics occurs and any form of treatment other than operative is fraught with a definite degree of risk. Although it is true that large numbers of patients are much relieved by the injection treatment even in the third stage yet there is no doubt that the modern operation carries no risk and has the most satisfactory and lasting results.

Contrary to general opinion the modern ligature operation carried out with careful pre-operative and post-operative medication under intravenous anaesthesia and accompanied by the technique of division of the pecten band (pectenotomy) may be rendered so free of discomfort that it is surprising that a horror exists still to such a marked degree in the minds of so many of the public. One extremely valuable recent addition in the post-operative care of these cases is with reference to the frequently accompanying retention of urine. This is of course purely spasmodic in nature and the spasm is readily overcome in the vast majority of cases by the subcutaneous injection of 1 ccm. of esmodin which has often worked like a charm.

Abscess and Fistula

An abscess in the region of the rectum or anus is usually produced by an infection reaching beneath the wall of the canal in the region of the pecten as detailed above. The pain which accompanies the condition may of course be soothed by the application of heat but an incision too soon rather than too late should be made as a track is almost invariably present leading from the abscess cavity into the anal canal either superficial to or between the fibres of or deep to the external sphincter. This can often be laid open freely at the time of the original incision. If such a track is not laid open the abscess is frequently converted into a fistula and then a subsequent operation is necessary in order to cure the fistula. Many workers in this field of surgery have felt and still feel reluctant to endeavour to cure the condition in one operation. We have employed a one-stage operation on several hundred cases and while no inward track has ever been noted a complete cure has been obtained except in a small minority of cases. If a fistula has been allowed to develop it must be laid open freely into the anal canal provided the internal sphincter is not divided. If the external sphincter is not divided with complete division of the external sphincter there is a risk of so con-

tracting the British housewife loves to do her most thorough darning in the area which is the seat of pruritus ani, these patients often improve considerably if their underclothes are made of pure silk or at any rate artificial silk. Local pathological conditions especially piles and cryptitis with a greater or lesser degree of pectenosis account for the vast majority of cases. If these pathological conditions are radically dealt with the pruritus usually disappears. Palliative treatment however will effect a cure in an early case. Mercury ointment applied well inside the anal canal will have an astringent effect upon the mucous membrane of the pile-bearing area. The skin may be treated for a few seconds with 20 per cent carbolic acid in glycerin followed by the application of an ointment. The following is a valuable prescription.

Powdered zinc oxide	3 drachms
Liniment of camphor	2 drachms
Sterile white vaseline	to 2 ounces

If more analgesia is required 10 grains of pericaine hydrochloride may be added. Nestosyl ointment is also often efficacious. Careful attention to the bowels is important. The drug which appears to have the most satisfactory stimulating effect upon the last few inches of the large intestine is senna and perhaps the most popular and satisfactory method of administering this is as follows.

P	Puls. fol. sennae	} ad 3 grains
	Puls. rad. jalap.	
	Puls. sulph. sublim.	
	Theriacale nigrae	ad 1 drachm

This taken regularly at night time in smaller or larger doses according to how it suits the patient gives a regular solitary and adequate evacuation of the bowels each morning. Still more advanced and intractable cases however always show physical signs of definite functional or hysterical tendencies—for example exaggerated knee jerks, loss of corneal reflex and areas of patchy anaesthesia. In addition to a radical cure of the local underlying causes by operative intervention careful treatment with nerve sedatives and helpful suggestion may be accompanied by small doses of x-rays (half an e.v.h. unit) twice together with the local application of a bland oily substance.

Rectal Tumour

(a) *In the Child*.—The commonest tumour in the child is a small adenoma about the size of a cherry which causes the occasional appearance of blood in the stool.

length of the large intestine. If they are not treated malignant changes almost invariably supervene after a period of years. Careful x-ray and sigmoidoscopic examinations are essential in order to ascertain exactly the state of the whole of the large intestine. No barium enema radiograph is complete without draining off the barium and taking a further picture after air replacement. A localized adenoma may be successfully treated with diathermy provided that microscopical examinations of portions of it have shown that it is not malignant, and frequent subsequent examinations are made over a period of years to ascertain that there is no recurrence.

Cancer of the Rectum

Cancer of the rectum is almost always a carcinoma, rarely a sarcoma, and this disease constitutes more than one third of all the cancers of the alimentary canal, including even the mouth. It occurs in three positions: (1) at the anus, (2) in the ampulla of the rectum, (3) at the recto-sigmoid junction.

Carcinoma of the Anus—This is usually seen at an early stage as it is accompanied by pain and the presence of a typical ulcer which bleeds easily, and the inguinal glands of the affected side are soon involved. The most satisfactory treatment consists in removal not only of the ulcer but of a large margin of apparently healthy surrounding tissue on each side and deeply, together with extirpation of the inguinal glands. In this situation, and in this situation only in dealing with rectal neoplasms, radium or radiation therapy may be made to play an important part.

Carcinoma of the Ampulla of the Rectum—A long latent period exists between the commencement of a carcinoma of the ampulla and the onset of symptoms. This may extend to several months, and often the first symptom is nothing more than a sense of fullness of the rectum after the bowels have moved. When this has been present for some time there may be a sudden attack of either diarrhoea or constipation, and ultimately the frequency of the bowel action becomes definitely increased. Diarrhoea occurs, accompanied by the passage of blood and mucus, the sense of fullness gives place to a definite aching, and the patient begins to lose both weight and appetite. The diagnosis is easy, provided a careful digital examination is made.

Carcinoma of the Recto sigmoid Junction—Here again the onset of symptoms may be delayed long after the growth has made its appearance. The first symptom is usually a definite attack of *altered bowel action*. For example, a patient who has been perfectly regular in his habits suddenly gets an attack of obstinate constipation, which may continue for several days or weeks in spite of a large variety of aperients. Another patient, who has been habitually constipated is suddenly delighted to find his bowels acting freely. Not until definite stenosis occurs and the condition has become considerably advanced do the well known symptoms of alternating diarrhoea and constipation make their appearance together with the passage of blood and mucus. The diagnosis is not by any means easy. Examination with the right index finger with the patient lying in the left lateral position seldom enables the examiner to detect the growth. If however the patient is examined with the left index finger with the patient lying in the right lateral position, the recto-sigmoid region is usually brought within reach of the finger and an early diagnosis can be established. Every suspicious case should in addition to a digital examination have a sigmoidoscopic examination and this should be done before, and not delayed till months after, a barium enema

Operability of Cancer of Rectum

The vast majority of cases of cancer of the rectum are alleged to be inoperable when they are first seen. First, because a large number of medical practitioners still believe that every cancer of the rectum is inoperable. Secondly, because in many of these cases there is a mass of impacted faeces due to the obstruction and to the powerful peristaltic action of the large intestine, and when the rectum is examined the whole mass is mistaken as being fixed, immovable, and quite inoperable. If the examination is repeated after seven or ten days of careful aperientization and wash outs, it is often found that a large proportion of the mass has disappeared, and the condition obviously is now freely movable and easily operable. Thirdly, with modern technique many patients who were thought to be inoperable a mere ten years ago are now found to survive the operation without any undue anxiety, and operability has risen in our hands from 30 per cent to over 50 per cent.

Palliative Treatment

Colostomy—A well established colostomy in the left iliac fossa, consisting of the exteriorization of a complete loop of the sigmoid colon, subsequently treated with one daily wash-out, is a most satisfactory operation. In the inoperable case it should be performed early rather than late. Owing to careless management a colostomy was for a long time regarded as producing more distress than otherwise, but in recent years its regulation is so satisfactory that its advantages are considerable in the majority of cases.

Diathermy—In patients whose general condition prohibits the employment of radical treatment diathermy has a definite and most useful place, and in cases in which the growth is inoperable a painful and discharging growth may be kept almost symptomless, sometimes for many years.

Radium—Except at the anus, cancer of the rectum is markedly radio-resistant, and my experience has led me to believe that its use in this position as a general rule does more harm than good.

Radical Treatment for Cancer of Rectum

The cure of cancer of the rectum depends upon three main factors: (1) the knowledge of the pathological paths along which the growth tends to spread, (2) the planning of an operation to include as much as possible of the fields of spread, (3) careful pre-operative, operative, and post-operative attention.

1 PATHOLOGICAL PATHS OF SPREAD

The way in which cancer of the rectum spreads was clearly and accurately demonstrated by Mr Ernest Miles over a quarter of a century ago, and the present position of the treatment of cancer of the rectum throughout the civilized world has been built upon his well laid foundations. Cancer of the rectum spreads by lymphatic channels in three directions: (a) downwards towards the ischio-rectal fossae, (b) laterally on the levatores ani muscles, and (c), most important of all, in an upward direction along the course of the inferior mesenteric artery, and thence laterally towards the wall of the pelvic colon.

2 PLANNING OF AN OPERATION

The earliest possible removal of the widest possible field gives the largest percentage of cures in cancer of any organ. Cancer of the rectum is no exception. In fact,

radical extirpation by the abdomino perineal method produces the highest percentage of cures compared with those in any other situation. It is believed that anything short of a radical operation is literally playing with a patient's life and while isolated instances of operations that have preserved the sphincters (though not always preserved control) are recorded it must always be recognized that anything short of an operation which includes all possible fields of lymphatic spread though frequently proving a brilliant success for a year or two is a gamble in which the patient's life often ultimately becomes forfeit.

When operating for cancer of the rectum three main surgical principles should be borne in mind.

(a) As indicated above not only the growth but also all removable fields of lymphatic spread must be extirpated as widely as possible. As the upward spread demands the most careful attention extirpation should be effected up to the point where the left colic artery arises from the inferior mesenteric artery.

(b) Before a primary growth is tampered with or manipulated in any way the majority of the blood and lymph vessels which are liable to transmit metastatic cells to the venous and lymphatic circulation should be ligated when possible. This is easily done in the abdomino-perineal operation in which the first step is to tie a ligature around the inferior mesenteric artery and vein and the accompanying lymphatics opposite the bifurcation of the abdominal aorta. Primary dissection is therefore carried out as far as possible from the original growth as is also all subsequent dissection.

for several hours and is followed by less fall in blood pressure than with other types of spinal injection and by no untoward sequelae. Ether and chloroform are rigorously excluded and general anaesthesia is continued by nitrous oxide oxygen.

Details of operative technique are too many to outline here but two important points should be mentioned.

(i) *Absolute Aseptic Intestinal Division*—This is carried out by Mr. Zachary Cope's modification of De Martell's three bladed clamp. When the bowel is to be divided the three blades are applied and the centre one removed. Division is then carried out between the two clamps which are left *in situ* by means of the actual cautery and an absolutely aseptic division of the intestine thereby takes place. This ingenious instrument would not appear to have received the recognition it deserves.

(ii) *Presacral Neurectomy*—As it is impossible to carry out a radical removal of the rectum without damaging the parasympathetic nerves it is advisable to relieve the bladder of a tonic contraction of its sphincter by removing the presacral nerve as a routine. The effect of this has been to abolish the need for a catheter except in the small minority of cases thereby preventing urinary infection and making the post-operative period much easier. At the same time the path of deep pain impulses is removed.

Post-operative Treatment

Over thirteen years ago I began to give a Hard train course as a routine post-operative measure for all cases of

ABNORMALITIES OF GROWTH AND DEVELOPMENT

THE CLINICAL AND PATHOLOGICAL ASPECTS*

BY

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ARREST OR RETARDATION—DWARFISM AND INFANTILISM

The conditions of dwarfism and infantilism can be considered together for although dwarfism is not infrequently found without infantilism the two are more frequently combined. Both represent disturbances in the growth sphere but whilst in dwarfism the defect is skeletal and limited to the skeleton in infantilism the retardation of development is general.

The term dwarfism implies a defect in stature below the normal standards but does not necessarily signify a pathological state for dwarfism under certain conditions may occur without any evidence of disease. In simple dwarfism the skeleton is of small size but the bodily characters and functions—especially in the sex sphere—are appropriate to the age of the individual. The skeleton may be proportioned or disproportioned. If disproportioned the defect may be either in the trunk or the limbs—an abnormality of the spine or the long bones. In either case the underlying cause may be developmental or acquired.

The term infantilism is more difficult to define, and is often used ambiguously. Strictly speaking, it should be reserved for more or less permanent conditions in which the physical and psychological attributes of childhood persist into adult life—smallness of stature underdevelopment of the musculature, a head large in proportion to the body comparatively short limbs, lack of function of the genitalia and certain qualities in the mental sphere. This strict interpretation of the term, however, is not generally adhered to and there is a tendency to include conditions of temporary delay in development in which the stage reached is less than that appropriate to the age of the individual. This is perhaps justifiable if the wide sense in which the term is used is clearly understood. The term infantilism however should not include pathological states such as eunuchoidism, in which retardation or arrest of development in one sphere—in this instance the sex sphere—without any general disturbance of growth and development is found.

It is obvious from our consideration of the many factors which influence the growth process that there must be a number of different causes of dwarfism and infantilism. Physiological and pathological varieties both occur. Dwarfism may be a separate entity in simple hereditary dwarfism and in achondroplasia and allied conditions. The various forms of rickets are also accompanied by growth defects, and in the coeliac and renal forms where there is a pronounced interference with general metabolism infantilism results too.

The different forms of infantilism are difficult to classify but there are two main groups. In the first due to endocrine deficiency the underlying cause may be hypopituitarism, hypothyroidism, or hypogonadism. If the underlying condition is untreated the physical and psychological attributes of childhood persist into adult life. To the second group the term cachectic has been

applied, and it includes those in which retardation or arrest of development has resulted from malnutrition, metabolic disturbance, or chronic infective disease. A convenient classification of the different varieties of dwarfism is as follows:

Simple Dwarfism

1 Simple hereditary dwarfism

2 Simple dwarfism due to developmental skeletal disease (a) achondroplasia chondro osteo-dystrophy and dyschondroplasia (b) osteogenesis imperfecta

3 Simple dwarfism due to acquired skeletal disease (a) simple rickets and late rickets, (b) spinal caries and spinal deformities due to other causes—for example poliomyelitis

4 Hypergonadal dwarfism

Dwarfism and Infantilism

1 Cachectic

2 Cachectic infantilism associated with more specific changes at the growth cartilages (a) congenital syphilis, (b) scurvy (c) coeliac rickets, (d) renal dwarfism.

3 Endocrine (a) hypopituitary (b) hypothyroid, (c) hypogonadal

1 True Hereditary Dwarfism

True hereditary dwarfism should not be regarded as a pathological condition, for apart from the defect in stature neither the skeleton nor other organs of the body show any evidence of abnormality or disease. These individuals are entirely normal apart from their small size. Puberty occurs at the normal age and sex function is normal. Hereditary dwarfism is essentially a hereditary characteristic and dependent on chromosomal constitution. The racial form is typified by the Norwegian Lapps, Central African pygmies, and inhabitants of the Andaman Islands. Many striking examples of the familial variety have been reported and a complete description of them has been given by Hastings Gifford (1911). Growth is slow and far below average, and this applies to the differential growth of the skeleton too.

2. Simple Dwarfism Due to Developmental Skeletal Disease

(a) ACHONDROPLASIA CHONDRO-OSTEO-DYSTROPHY AND DYSCHONDROPLASIA

Amongst the developmental conditions producing simple dwarfism achondroplasia and the closely related entities, chondro-osteo dystrophy and dyschondroplasia, must be considered. Some authorities take the view that achondroplasia, dyschondroplasia (Ollier, 1899), chondro osteo-dystrophy (Morquio, 1929), and hereditary deforming dyschondroplasia (metaphyseal aclasis) are only different manifestations of one pathological state—dyschondroplasia, by which term is implied a nutritional defect of the growth cartilage. This view is held by Parsons (1936) who suggests that achondroplasia could be regarded as the extreme form—namely, an aplasia—with the others as intermediate varieties.

From the pathological and clinical aspects there are certain points of distinction.

In achondroplasia the most striking feature is a mucoid degeneration and absence of cell proliferation in the growth cartilages. The normal palisade arrangement of the cells—that is, the normal scaffolding—is absent. Ossification is consequently hindered by the absence of this scaffolding, and longitudinal bone growth interfered with.

The term chondro osteo-dystrophy has been applied to several ill understood conditions. The earlier cases were reported by Brailsford (1929) and Morquio, who described

*The Oliver Sharpey Lectures delivered before the Royal College of Physicians of London on March 16 and March 18 1937. Lecture I was published last week.

irregular development of the metaphyses and epiphyseal ossification centres. The latter appeared as multiple foci which either fused gradually or became distorted and fragmented in joints subjected to pressure. In the vertebral column affected vertebral bodies became irregular in shape and size, the result of compression from the superimposed weight of the vertebral column. The chondro-osteo-dystrophy of Brailsford and Morquio bears a close resemblance to cases reported by Dickson Wright (1930-1) as generalized osteochondritis, in which every epiphysis in the body became fragmented and distorted, and by Thursfield and Lightwood (1930-1) as "stippled epiphyses"—a case with clinical features suggestive of achondroplasia but, radiologically, fragmented epiphyses. The fundamental disturbance in the growth cartilage of this case, described later by Harris (1933c), was a mucoid degeneration more pronounced in the centre of the epiphysis than at the metaphyseal line, but otherwise identical with that in achondroplasia. There was an attempt in certain areas to form cartilage cell columns, but no continuity in the orientation of the cells for any distance.

The term dyschondroplasia has been coined by Ollier to describe the condition at the growth cartilage in which cartilage cell proliferation—that is, the scaffolding—is present in excess, but the subsequent senescent processes of degeneration, calcification, and ossification do not occur. As the bone develops masses of unossified cartilage persist at the metaphysis. Hereditary deforming dyschondroplasia is a variety of this condition with additional features—an unmodelled metaphysis and exostoses.

From the clinical aspect all these conditions have much in common, and dwarfism is generally pronounced. The achondroplasiac certainly appears to represent the extreme form in which the whole skeleton is affected and the changes are present at birth. The characteristic appearance is produced by a combination of normally sized trunk and short limbs, particularly the proximal segments, a relatively large head and small face with depressed nasal bridge, and trident hand. The disproportion between limbs and trunk is most pronounced. A lumbar lordosis usually produces an undue prominence of the abdomen, and the gait is of an odd waddling character. Dentition, sex, and mental development are normal. Radiology of the skeleton shows characteristic changes. In the child and adolescent the space between the epiphysis and metaphysis is smaller than normal and the metaphyses tend to be unduly splayed and broadened near the joints, producing the characteristic petunia-like appearance, due to failure in the modelling process.

The dwarfism of chondro-osteo-dystrophy is very similar, but the child is normal at birth and the head and facial changes are not found as in achondroplasia. The proportions of the skeleton depend on whether the vertebral column or limb bones are more affected. In some cases both are the site of characteristic changes, in others the defect is localized to one or other. The diagnosis can be confirmed by radiology, when fragmentation of the epiphyses will be found. In some instances this condition improves as the child grows older, but although a satisfactory growth rate is resumed a degree of dwarfism results.

The clinical pictures of dyschondroplasia and hereditary deforming dyschondroplasia are similar to the above but the limb bones are chiefly affected and deformities bowing or genu valgum may be present. In both a short-limbed skeleton is usually found. In the hereditary type the characteristic radiological features are an irregularly expanded metaphysis with exostoses. The progress of

the condition can be judged from the story of a family, and particularly two sisters, who came under my personal observation. In the younger, a dwarf aged 8, the features of dyschondroplasia were first noticed at the age of 18 months. At 8 she had a strikingly disproportioned skeleton: symphysis-vertex 54.5 cm, symphysis-soles 35.5 cm. The limbs were short and there was enlargement and typical radiological changes at the metaphyses. She happened to be the ninth child of a family of ten, of which the third, fourth, and tenth members were also subjects of this condition. Radiological examination of the metaphyses of her elder sister (No. 4, aged 14) by the same radiologist, at the age of 11 had shown an identical condition, but a second examination carried out three years later—at the age of 14—demonstrated that the metaphyseal abnormalities had disappeared. At the age of 14 this girl was still strikingly dwarfed and her height was only 4 ft 4½ in. Her skeleton was disproportioned and of the short limbed type: symphysis-vertex 28½ in, symphysis-soles 24½ in. The changes of puberty were normal and well advanced.

(b) OSTEOGENESIS IMPERFECTA

Osteogenesis imperfecta must be included among the developmental skeletal diseases leading to simple dwarfism owing to the scoliosis, stunting of long bones, and deformities following the fractures which invariably occur. Apart, however, from the deformities from healed fractures, the bones are actually shorter, thinner and smaller than normal. The epiphyseal cartilage is normal, but in the metaphysis the trabeculae are slender and delicate and are widely separated by interstices filled with cellular connective tissue. The underlying abnormality in osteogenesis imperfecta is a generalized disturbance of osteogenesis, according to Knaggs (1926), a failure of differentiation of osteoblasts. The resulting growth defect depends much upon the deformities and the age at which the condition manifests itself. In the infantile form there may be stunting and evidence of fractures at birth, but these children seldom survive to adulthood. In the adolescent type the child may appear normal at birth, but the tendency soon manifests itself, and repeated fractures result in deformities and skeletal dwarfism. The radiological changes in the bones are characteristic: an almost complete absence of cancellous tissue, and the cortex appears as a faint line.

3 Simple Dwarfism Resulting from Acquired Skeletal Disease

In discussing the factors which limit growth, reference was made to Harris's investigations showing that changes of premature senescence in growth cartilage and temporary arrest of growth result from the infective and metabolic diseases of childhood. In fact, a quick succession of severe diseases during adolescence has been observed to cause permanent arrest of growth with complete union of the epiphyses. Dwarfism then results, but often without infantilism. Apart from these cases there are two types of dwarfs which require consideration in this section: (a) due to simple and late rickets and (b) to spinal caries or other spinal deformity.

(a) SIMPLE DWARFISM AND RICKETS

The era before the recognition of the cause of rickets was responsible for many examples of rickets deformity and simple dwarfism. The pathological process, as is well known, is due to vitamin D deficiency and consists of a softening and deformity of the bones from deficient

deposition of calcium phosphate, and especially imperfect calcification and ossification at the epiphyseal line. The cartilage cells proliferate excessively, and become converted in a patchy manner into tissue resembling bone but very deficient in lime salts—the so-called osteoid tissue. The intensity of the process is directly proportional to the rapidity of growth, for the non-growing animal does not develop rickets. A similar vitamin D deficiency in adolescence leads to late rickets, a comparatively rare condition, and, in adults, when all bone growth has ceased to a general rarefaction and softening of the skeleton—osteomalacia. Owing to the softening of the bones in these rickety conditions, the skeleton, and particularly those parts which are subjected to muscular strain or the influence of posture may be greatly deformed. In the first rachitic dwarfism with severe deformities was not infrequently seen. Now since the recognition of the cause of rickets it is a condition of extreme rarity. A study of a series of children with defective growth, however, does suggest that inadequately treated simple rickets in infancy may produce considerable degrees of dwarfism, noticeable only in later years. With adequate treatment rachitic osteoid tissue is replaced by healthy growing bone in the course of three or four months and this is the measure of interference with growth. Nevertheless, in my series of cases brought for defective growth alone, 20 per cent gave a history of infantile rickets as the only likely causal factor. Slight stigmata of past rickets could usually be found, and the skeleton was disproportioned as a rule and shorter in the lower measurement than in the upper. The intelligence and genital sphere developed normally.

Late rickets is also a cause of dwarfism, and must be distinguished from rickets of the coeliac and renal types. Typical rickety changes occur in the skeleton, and stunting of growth may be pronounced. Late rickets, rarely seen now, tends to develop during the active growth periods of the second dentition and puberty.

(b) SIMPLE DWARFISM DUE TO SPINAL CARIES AND OTHER SPINAL DEFORMITIES

For the sake of completeness mention must be made of the forms of simple dwarfism due to spinal caries and other spinal deformities. The skeletal deformities are of the short trunk type. A good illustration is the hunch-backed dwarf in whom angulation of the spine has resulted from vertebral tuberculosis. The site of the vertebral lesion is usually in the lower thoracic region, and the tuberculous process begins as a rule in a single vertebra, as a nutritional disturbance of the marrow following a tuberculous endarteritis. Absorption and caseation take place and sooner or later the vertebral shell collapses from the superimposed weight of the vertebral column. A kyphosis and angular deformity then results. Other diseases of the vertebral column occurring during the developmental period may produce dwarfism of the short trunk type, and occasionally examples have been observed from muscular atrophy following anterior poliomyelitis.

4 Hypergonadal Dwarfism

The occurrence of hypergonadal dwarfism has already been fully discussed under the heading of macrosomia praecox. It was then pointed out that although these syndromes are associated with transitory overgrowth in childhood, accompanied by sexual precocity, dwarfism ultimately results owing to premature epiphyseal fusion.

Before we pass on to a consideration of the conditions in which dwarfism and infantilism are combined let us briefly review the main features of simple dwarfism. In

some instances the statural defect is largely due to deformity, as in the dwarfism of osteogenesis imperfecta, spinal caries, and other conditions of the group. Much depends on the extent of the skeletal abnormality, which varies from a generalized disturbance of osteogenesis with multiple fractures in osteogenesis imperfecta to a localized infective process, perhaps in a single vertebra, in spinal caries. In the main varieties of simple dwarfism, on the other hand, the site of the pathological disturbance is the growth cartilage. It varies from mucoid degeneration and scaffolding defects in achondroplasia and allied conditions to cartilage cell proliferation with imperfect calcification and ossification in rickets. In hypergonadal dwarfism, premature senescent changes occur in the cartilages from the action of the sex hormones, and there results early epiphyseal fusion with cessation of growth. Similar changes and dwarfism have been found as a result of a series of infective diseases in adolescence. The growth and differential growth curves in these individuals are determined largely by the age of onset and severity of the pathological process, and by the nature and degree of permanence of the lesion. The most severe statural defects are found in achondroplasia and allied conditions where the degenerative process dates to foetal life, and, in the present state of our knowledge, is permanent and irremediable. In rickets, on the other hand, even when inadequately treated, the cartilage changes are more temporary and the damage done not irreparable. A disproportioned skeleton is liable to result because the long bones at the 'springing up' periods are especially interfered with.

Dwarfism and Infantilism

Conditions in which dwarfism and infantilism are combined may be considered under three main headings: (1) simple cachectic infantilism, in which retardation or arrest of development, general and skeletal, results from some serious chronic wasting disease in childhood; (2) cachectic infantilism complicated by more specific changes at the growth cartilages as in congenital syphilis, scurvy, and coeliac and renal dwarfism; (3) endocrine infantilism where arrest of development results from anterior pituitary, thyroid, or gonadal deficiency.

1 Cachectic Infantilism

Cachectic infantilism has been variously described as Lorain's (1871) infantilism, infantilo-chétivism, or dystrophic infantilism. The essential aetiological factor is a chronic wasting disease occurring during the growth period. This causes retardation of general development and 'lines of arrest' in the growth cartilages. The skeletal and other systems of the body are affected proportionately. Any condition of prolonged illness in childhood may produce such a result, but especially important are gastrointestinal diseases in which there is long standing interference with nutrition. Chronic abdominal tuberculosis and coeliac disease provide the most typical examples. The latter condition will be considered in a separate category owing to the rickety changes which occur. The infantilism of congenital syphilis, scurvy and chronic interstitial nephritis will also be grouped with coeliac disease as here also special epiphyseal changes complicate the picture. The nutritional disturbance from dietetic restriction in young diabetics before the introduction of insulin therapy has also been observed to result in considerable retardation of growth and development, amounting in severe cases to infantilism. Other causes of cachectic infantilism are inanition from underfeeding, chronic dysentery, and intes-

tinal worms In regions where malaria and hookworm disease are prevalent both have been found to lead to serious delay in development Cases of hepatic and hepatosplenic infantilism have been reported in the literature, but it seems reasonable to classify them under this rather than under a separate heading The interference with metabolism can be held responsible for the delay in development Hepatic disease does not appear to be a common cause of infantilism, for the reason probably that, if the hepatic lesion is severe, death occurs before development is interfered with, whilst, if the lesion is slight, liver function is not seriously affected and infantilism does not result

In cases of cachectic infantilism seen in later years an adult type skeleton is usually attained Much depends on the severity of the illness and the time at which the pathological process began The interference with growth at the growth cartilages is not, as a rule so pronounced as in the rickety and endocrine forms The nature of the pathological changes and the process of formation of lines of arrested growth have already been considered Development may be severely retarded, but adulthood is ultimately attained

In describing the clinical features of cachectic infantilism the original description of Lorain (1871) cannot be bettered The physique remains feeble and the general bodily form is small, the skeletal proportions are normal the genitalia appear diminutive, but are in proportion to the bodily size There is no defect in intelligence but the mind remains childish The changes of puberty do not occur at the normal age, and may be delayed until 18 or 20 Even then they may not be normally established, but in later life fuller development is usually reached This description is very typical of the majority of cases of cachectic infantilism It need only be added that radiological examination shows that osseous development is not disproportionately retarded if considered in relation to body size Lines of arrested growth can be demonstrated in the diaphyses

2 Cachectic Infantilism Complicated by More Specific Changes at the Growth Cartilages

(a) CONGENITAL SYPHILIS

The retardation of growth and development not infrequently observed in congenital syphilis could be reasonably included under the heading of simple cachectic infantilism were it not for the specific changes which may occur in the growth cartilages, interfering with growth in the long bones and so producing a disproportioned dwarfism These changes are usually of the nature of a syphilitic osteochondritis as originally described by Wegner (1870) a chronic inflammatory process which destroys the normal arrangement of the cartilage cell columns The calcifying cartilage is interspersed with fibrous tissue characteristic of chronic inflammation, and the margin of the newly formed bone is irregular Radiographically the free edge of the ossification zone resembles a saw in which the teeth are irregular in size The clinical picture of retardation of physical development in congenital syphilis would not be so distinctive were it not for the presence usually of some of the other well known stigmata of this disease Other conditions in this group showing short limbed disproportion of the skeleton scurvy and coeliac and renal dwarfism require differentiation but the radiological and other signs should make the diagnosis clear Harris (1933e) has pointed out one important distinction between these conditions whilst syphilitic osteochondritis especially affects the slow growing cartilages those at the proximal end of the femur and distal end of the tibia the changes of scurvy

and rickets are usually manifested at the fast growing cartilages in the neighbourhood of the knee

(b) SCORBUTIC INFANTILISM

Although scurvy from vitamin C deficiency—Barlow's (1883) disease—in its chronic form and of sufficiently long standing to be productive of infantilism must now be a very rare condition, when it has been observed specific changes have been found at the growth cartilages which have seriously interfered with growth Pathologically the process in the growth cartilage consists of a haemorrhage from the capillary loops which disrupts the newly formed bone and calcified cartilages and thus interferes with their nutrition The haemorrhagic clot may be replaced by fibrous or in certain instances bony tissue Cassidy (1922-3) has reported a striking example of scorbutic infantilism which showed the typical clinical picture A boy of 18 had never eaten either fruit or vegetables He first developed scurvy at the age of 13 with haemorrhagic swellings in the muscles of the legs, and was unable to walk Subsequently under antiscorbutic treatment, he improved, but soon reverted to his favourite diet At 18 there was striking retardation of growth and development and the changes of puberty had not appeared He was bed ridden and, although then able to move his feet his lower limbs were otherwise powerless Radiological examination showed the presence of remarkable conical structureless opacities at the ends of the diaphyses of the long bones most evident around the knee These opacities suggested previous haemorrhages in which bony changes had taken place Otherwise there was extreme rarefaction of the skeleton and in both femora evidence of recent fractures This case illustrates the severe retardation of growth and development which follows prolonged vitamin C deficiency

(c) COELIAC RICKETS

The arrest of development in long standing cases of coeliac disease is often very striking Smallness of stature is associated with general retardation of development The state of cachectic infantilism however, is complicated by the presence of rickety changes in the metaphyses which interfere with the growth of the long bones and produce a short-limbed, disproportioned skeleton Radiologically, the development of the epiphyseal centres of ossification corresponds to the size of the individual The metaphyses are swollen and cupped as in rickets and the epiphyseal line becomes irregularly serrated Osteoporotic changes appear sooner or later in the shafts These rickety changes can be attributed to vitamin D deficiency the result probably of malabsorption or possibly of re-elimination from the intestines of fat and the dietary restrictions which have to be imposed on the individual

Clinically the general appearance is striking and very similar to that in hypopituitary infantilism except for the presence of rickety deformities Dwarfism is pronounced and the appearance of the secondary sex characters may be delayed until the age of 20 or later In the majority of cases a history of fatty stools provides the clue to the nature of the underlying condition

(d) RENAL DWARFISM

Renal dwarfism from chronic interstitial nephritis in childhood provides a very similar picture It differs fundamentally from the other types in being due to the action of retention products—that is inadequate excretion of phosphates by the kidneys and consequent interference with calcium metabolism The underlying renal

condition is in many cases congenital. In fact, these children often show signs of renal inadequacy from birth, and as they grow older the bony deformities appear: the enlarged radial epiphyses, deformities of the long bones, and, later, genu valgum are characteristic of this condition. The urinary findings are similar to those of chronic interstitial nephritis in the adult, and at post mortem examination the kidneys have been found to show varying degrees of granular atrophy.

Growth is slow and development severely retarded, and the presence of rickets changes at the metaphyses through early years produces a disproportioned short-limbed skeleton. Radiologically the metaphyseal changes are difficult to distinguish from those of simple rickets, and a typically cupped and irregularly serrated metaphyseal line occurs. Mental development is unaffected, but the appearance of the secondary sex characters and the changes of puberty are much delayed. Perhaps the majority of cases of renal dwarfism do not survive until the age of puberty.

3 Endocrine Infantilism where Arrested Development Results from Glandular Deficiency

(a) HYPOPITUITARY INFANTILISM

An immense step forward in our knowledge of hypopituitary dwarfism and infantilism was made when it was shown that the removal of the anterior pituitary in young animals, notably puppies, produced arrest of growth and sex development. The testes remained in an infantile condition and the secondary sex characteristics failed to appear. The arrest of growth was particularly noticeable in the long bones, which were unable to increase their shaft length. Histological examination showed lack of formation of cartilage cells in the growth cartilages. Radiologically there was retarded osseous development and delayed epiphyseal fusion far beyond the normal time.

The most clearly understood pathological states causing hypopituitary infantilism are vascular lesions or tumours. Little is known, from the pathological aspect, of functional exhaustion of the anterior lobe. Of the vascular lesions Simmonds has described a syndrome, which now bears his name, of infantilism, cachexia, and defective growth from ischaemic necrosis of the anterior pituitary, the result of infarction generally from infective or acute illness. The deficiency syndromes in childhood due to compression from a tumour are those associated with the parahypophyseal and suprasellar cysts. As a rule the clinical picture is characterized by infantilism, dwarfism, and obesity: the syndrome of dystrophia adiposogenitalis described originally by Fröhlich. Whilst there is no doubt that cachexia usually accompanies the lesion described by Simmonds (1918) and adiposity the tumour syndrome associated with Fröhlich's (1901) name, on clinical as opposed to pathological grounds this nomenclature appears to be too rigid, for cachexia is sometimes found with parahypophyseal cysts and typical cases of Fröhlich's syndrome without any tumour. The difficulty in keeping to this nomenclature for clinical cases lies in the varying metabolic disturbances. The relation of the latter to the pituitary is not yet understood and it would seem better to classify cases as hypopituitarism with or without tumour. In adults compression of the cells of the anterior lobe may be due to another type of tumour, the pituitary chromophobe adenoma, but such adenomata only occasionally develop before the end of the second decade—that is before the developmental stage has passed—and consequently are not often associated with the hypopituitary syndrome of dwarfism and infantilism.

The growth defects in hypopituitarism are characteristic in cases antedating the second dentition. There is a striking disproportion of the skeleton, and the limbs are short in comparison with the trunk—that is, an infantile type of skeleton is retained. If, on the other hand hypopituitarism does not develop until after the second dentition, when the skeleton has reached a more mature type, the same degree of disproportion will obviously not be found. There is, however, a tendency for the growth of the long bones to be affected more than that of the trunk, and evidence of this will be found in skeletal measurements. Radiological examination will show characteristic delay in the appearance and development of the ossification centres. The epiphyseal disks remain ununited beyond the usual time. This growth defect, associated with sex infantilism, normal intelligence, and mental faculties, gives the typical picture of hypopituitary infantilism. Adiposity when present tends to be limited to the trunk, abdomen, hips, and proximal segments of the limbs, the subcutaneous deposits in the distal segments being scanty and the extremities spared. In hypopituitarism due to parahypophyseal cysts neighbourhood symptoms are present and radiological examination of the sella turcica gives a characteristic picture. The fossa is usually of the flat and open type, with erosion of the clinoid processes. Suprasellar or intrasellar shadows may be observed, and indicate areas of calcification in the cyst. The calvarium often presents characteristic features—a "beaten silver" appearance due to convolitional pressure and thinning from increased intracranial tension.

(b) HYPOTHYROIDIC INFANTILISM

Until recent years the thyroid has been regarded as the focal centre of pathogenesis in hypothyroidic dwarfism and infantilism. Varying grades of atrophy of the gland are found. Lately, however, it has been shown that the thyroid is under anterior pituitary control, so that in hypothyroidic states the possibility of a primary anterior pituitary pathogenesis must be borne in mind. It has been shown, for instance, that pituitary ablation is followed by hypothyroidism and that the anterior pituitary secretes a thyrotropic hormone which exercises its function through the mediation of the thyroid. One must bear in mind, therefore, the possibility of an anterior pituitary factor in hypothyroidic infantilism, and that the latter may be due to inadequate supplies of thyrotropic hormone.

In untreated congenital athyroidism dwarfism is pronounced, the long bones are affected more than the trunk and a disproportioned short-limbed skeleton results. The ossification centres are late in making their appearance in the cartilaginous epiphyses, and, when they do, they develop slowly. Growth may come practically to a standstill in untreated cases and the epiphyses may remain largely cartilaginous till the end of life. These changes can be demonstrated radiologically. Histologically, in the growth cartilages cell proliferation is much diminished and there is a want of orderly arrangement of the cells. Rounded groups of cells tend to occur and the normal palisade arrangement is not present. Some calcification of the matrix is seen, but its depth depends on the degree of cell proliferation (Knaggs, 1928-9).

In post nasal hypothyroidism a condition to which the term myxinfantilism has sometimes been applied, the resulting skeletal defects depend to a large extent on the age at which the thyroid defect develops. If it antedates the second dentition and the condition remains untreated a disproportioned skeleton with short limbs is found. In cases developing later and after the second dentition

retardation of growth in the long bones and skeletal disproportion are less pronounced. Disturbances in dentition go hand in hand with those of bone growth, and retardation of sex development in untreated cases is striking. The appearance of the secondary sex characters and changes of puberty may be indefinitely delayed. This picture with its associated mental retardation and myxoedematous skin changes is quite characteristic. The rate of growth and development when thyroid treatment is first instituted is often remarkable, but when once leeway has been made up further progress is on more normal lines.

(c) HYPOGONADAL INFANTILISM

(i) *From Pre pubertal Castration*—The effects of early castration in young animals are well known, but clinical reports of individuals, at any rate of the female sex, who have been castrated in juvenescence are extremely rare, if any exist. The details of such a case will therefore be of interest. Castration in adolescence results in characteristic changes in the skeleton. The growth of the long bones persists beyond the usual time, resulting in abnormal length of the limbs in comparison with the trunk. Such castrates usually grow tall, but, in the present instance of early castration, striking retardation was found. This patient, aged 19½ at the time of my observations, had had both ovaries removed at the age of 9½ for bilateral multilocular cystadenomata. As a result of the operation the changes of puberty did not occur and the secondary sex characters failed to develop. Her height at 19½ was only 5 ft 1½ in, the measurement from symphysis pubis to vertex being 27½ in and from symphysis pubis to soles 34½ in—that is, the length of the lower limbs was greatly in excess of that of the trunk. A remarkable feature of this case was the very great enlargement of the sella turcica, which was shown by radiological examination to be three to four times the normal size. No changes were found in the fundi or visual fields. Radiological examination of the carpus showed that ossification centres were present and of a more or less normal degree of development, though it should be remembered that the patient was approaching this state at the age the operation was performed. The epiphyseal junctions, however at the time of observation, had remained unfused. A modified Aschheim Zondek test gave a positive result, indicating the presence of gonadotropic substances in the urine. Does it not seem reasonable to assume that the growth defect in this patient, unusual after castration, was due to a failure of the normal secretion of growth hormone from the eosinophil cells of the anterior lobe? In view of the enlargement of the sella turcica noted in the radiograph the hypothesis could be advanced that an overgrowth of the castration cells of the anterior lobe had interfered with the function of the growth cells. An overgrowth of castration cells is consistent with the findings in the pituitary after castration in animals.

(ii) *Hypogonadal or Eunuchoid Infantilism*—Under this heading I will also quote a case which illustrates another most unusual condition—a combination of eunuchoidism, infantilism and dwarfism. This patient, a male, was aged 34 at the time of my observations. He was very small and wizened in appearance. His height was only 4 ft 3½ in, the measurement from symphysis pubis to vertex being 21½ in and from symphysis pubis to soles 30½ in—that is the length of the lower limbs was greatly in excess of that of the trunk, as in eunuchoidism. Neither testicle was palpable in the scrotum or inguinal canal and there was a complete absence of facial, pubic

and axillary hair. The skin changes and distribution of the subcutaneous fat deposits were also typical of eunuchoidism. Radiography showed that the epiphyses of the long bones were still ununited. The clinical features suggest that the primary lesion is gonadal rather than anterior pituitary. The condition differs from hypopituitary infantilism in the excessive length of limb as compared with the trunk, and from true eunuchoidism in the defect in stature. In ordinary forms of eunuchoidism the individual is of normal stature or tall, a feature which is ascribed to the persistence of growth in the presence of ununited epiphyses. The persistence of growth could be attributed to eosinophil activity in the anterior pituitary. It seems likely that in this diminutive and infantile individual the defect of growth may have resulted from a secondary eosinophil hypoplasia. There were no changes in the sella turcica, nor was there any evidence of pituitary tumour as judged by examination of the fundi and visual fields. On the other hand the general features and bodily dimensions of eunuchoidism strongly suggest a primary hypogonadal aetiology.

Other Forms of Infantilism

From time to time other forms of infantilism have been described, and although, if the above classification is adopted, it seems reasonable to include them in one or other of the categories they should be mentioned separately for the sake of completeness.

So-called cardiac dwarfism and infantilism may be cited as an example. It would be generally agreed that severe cardiac lesions may cause interference with growth, and congenital abnormalities in particular are sometimes associated with arrest of development. On the other hand, congenital heart disease is known to be consistent with average development, and even when retardation does occur it is difficult to be sure that both cardiac and general maldevelopment are not part of a more widespread abnormality of the germ plasm. Mitral stenosis of rheumatic origin has been regarded as a cause of dwarfism. That it cannot be a common cause is evidenced by the number of children with it who grow and develop satisfactorily. There is certainly little evidence that cardiac lesions of this type produce any serious arrest, for the changes of puberty and secondary sex characters usually develop in a normal way. In fact, in cases which have been reported the defect has usually been one of stature rather than of general and sexual infantilism.

Some reference is also necessary to the condition described by Gandy (1906) as retrograde infantilism in which there is found a regression of sex characters and functions towards the infantile state. The cases described have almost invariably had their onset in adult life so that skeletal dimensions and proportions have not been affected. In the light of recent knowledge it would seem that some of these cases at any rate fall into the category of late eunuchoidism, in which a late atrophy of the sex glands occurs. Others judging by the presence of hypothalamic symptoms have probably been of hypopituitary origin. In some instances thyroid atrophy has been reported and here the gonadal defects have probably been secondary to hypothyroidism. So-called retrograde infantilism therefore seems to include a number of different conditions. In any case as the skeletal dimensions are normal it does not seem justifiable to place them in the category of true infantilism.

Finally infantilism in association with Addison's disease has been reported in one striking case by Morlat (1903) and in a somewhat similar one by Apert (1933).

under the tentative heading of suprarenal infantilism. The latter points out that bilateral tuberculosis of the suprarenal cortex causing Addison's disease is rare in childhood, and such lesions if they do occur, usually prove fatal before infantilism can develop. In the two cases mentioned dwarfism and infantilism were associated with pigmentation, asthenia, anorexia and wasting. In Morlat's case, though the stature was small, the proportions of the head, trunk and limbs were those of an adult. In the scheme of classification adopted in these lectures these cases could therefore reasonably be grouped in the category of cachectic infantilism.

A survey of the field of clinical and pathological abnormalities of growth and development shows that we are concerned with the influence and interaction of four groups of factors, nutritional, infective, endocrine, and hereditary, in the production of two different groups of phenomena—alterations in bodily size on the one hand, and variations in the time factor of development on the other. Abnormalities of stature such as gigantism and dwarfism and abnormalities of development, precocity and infantilism are clearly associated closely, and occur together in a number of different combinations.

Our knowledge of some of the factors which modify growth and development is still very deficient. The influence for instance of over nutrition and hypervitaminosis is not understood though the effects of under nutrition, hypovitaminosis, and infective disease in limiting growth and retarding development are becoming more clearly defined.

Our understanding of the endocrine factors has advanced in the last decade. Experimental work with the anterior pituitary growth hormone has shown its capacity for stimulating bodily growth, and its effects on the growth cartilages and general bodily tissues can be appreciated from clinical observations in hyperpituitary gigantism and hypopituitary dwarfism. The equally important influence of the sex hormones in permitting or limiting longitudinal growth by controlling the time of fusion of the epiphyses can also be judged from the various pathological conditions in which sex hormone production is disturbed. The sex hormones appear to produce senescence in growing cartilage, a maturing effect comparable to that seen elsewhere in the body. It is only necessary to remind ourselves that sex hormone production is primarily under anterior pituitary control to realize how important in growth and development is the anterior pituitary body. Further knowledge with regard to the site of production of the anterior pituitary sex hormones, and histological evidence as to the cell counts in the anterior pituitary in different pathological states of growth and development, should do much to help our understanding of these conditions.

The influence of heredity in growth and development is not within the scope of these lectures but it is evident that hereditary influences have played an important part in a number of the conditions we have been studying. The importance of genetic factors in determining endocrine constitution can only at present be surmised, but it is in this field that there would appear to lie the explanation of many of the variations of growth and development met with in everyday experience.

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The Committee of Award of the Commonwealth Fund Fellowships has made a number of appointments to fellowships tenable by British graduates in American universities for the two years beginning September 1937. These fellowships are offered by the Commonwealth Fund of New York, of which Mr Edward S Harkness is president. Awards in medicine have been made to D M Douglas M B Ch B (of the University of St Andrews) to Minnesota University and to J D Spillane M B., B Ch of the University of Wales) to Columbia University

DOES SUPERFOETATION OCCUR?

REPORT OF A POSSIBLE CASE

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Superfoetation may be defined as the implantation of a second fertilized ovum in a uterus which has already contained a pregnancy for one month or more. The possibility of such a phenomenon occurring in the human female is still a matter of controversy, and the following case report, although unfortunately scientifically incomplete, will be of interest in view of its extreme rarity.

Case Report

A woman aged 35 married for eight years gave the following amazing obstetrical history. In 1930 the year following her marriage, she was delivered of a stillborn child at thirty-two weeks. In 1931 she had another stillbirth this time at twenty-eight weeks. In 1932 she was delivered of stillborn twins and a further pair of twins were again stillborn in the following year. In 1934 a third pair of twins which did not live, were born at about twenty-eight weeks. She did not know the cause of death of any of these babies, but thinks that the first was trouble with the cord. She also believes that some of them were malformed. There was no family history of twins on either side. In the following year, 1935 she had a miscarriage following an accident at about sixteen weeks. On March 2, 1936, she had another miscarriage this time at about twelve weeks.

Following this miscarriage she had two small "shows" at intervals of a month, the first two months after her miscarriage. Apart from this, amenorrhoea existed from the miscarriage on March 2 to December 20 1936 when she gave birth to a normal live male child weighing just under six pounds. The delivery occurred under unusual circumstances. The patient received no ante-natal care and while motoring in the country experienced three very severe abdominal pains at intervals of one minute. Immediately afterwards the child was born in the car, the placenta following almost at once. The husband was the only witness of the delivery and the birth was promptly registered. No doctor attended her. The child survived and was bottle fed as the mother had no milk. The patient was little disturbed by the incident and was about again in twelve days time. During the three months following the birth she felt perfectly fit and well but noticed the abdomen remained rather large and was progressively swelling.

She was first seen by us on March 19 1937 exactly eighty-nine days after the delivery and said she thought she had developed a cyst. Amenorrhoea had existed since the child was born. No movements had been felt. On examination the breasts were active. The uterus contained a foetus with the vertex presenting in the right occipito-anterior position. The foetal heart was heard. The gestation period was estimated at thirty-four weeks and there was no apparent abnormality. The Wassermann reaction proved negative.

When told that she was pregnant she flatly refused to believe it, and partly to convince her a radiograph was taken. The radiologist confirmed the diagnosis and position of the foetus but estimated the period of gestation at thirty-six weeks. Even when shown the film she would not believe she had a normal pregnancy and was convinced she would produce a monstrosity of some type.

Three days later labour began with spontaneous rupture of the membranes. Progress was normal at first dilatation of the os being very rapid. After a two-hour second stage with weak pains delivery was terminated by a low forceps operation as a secondary uterine inertia was feared. While per-

forming the delivery it was noted that the soft tissues stretched very easily. A living female child was secured weighing 6 lb 12 oz and appearing perfectly normal and at full term. The third stage was completed within five minutes. Neither placenta nor membranes presented any abnormality but it was noted that the placenta was rather small measuring four inches in diameter and three-quarters of an inch in thickness. Bimanual examination fourteen days later revealed no clinical evidence of double uterus and the patient would not submit to lipiodol injection. Both mother and child made an uneventful recovery, milk appearing in the breasts normally on the third day. At the time of writing both her children are well and gaining weight rapidly.

Possible Explanations

There are three possible explanations for such a case. In the first place the delivery of a live child in December, 1936, may have been a product of the patient's imagination. Against this we have the husband's confirmation, the inspection of the child of the birth certificate, and of the form of registration by one of us (F L. McL.), and the rather fragile direct evidence of a small placenta and very easily dilatable maternal passages at the second delivery. On this and the knowledge that several similar cases are to be found in the older literature we feel convinced that the case is genuine. A second possibility is that the case is one of twin pregnancy with retarded development followed by delayed delivery of one of the foetuses due to diminished blood supply and difference in growth rate. The patient's tendency to twin pregnancies perhaps favours this explanation, but it seems hardly credible that the second twin remained for twelve months in the uterus to be delivered alive and apparently perfectly normal. Nearly all such cases end in early abortion. The third explanation is that this is a case of true superfoetation. This will explain the facts of the case, and the times at which we know coitus took place make possible the second fertilization some three months after the first.

Commentary

Theoretically fertilization of another ovum should be possible providing that the cavity of the uterus is not already closed by the developing ovum and that ovulation has continued during the pregnancy. As regards the first condition, we know that the uterine cavity normally becomes completely filled by the developing ovum between the third and fourth months, so that up to this time a second fertilization should be possible. The blockage of the cervix by a mucus plug and the sealing off of the Fallopian tubes by a decidual mucosa at this time have been cited as further objections. Actually the formation of a mucus plug is not by any means constant in the pregnant uterus, and if present it is not always an obstacle to the advance of sperm. The mucus plug has also been noted in the non-pregnant uterus, and it is possible that the ejection of semen from the male organ may be strong enough to pass it or wash it away. In addition cases in which the menstrual cycle continues during pregnancy indicate an open passage. A final point is that cases have been noted in which the orifices of the tubes were patent in the third month. One may presume, therefore that though the passage for sperm up the genital tract is closed in most cases of early pregnancy, there are occasional cases in which the passage remains patent up to about the third month.

It is generally believed that ovulation ceases during pregnancy under the inhibitory influence of the corpus luteum. There is evidence however, that in some cases ovulation does take place. Ravano (1907) examined the

ovaries of 100 pregnant women. He often observed ripening follicles and saw in no less than 5 per cent a recently ruptured corpus luteum. Studdiford (1936) examined the ovaries taken from 100 cases of ectopic gestation and concluded that though in some cases maturation of the ovum took place during pregnancy it usually terminated in degenerative changes and atresia. Moench (1927) reports a case of double uterus in which a miscarriage at twenty-eight weeks was followed three days later by the abortion of a twelve weeks foetus. Here ovulation must have continued or begun again about the fourth month. Radasch (1921) quoting Cosentino describes the case of a woman who died in the sixth month of pregnancy; the ovary showed a recent corpus luteum, maturing follicles were present in various stages of development, and one ruptured follicle was discovered which still contained a ripe ovum. It seems likely that, in an organ in which functional pathological changes are so commonly met with the inhibiting corpus luteum influence may occasionally be suppressed and ovulation occur. In cases of repeated abortion the influence of the corpus luteum is thought to wane between the third and fourth months. It is possible that ovulation can take place in these cases at this time, and that if the passage to the ovum is clear a second fertilization might ensue. It is interesting to note that the case we describe had two shows of blood at intervals of a month during the early gestation period.

Similar Cases

We cannot find any cases similar to the one we report in the recent literature, but several such cases are referred to by the older writers. The explanation may be that in modern obstetrics, in the normal course of events, the double pregnancy would always be recognized at the time of delivery and any delay of the second birth dealt with. Twins often vary in size and development and Schwaab (1920) describes a case of twins weighing 1,900 and 2,850 grammes. It is possible that such cases may be ascribed to superfoetation and if left to nature the smaller foetus might remain in the uterus till term. A similar case to ours is referred to by Milne (1871). This woman delivered a full term infant on November 17, 1807, a second infant, also at term was delivered on February 2, 1808. Churchill (1846) quotes the case of a woman delivered of a full term child on April 30. On September 17 she produced a second child, which also appeared to be at full term and both survived. That the uterus was single was confirmed at post mortem when this woman died in later years.

Other such cases are referred to by Leishman (1873), Barnes (1884), Cassan (1826) and Arrowsmith (1834). Bonnar in 1864, published a paper describing an investigation of the records of the British peerage, here the exact date of birth of successive children of peers is given without reasonable possibility of error. He has collected several examples of births rapidly succeeding each other which seem inexplicable by any theory other than superfoetation. He cites one case of a child born on September 12, 1849, to be followed by another on January 24, 1850, an interval of 127 days; both children survived. Such cases, he holds, are examples of superfoetation.

Other Evidence

A number of cases in which masses containing two foetuses of markedly different size and development were aborted are brought forward in support of the theory of superfoetation. In 1927 Riddell reported a case diagnosed as a missed abortion. At operation a three and a half-

months macerated foetus and placenta were discovered, together with a healthy growing foetus of seven weeks. He suggests that in this case ovulation may have begun again after the death of the larger foetus. Willis (1929) cites a case in which two foetuses estimated as being of nine and sixteen weeks gestation respectively, were aborted. A single placental mass with two cords issuing from it excluded the possibility of a double uterus. Hansen (1932) reports a similar case, in which he estimates the gestation periods at one and three months, both foetuses were quite normal and appeared only recently dead. Other such cases are reported by Langmore (1863), Tyler Smith (1856), Gustetter (1918), Föderl (1932), Studdiford (1936), Radasch (1921), and others. In the case Radasch describes an aborted mass contained two foetuses of sixteen weeks and forty days' estimated gestation in separate sacs. Neither showed any signs of maceration. He points out that the younger a foetus is the more rapidly does maceration take place, and he feels that his is a case of superfoetation, as a young foetus could not remain dead in the uterus for two months without showing marked maceration.

Superfoetation in Animals

There is much convincing evidence that superfoetation can take place in animals, though here also it must be regarded as an extremely rare event. Slonaker (1934) has produced perhaps the strongest evidence in its favour in his work with albino rats. These animals show periods of activity and alterations in the vaginal smear corresponding with ovulation. During pregnancy, which lasts twenty-two days, these characteristic signs of ovulation are absent, but in a few animals he observed periods of activity occurring between twelve and fifteen days after coitus. In these cases he presumed that ovulation was occurring during pregnancy, and accordingly left two such animals with the male till the twentieth day after the first coitus. Both animals gave birth to two normal litters, the first on the twenty-second, followed by a second litter on the thirty-seventh day after the first coitus. He feels sure that both were cases of true superfoetation. Numerous other examples of superfoetation in animals are reported. Buchanan Smith (1927) observed superfoetation in large black sows, in cases which he concludes cannot be explained by arrested development. He also cites cases occurring in sheep. Markee and Hinsey (1935) report a probable case in a cat. Other instances are cited by King (1913), who has also observed cases in albino rats.

Conclusion

We have described a case of which we think the most likely explanation is superfoetation. Unfortunately there was no scientific proof and no medical witness of the first birth, but from our observations we are both convinced that the case is a genuine one. A number of similar cases are described in the older literature but none in recent years. Thus we attribute to the fact that in modern times comparatively few cases escape the attention of doctor or midwife.

An outline of some of the literature is given, showing evidence that ovulation may occur during pregnancy, that cases of abortions containing foetuses differing widely in size and development are seen from time to time, that cases are reported in animals.

Lastly it should be remembered that since all possible circumstances are against superfoetation occurring, it is extremely rare, but there is an exception to every rule, and just because it has not occurred, or rather has not

been reported previous to a certain time, does not mean it can never occur, and it is only fair for those who would be dogmatic to consider such a case as this with an open mind

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KERATOPLASTY

BY

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During the last few years much attention has been drawn to corneal grafting by numerous publications in ophthalmological and other journals. The experimental work of Tudor Thomas in England and Castroviejo in America has illuminated the subject considerably, but has perhaps tended on the whole to emphasize the difficulties of the procedure in the minds of medical men. The demand for the relief afforded by keratoplasty is relatively small in Western countries, and this, together with the comparative scarcity of good material for transplants, limits the field and tends to make the majority of ophthalmic surgeons in the West hesitate to adopt a measure which presents so many apparent difficulties.

Conditions are different in the Near and Far East, where the demand for relief by corneal grafting is considerable and suitable grafting material is easy to obtain. Under such circumstances it is only to be expected that simplification of technique and greater rapidity of execution should be aimed at and acquired, and although reports of cases and operative detail from Eastern Europe, India and adjoining areas do not show up prominently in the literature, there is little doubt that in these areas much more practical experience has been obtained in performing corneal grafting on the human subject than elsewhere.

A Simple Technique

I am not familiar with the exact methods adopted by the various ophthalmic surgeons who freely employ keratoplasty in the East but I have evolved a simple technique which appears to hold out as good a chance of success as the more elaborate methods described in recent literature. It has the advantage that it can be undertaken confidently by any ophthalmic surgeon of experience. I demonstrated this method in Melbourne at the Annual Meeting of the British Medical Association but only on the rabbit, as a patient and donor were not available.

The trephine is used for both graft and bed. The nests of trephines made for me by Messrs Down Brothers give a fair range in size. Although I have employed a 12-mm trephine on two occasions my impression is that this is too big not because the graft does not readily take, but because anterior synechiae are more likely to occur. The formation of an anterior synechia with the back of the graft junction is the complication most to be dreaded in keratoplasty. A 3 mm trephine is too small except when one employs it for the graft method of treating fistula which I have described. The best average trephine diameter is perhaps 6 mm. There is no real need to have special nests of trephines, although the finish of the edge in specially made cylinders gives a bevel to the margin of graft and trephine hole. Cork borers such as are found in a laboratory, are almost equally good. No other special instrument is required, although of course it is preferable to use fine needles, such as Barraquers or Kalt's half circle 7 mm point to eye (maker's 12 mm), and a delicate needle holder such as that made for me by Weiss. The various steps in the procedure are briefly as follows.

The cornea chosen for grafting should preferably have a normal anterior chamber. (This is highly advisable in earlier attempts. Later the surgeon may consider what we refer to as reconditioning the anterior chamber before grafting a much more difficult and tedious procedure.) The graft should for preference be obtained from a living human eye. I have no experience of grafts obtained post mortem. Eyes blind from glaucoma furnish quite good grafts, as do eyes removed in the course of exenteration for malignant disease. It appears to be unnecessary to choose a donor of the correct blood group. The donor and recipient are placed on adjoining tables and prepared in the usual way as regards surgical cleanliness. Alkinesia and anaesthesia are established by novocain and adrenaline, pantocaine drops are given. The recipient's pupil should be small, the donor's wide, if this is possible. The necessary instruments for completing the enucleation or exenteration on the donor are left ready and an operator detailed for this work.

Preparation for Transplantation

Having decided on the disk diameter and the trephine to be used, the site is demarcated on the recipient's leucomatous cornea by a few rotations of the trephine. The stitches are then put in, taking the first bite at 6 o'clock just off the cornea where an easy but firm grip can be taken with the point of suture which does not produce conjunctival drag or puckering. One end of the thread is held, the needle with the other is carried across the cornea to 12 o'clock where a similar bite is taken. The needle is then unloaded and the free end carried back to 6 o'clock and laid beside the end already in position. This manoeuvre is repeated at points corresponding to 7.30 and 1.30, 9.30 and 4.30. It is well to do this clockwise and remember the order of placing the sutures. One observes how they will eventually be related to the graft by noting where they cross the demarcated area. The stitches are then pulled free of the demarcated area, the lids closed, and attention given to the donor who now has a speculum *in situ* and is ready prepared.

Trephining the Donor

Here the same trephine is used in a corresponding position on the cornea. Good fixation of the globe is desirable. This can be effected simply by a T shaped fixation forceps. The trephine must be used evenly and freely.

KERATOPLASTY

It is desirable to go right through and get the disk cut away clean as far as possible. There is generally a hinge left the shorter this is the better. On removing the trephine the disk opens outwards on its hinge, pushed by the contents of the globe. One should try to avoid damaging the uvea and getting pigment on the graft. If the graft tilts the hinge is easily cut free on the bevel with fine sharp scissors either fine blunt-pointed or curved with one sharp and one beaded point. A fine Stevens type of scissors answers satisfactorily.

If the trephining has been well done the hinge consists of a narrow belt of Descemet's membrane which is readily cut free. The graft must on no account be touched at this stage except with a camel hair brush or an equally innocuous piece of apparatus and then only on the epithelial aspect. Should the hinge be larger and the graft remain *in situ* it is perhaps best to complete the separation of the hinge with a narrow Graefe's knife. The knife is plunged through the gap already cut, deep into the eye regardless of the lens, which is dislocated backwards if necessary. The edge is then approximated to the hinge which is cut on the bevel as the knife is withdrawn. This is repeated. Cutting in the other direction is more dangerous to the graft, and Descemet's membrane is more likely to be rucked up. The severed disk is now received—epithelium downwards—on a Volkmann spoon encouraged by a camel hair brush. It is submerged in saline—or more elaborate physiological isotonic solution—about body heat. Should vitreous or pigment appear to be adherent to the endothelial face it is gently removed with the brush from the centre towards the periphery. The graft is treated from the beginning like a delicate histological section in process of mounting. The donor is then left to another surgeon and the process of trephining the recipient commenced.

Trephining the Recipient

Here one must proceed with great caution. With even rotation trephine as far through the cornea as possible, it is generally fairly obvious when one is nearly through. A slight tilt is then given to the trephine, which goes through followed by an aqueous escape. In this case the hinge is likely to be much larger possibly two thirds the circumference of the circle. Fortunately one can seize the disk in a forceps and deliberately sever the hinge slowly and carefully with a suitable bevel by means of the knife or scissors, such as mentioned above. The chamber is now inspected. Let us assume the pupil is contracted the iris intact and the lens clear. This is the ideal background. A little normal saline is run in from the irrigator. This temporarily gives a view towards the angle and leaves a little fluid between iris and cornea.

The Transplantation

The graft is now lifted with the Volkmann spoon and camel hair brush from its warm saline tumbled into the aperture and adjusted to its new position by a few touches of the brush. The stitches are then replaced over it in their order and tied off by means of a pair of forceps suitable for this purpose. Suture tying forceps are most desirable at this stage and Silcock's iris forceps are more useful for this than the purpose for which they were originally intended. Atropine and iodoform ointment is now placed in the conjunctival sac the eye closed, and both eyes bandaged. The patient is kept somewhat quieter than a cataract case gently examined on the third day and a little more atropine and iodoform ointment given. The graft has usually taken by this time and the

chamber formed. On the fifth day the stitches are removed. Atropine is continued. The patient is allowed to walk to inspection, and goggles are given on the eighth day.

Points of General Interest

It is undesirable here to go into all the variations that may have to be adopted if the condition of the recipient's eye is other than that suggested above—for instance, in leucoma adherens with shallow or non-existent anterior chamber and the whole grout of abnormal conditions in the anterior segment which follow gross corneal ulcers. The procedure of preliminary investigation and preparation naturally varies in every case, but its detailed discussion is more suited to a thesis on corneal plastic methods. There are a few points of general interest and practical importance which may be noted here.

A cornea that has previously been vascularized—for example, one which has been affected by interstitial keratitis or trachomatous pannus—offers better soil for a graft than a cornea free of such old vessels. This has been known for a long time, and is referred to by Elschnig.

A child is a much more difficult subject for keratoplasty than an adult.

It is important to respect Descemet's membrane; it readily lifts, buckles and detaches at the cut edge.

Anterior synechiae are liable to form in this situation. These are almost certain to be followed by opacification of the graft unless very trivial and freed early. The use of eserine is preferable to that of atropine in the grafted eye if the graft is large. Atropine may be desirable if the graft is small, this requires judgement. The main object is to avoid anterior synechiae.

The stitches must not be left too long, they may damage the graft. Five days is quite long enough. An optimum result with a clear graft and really good visual acuity is exceptional. Improvement to the extent of allowing a previously "led" patient to see large objects and get about alone is a modest expectation in straight forward cases. Patients must be warned not to expect too much, this saves disappointment. The most theatrical effects are produced by successful keratoplasty when the blind patient is made to see, but this is by no means the only indication for corneal grafting. As a method of repair it is often far superior to the conjunctival flap, the epithelial graft, and such plastic procedures.

Sir E. John Russell, F.R.S., of the Rothamsted Institute, Harpenden is to lead a group of members and friends of the Le Play Society to Russia in August. The visit will afford an opportunity for seeing something of what is being done in the application of science to everyday problems in Russia particularly in regard to farming. The general geographical features of the country, its geology, vegetation, and various social experiments will also be studied. This group will leave London on August 6, travelling via the Black Sea to Erivan in Soviet Armenia, returning via Moscow and Leningrad by boat to London. Finnish Lapland is to be visited by another Le Play group, who will stay for a short time on the Arctic coast. For geographers botanists, and geologists this presents a particularly interesting area for vacation study. The party will leave London on August 4. Similar arrangements are being made for visits to Yugoslavia (Old Serbia) where there will be special interests for the geologist and the botanist to Czechoslovakia, to the Dalmatian coast, and to the Outer Hebrides. Full details of these vacation visits can be had from Miss Margaret Tatton, director, the Le Play Society, 58, Gordon Square, London, W.C.1

SYPHILIS IN THE DIAGNOSIS AND PROGNOSIS OF CANCER

BY

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The association of syphilis and cancer has long been appreciated as one of some closeness, and much work has been done on the subject and interesting results obtained from its study. Most of this has centred upon syphilis as an aetiological factor, and is, of course, of great importance in the appreciation of pre-cancerous conditions. The practical application, however, of this work must lie with the authorities concerned in the control of venereal disease, and with those who have to treat syphilis. From the point of view of the surgeon dealing with a cancerous patient it may be of great philosophical interest to know that a history of syphilis is present, and of course if the disease is still active the patient should be handed over to the proper person for full anti-syphilitic treatment later. This paper is concerned, however, not with pre-existing syphilis and cancer, but with the danger of coexisting syphilis giving rise to difficulties in the diagnosis of cancer, and perhaps modifying the prognosis by causing delay in treatment.

The universality of syphilis, especially in the days not long past, and the multiplicity of the lesions in its later stages, has given it the place of honour as the producer of any unusual condition. In consequence one finds a tendency to think of syphilis when confronted with any curious lump or ulcer. For the older generation of surgeons it may have been common to find the lesions of tertiary syphilis but to a younger generation they are of comparative rarity, and it is the fostering of this newer outlook, especially with regard to the diagnosis of cancer that I wish to encourage. If a gummatous lesion is not diagnosed it may be very gratifying for someone more experienced to point out the obvious nature of the lesion and the ease of its cure, but no great harm will be done by any delay incurred.

Two Illustrative Cases

An outstanding example comes to mind in the case of a young man, aged 21, who was seen in October 1934, with a swelling in the right temporal region of four months duration.

The swelling had appeared originally with a little pain a week after a local injury since when it had steadily increased in size with slight variation. The swelling was diffuse a little tender and rather boggy. It was incised but no pus was obtained and a radiograph did not show any changes in the underlying bone or other abnormality. The patient returned two months later with the mass increased in size and it was treated with interstitial radium. This had no effect and a month later the mass was excised and was shown by histological examination to be a gumma. With this knowledge a Wassermann reaction was carried out and proved to be positive.

Indeed a sorry tale, all of which could have been obviated by a biopsy at the very beginning but the great fact remains that the man is alive and has now had a full course of anti-syphilitic treatment.

A man aged 26 was sent to hospital with a diagnosis of carcinoma of the tongue confirmed by biopsy and with a negative Wassermann. The lesion however did not look neoplastic and a further biopsy was performed which was

reported as probably gummatous in spite of the negative Wassermann. This reaction was repeated and proved positive and the patient was given potassium iodide. Rapid improvement resulted and was followed by a full course of proper anti-syphilitic treatment. In this case the true diagnosis was arrived at first by experienced clinical observation but ultimately by the opinion of a good histologist.

On the other hand, if a cancerous lesion is treated as syphilitic, then the real diagnosis will probably only be evidenced by the appearance of metastases, by which time the outlook is very gloomy. Many patients are unfortunate enough to suffer from cancer and have serological evidence of syphilis. In their cases either a false diagnosis is made or doubt left owing to the positive Wassermann reaction, and valuable time may be lost while potassium iodide is given, or even a full course of anti-syphilitic treatment.

Diagnostic Difficulties in Oral and Pharyngeal Cancer

It has been found that the difficulties of diagnosis seem particularly great in oral and pharyngeal cancer or in associated neck glands, and it is with special reference to such cases that I write, although I believe my remarks have a very general import. In the first place, cases are seen in which the diagnosis of the lesion has been uncertain, and the practitioner has fallen back on syphilis or cancer as possible causal agents. It is very easy to take blood for a Wassermann reaction, and if this should happen to be positive—and there is a greater possibility of such being the case in a cancer patient—then potassium iodide will probably be given. Now it is well known that malignant lesions, especially those of the mouth, do show evidence—though, of course only temporary—improvement under potassium iodide so that it is possible that the combined influence of a positive Wassermann and improvement under potassium iodide might lead to a full course of anti-syphilitic treatment being started. This is perhaps a good programme for the treatment of a gumma, granting that to a surgeon familiar with the manifestations of tertiary syphilis the lesion would probably have been obvious in the first place. Owing to more efficient control and early treatment of syphilis such lesions and such surgeons are becoming rare. If, however, the lesion be not syphilitic, but cancerous a tragedy will be well on its way to occurring. Such a danger is very real and is brought forcibly to notice when one sees how closely a cancer can at times mimic a gumma.

A case in point was that of a male aged 54 who was seen in June 1936 with an ulcer in the middle line of the middle third of the dorsum of his tongue about 3 cm. in diameter. The base was formed by a yellowish sloughing mass but the edge was slightly raised and hard. There was no fixation of the tongue and no enlarged neck glands were present. The surrounding tongue and palate were leukoplakic. The ulcer had begun as a little lump six weeks previously and had not caused any pain. A tentative diagnosis of gumma had been made and many who saw the case agreed that this was correct. Owing however to the suspicious nature of the edge a biopsy was asked for and at the same time a Wassermann reaction was carried out—and incidentally reported as positive. The histological examination revealed a non-keratinizing squamous carcinoma. Radium treatment was started and later a block dissection of the neck was performed.

In such a rapidly growing tumour the outlook could not be good and the patient has now a recurrence in his neck but any delay which would surely have occurred in the absence of a biopsy, would have made things very much worse.

The Question of Biopsy

It is better to be ever thinking of cancer at the outset, and to make the diagnosis by biopsy if there is doubt. Should there then be a suspicion of syphilis, the question of cancer having been ruled out, let a Wassermann reaction be confirmatory only and hand the patient over to the proper person for full treatment. An objection to this line of investigation is the danger of the biopsy enhancing the possibility of metastasis. Personally I have not seen or heard of any damage resulting, but in view of other better qualified opinions I must acknowledge the possibility. Perhaps the diathermy needle helps to minimize this risk and in dealing with the more malignant anaplastic carcinomata and sarcomata, in which the danger is supposedly much greater, a dose of γ rays might be given immediately before or after the biopsy. The extreme importance of early accurate diagnosis is, however, so great that some risk is justifiable. We are left with the possibility in the highly malignant cases of using irradiation as a means of diagnosis as well as treatment should a biopsy really be contraindicated. A rapid resolution will suggest the continuance to a full course of treatment; no response will demand a diagnosis.

A second type of case occurs in which the lesion is or should be recognizable as a cancer, but the patient is found to have a positive Wassermann reaction. In many clinics such an investigation is carried out as a routine on all possible cancer cases. In the past this was of importance for completeness of records or for statistics, which I venture to suggest have now proved the aetiological relationship of the two conditions. When done in a cancer clinic or under the auspices of one who sees many cancer cases and who is accordingly ever on the look out for neoplasms little harm can occur, but if done under less favourable circumstances there may be a tendency to treat the syphilis first and see what happens to the suspect lesion. In such an event I am of the opinion that really valuable time is lost. The cancer must be treated first; after all, it does not take long, and then the patient can be handed over for full and proper anti-syphilitic treatment. Remembering that there is real danger of a coincidental positive Wassermann reaction throwing doubt upon the diagnosis of a cancerous lesion, one wonders whether anything is gained by its routine performance in this type of case. This is really of vital importance because we are dependent for better results upon earlier diagnosis and this earlier diagnosis is going to be made, not by cancer experts, but by the general practitioners, who must at all costs play for safety and think of cancer first. It is not suggested that the general practitioners should themselves perform a biopsy upon all doubtful lesions because a surgeon of greater experience may be confident of the diagnosis on clinical grounds. But if after consultation some doubt remains, then biopsy must be urged and should be performed by one who is in close co-operation with a pathologist.

A final possibility is that in leaving the syphilis untreated during the treatment of the cancer the prognosis may be worsened, but I do not know of any evidence to this effect and do not see any real reason why anti-syphilitic treatment should not be started immediately in any case. That however is not a question for the surgeon or radiologist who is dealing with the cancer, but for the venereologists and I maintain that the cancer has the prior claim to treatment.

Clinical Memoranda

The Aetiology of Femoral Hernia

When operating recently on a man of 59 for strangulated femoral hernia I found a condition that interested me in the light of the theories of origin.

CASE REPORT

This particular hernia had existed for thirteen or fourteen years; its development had been gradual, and up to the time of the patient's present illness it had been reducible. The onset of pain was sudden with vomiting. I saw him about three hours later. Efforts at reduction failed and operation was undertaken. Incision over the tumour showed an engorged purple mass, having a superficial resemblance to bowel; it proved however, to consist of lobules of fat. It was followed up to a narrow neck, constricted as usual by the sharp edge of Gimbernat's ligament. After prolonged dissection the sac was discovered and opened inside the strangulated mass and was quite empty. The tumour consisted of extraperitoneal fat on the outer surface of an empty hernial sac. (It is of interest that, when exposing the external abdominal ring in the course of operation, a lobule of extraperitoneal fat projected here also and was sliding freely up and down the inguinal canal.) The sac was tied off in the femoral canal, the stump drawn up above Poupart's ligament and stitched to the external limb of the conjoined tendon; the canal was then closed by suture through conjoined tendon, Cooper's ligament, and external oblique at the same time bringing the medial wall of the internal abdominal ring beneath the cord into apposition with the upper and internal surface of the external oblique, as for Bassini's closure.

COMMENTARY

I record this case as it seems to support J. Philip Buckley's (1934) 'acquired sacular' theory of origin, by which, as he supposes, extraperitoneal fat protrudes through the femoral ring, expands in the loose tissues of the thigh, and draws down further lobules and eventually a small pouch of attached peritoneum. A time comes when the expanded fatty mass is unable to return through the narrow neck. It would seem obvious that in my patient at any rate this had been the course of events. R. Hamilton Russell (1923) asserts that femoral sacs are invariably congenital, acquiring contents at varying periods of life, and that removal of the sac is therefore the only treatment necessary. In cases such as mine, where the sac appeared to be an unimportant adjunct to a mass of extraperitoneal fat, it seems doubtful if this treatment would be adequate. The theory also fails to explain how recurrent femoral hernias occur after operation and removal of the sac. Leslie W. Tasche (1932), on the other hand, finds that these sacs are never congenital. There is at least no record of their discovery in a foetus or a newborn infant. He also holds that traction rather than pressure is the primary cause of the hernia, rejecting Murray's theory of abnormal gubernacular pull, for which there seems very little evidence, and believing that the primary escape is of a fat lobule, a sac and its possible contents being drawn down subsequently.

When one comes to consider treatment, it seems at least doubtful whether removal of the sac, without any further precautions, would in the case here recorded have been an adequate safeguard against recurrence or redevelopment.

Bourne Lincs

W B R MONTEITH F.R.C.S.Ed

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Reviews

FACIAL PAIN AND FACIAL SPASM

The Facial Neuralgias By Wilfred Harris M.D. F.R.C.P. (Pp 109 15 figures 7s 6d net) London H. Milford Oxford University Press 1937

Les Spasmes de la Face et leur Traitement By Th. Alajouanine and R. Thurel (Pp 88 12 fr) Paris Masson et Cie 1936

Dr Wilfred Harris's well-known book on *Neuritis and Neuralgia* is a mine of clinical information about pain in all parts of the body. His new book, *The Facial Neuralgias*, is a further attempt at classification and differential diagnosis of the many and baffling types of facial pain. Naturally trigeminal tic, in the treatment of which by alcoholic injection Dr Harris has been one of the pioneers, bulks large in this new volume, about half of which is devoted to this subject. Dr Harris, besides reviewing the aetiology and clinical features of trigeminal neuralgia, discusses the indications for both alcoholic injection and surgical treatment, and describes the technique of the various routes of injection and the after-care of the patient in detail. He pays special attention to migrainous neuralgia, the recognition of which as a clinical entity is due mainly to his own observation and which he has treated successfully by alcoholic injection. He also describes the rarer forms of facial neuralgia, such as geniculate and glossopharyngeal neuralgia, and draws attention to the important but as yet incompletely explored field of pain of sympathetic origin. Since the book also includes such common causes of facial pain as disease of the teeth and nasal sinuses, it is a very complete review of the subject. The older clinical knowledge is combined with an exposition of recent advances in diagnosis and treatment, and the whole is diversified with brief reports of cases and amusing experiences. As a study in diagnosis it will appeal to a large medical public, though when it comes to the application of the technique of alcohol injection of which Dr Harris is himself a master many will be found to sympathize with the neurosurgeon quoted by Dr Harris as saying that when he injected the Gasserian ganglion there were two terrified people one at each end of the needle. The production of the book attains the high standard expected of Oxford Medical Publications.

In *Les Spasmes de la Face et leur Traitement* Drs Th. Alajouanine and R. Thurel discuss the differential diagnosis and treatment of various forms of involuntary movement confined to or predominating in the face. Under the term peripheral facial hemispasm they describe the spasmodic muscular contractions often seen after facial paralysis and the myoclonic movements which they term *hémispasme facial autonome* but which are usually known in this country as facial myoclonia. The treatment advocated for the latter condition is the injection of the facial nerve beneath the zygoma with 70 per cent alcohol. Under the term facial spasms of central origin the authors include facial tic, facial Jacksonian epilepsy, chorea athetosis and blepharospasm which they regard as being of organic origin. For blepharospasm they recommend bilateral alcoholic injection of the superior branch of the facial nerve. This little monograph concludes with a bibliography of seventy-four references.

PRACTICAL ORTHOPTICS

Practical Orthoptics in the Treatment of Squint By Keith Lyle M.A. M.D., M.Chir. M.R.C.P., F.R.C.S., and Sylvia Jackson (Pp 212 64 figures, 5 plates (4 coloured) 12s 6d net) London H. K. Lewis and Co 1937

The work of the "Orthoptic Clinic" of the Royal Westminster Ophthalmic Hospital is the theme of this book by Mr Keith Lyle and Miss Sylvia Jackson. The clinic was started by Miss M. C. Maddox, daughter of Dr E. E. Maddox of Maddox rod fame. The authors of the book give a clear and yet detailed account of the methods of fusion training, and have set themselves to show which particular types of squint benefit by training and those in which such treatment is merely a waste of time. They rightly insist that such training is not to be regarded as a substitute for the correction of refractive errors, nor for operation, although in a large proportion of cases orthoptic treatment may cure a squint without recourse to operative adjustment.

The authors emphasize the point that this branch of work must be carried out by those who have a special knowledge of the subject, real harm may be done otherwise. To protect patients an Orthoptic Board has been formed regulating the training and qualifications of orthoptists. Candidates for the qualification must be of school certificate or matriculation standard of education, and must study for one year in the orthoptic centre of one of the hospitals recognized by the board at the end of which time they are required to satisfy the board's examiners as to their efficiency.

CHEMISTRY, ORGANIC AND INORGANIC

Essential Principles of Organic Chemistry By Charles S. Gibson O.B.E. M.A. Sc.D. F.R.S. (Pp 548 18s net) London Cambridge University Press 1936

Inorganic Chemistry. A Survey of Modern Developments By Sir Gilbert T. Morgan D.Sc. Sc.D., LL.D. F.R.S., F.I.C. A.R.C.Sc. and Francis Hereward Burstall M.Sc. A.I.C. (Pp 462. 15s net) Cambridge W. Heffer and Sons 1936

Gibson's *Organic Chemistry* is written more especially for the particular class of students who are later to engage in biochemistry, pharmacology, and kindred sciences. Among the textbooks of organic chemistry in modern use there are some which are so much alike that any of them could be exchanged for another without gain or loss. This work differs from many others in that it bears the impress of the author's individuality. This is a commendable feature, and when the author knows the special ramifications of his subject which are of peculiar interest to his own class of students, and when, moreover, he has a gift for the presentation of facts in a clear and connected form the teaching cannot fail to carry with it the teacher's spirit of enthusiasm. By this quality in a textbook the student's work is rendered easier and more profitable. Gibson's book fulfils this characteristic. It is replete with the information needed by those students for whom it is intended arranged in sequence to form a coherent system and explained in the clearest language. The omission of those branches of organic chemistry which are not pertinent to the intended course of study, an omission highly necessary in this case, has been effected with a nice regard to the length of pursuit of the less relevant branches and the point of their interruption. The omission of the terpenes and certain other sections has permitted a useful expansion of more important matters.

Morgan and Burstall's *Inorganic Chemistry* is a general treatise embodying the more important discoveries.

recent times. The subject is approached from the modern point of view regarding the interatomic relationships comprised in the terms electro-valency, covalency, and co-ordination linking. After an introductory chapter illustrating the meaning of these terms there follows a series of chapters one allotted to each of the periodic groups of elements. Other chapters deal with subjects chosen for their special interest, such as the corrosion of metals, compounds of metals with other metals, and the metallic carbonyls. The nature of the subject matter is diversified and embraces all kinds of material in many different aspects. It would amaze chemists of an older school to read of varieties of gaseous hydrogen designated as para and ortho. Is there a dearth of inventive genius among chemists in the matter of nomenclature? The terms para and ortho were already much overworked. Also the utilitarian school will eagerly learn of the use of helium in diving apparatus, helium having less solubility than nitrogen does not give rise to the release of bubbles in the blood during decompression of the diver's atmosphere. The method of treatment of the subject is directed to an explanation of the properties of the elements and their compounds on the lines of the most modern theories, and much valuable information is given regarding the uses that are being made, both in science and in the arts, of the knowledge founded on the newly discovered properties of elements and their compounds. Precise details are in general omitted but references to original papers supply pointers for a more complete study of the matters discussed.

ORTHOPAEDIC HISTORY

Source Book of Orthopaedics. By Edgar M. Bick, M.A., M.D. (Pp. 376, 18s.) Baltimore: Williams and Wilkins Co. London: Baillière Tindall and Cox, 1937.

It is always melancholy to contemplate waste of human effort. If it is a matter of books one may find an author who is still busily writing about a lost or dead cause, or one who has obviously been at great pains to collect good material and then has not known what to do with it. Dr Edgar M. Bick, the author of a *Source Book of Orthopaedics* comes into the latter category. He must have read hundreds of papers, and he has undoubtedly got together a mass of valuable information. But it is presented so baldly. Baedeker's style is superb in a condensed guide book but it is not suited for a historical work. Here are two typical passages for comparison.

The E window is by Burne-Jones. On the N side are a series of interesting monuments. Sir George Nowers (d. 1425) and Lady Montague (d. 1353) with fine effigies. The Prior's Tomb (ca. 1300) and the so-called Shrine of St. Frideswide (15th or 16th cent.) more probably a watching-chamber. On the pier at the foot of the monument of Sir George Nowers is the tablet of Robert Burton (d. 1639).

In Germany the method gained rapid acceptance. Vulpius,¹⁷ and Holmeier¹⁸ in 1888, Peterson¹⁹ in 1889, Schussler²⁰ in 1890 and Dollinger²¹ in 1891 all reported cases in which this procedure had been attempted with varying degrees of success. Giordano²² in 1890 and Bidone²³ in 1894 were among its early advocates in Italy.

True paragraphs of this kind are separated by patches of discussion or narrative, but they turn up with depressing regularity. What is needed is a story of movements in this fascinating history of orthopaedics, the slow evolution of principles, accounts of the work of the great pioneers—perhaps with the detailed references as footnotes or an appendix. But it may be that this is not what a 'source book' should do.

The author's style is not calculated to attract the reader, we find it uneasy and heavy. And there are shocks all

along the way: coupe for coup, capitis femoris for head of the femur (nominative), phlange (not in the Oxford Dictionary) for flange, diversified meaning different, and Waterloo fought in 1814. Nor does there seem to be any clear idea as to when medical history ends. According to Dr Bick, it includes work being carried on at the present time, good work perhaps, but not yet of proven value. Yet with all these faults the book is valuable, though painfully difficult to read. An astonishing amount of useful information has been collected, and this alone justifies recommendation of the book as a work of reference. We hope that a second edition will soon be called for, and that the opportunity will be taken for drastic revision on more rational and more historical lines. We hope that the author will not be offended if we advise him to study again Keith's *Menders of the Maimed*.

COMPONENTS OF HUMAN TEMPERAMENT

When Temperaments Clash: A Study of the Components of Human Temperament. By Murdo Mackenzie, M.D. M.R.C.P. (Pp. 227, 7s. 6d. net.) London: T. Murby and Co., 1937.

The mediocre performance which most of us put up in this complicated and bustling modern world is largely the product of a harried nervous system. If we knew how to protect our nerves from the powerful discordant stimuli they are always receiving we should be able to keep calm, hold ourselves together, maintain our balance, and time our efforts—whether at golf, investments, or human relationships—so that they would be effective. Dr Mackenzie, whose name is already well known to readers of this *Journal*, sees civilized men placed between the two enemies of anxiety and apathy, and thrown willy nilly from one to the other. Man has gained a great deal of power over the unimaginative world, but is still a child in his dealings with the imaginative world. He can control and annihilate animals, but cannot find the proper way to live with his fellows. The result is a conflict, varying in degree but practically constant which throws both tyrant and victim into a state of nervous disequilibrium or neurotic instability. Dr Mackenzie describes this state and its many symptoms in vigorous ordinary language, full of commonplace instances. His analysis of anxiety and apathy in the life of an ordinary business man who lives between his office and his suburban house will bring home for the first time to many medical and more lay persons the real nature of neurosis. He then does what few writers on neurosis do: he suggests a solution, and sketches its working out in the life of a craftsman, an advertiser, a dealer, and an administrator. In his last chapter he gives valuable hints on the means by which a patient can obtain temperamental release by learning to work along the line of his own temperamental pace and sense of value. Even with a bad start, the author holds, the gift hitherto concealed can with knowledge, courage, and sincerity be changed into the gift released.

COSMETIC DERMATOLOGY

Cosmetic Dermatology. By Herman Goodman, B.S., M.D. (Pp. 391, 36s.) London: McGraw-Hill Publishing Co., 1936.

We have often called attention to the fact that the cosmetic applications of dermatology are much neglected in this country. Such is not the case in America. Dr Herman Goodman, who has long devoted himself to the cosmetic aspect of cutaneous disease, has now produced a valuable treatise which includes much information that will be found very useful not only by medical practitioners

interested in skin disease, but, in particular, by that large class of people who in the United States appear to be known as 'beauticians'. The book is divided into two parts: the first consists of a dictionary of ingredients employed in cosmetic prescriptions, while the second part comprises a number of chapters on the many cutaneous diseases that are of cosmetic importance and also on miscellaneous matters such as lipsticks, face powders, cold creams, pigmentation of the skin, etc.

One of the most valuable features of Dr Goodman's book is the immense collection of cosmetic prescriptions he has gathered together, each of which he claims to have tested personally. One wise conclusion we heartily endorse: every physician should know what his prescription looks like when it makes its appearance as a lotion or an ointment. This is a point often neglected in the instruction of students. The formula is written out, the patient is sent off with it to the hospital dispensary, but the actual completed preparation is never seen by the physician or his class. Naturally in cosmetic therapeutics the elegance of the finished product is of more importance than in other branches of dermatology, but in none of them should it be neglected. Specimens of ointments and lotions commonly used might well be kept in the out-patient department so that students may become familiar with the outcome of their own prescriptions.

Although the volume before us will undoubtedly be of use to dermatologists, we can recommend it still more strongly to the professional 'beautician', who will find in it preparations suitable for every cosmetic purpose, and also much good advice which should prevent him from undertaking the responsibility for treating conditions that ought to be entrusted to a physician. Altogether a somewhat unconventional but nevertheless valuable work.

Notes on Books

The fifteenth edition of Warwick and Tunstall's *First Aid to the Injured and Sick* (Bristol: J. Wright and Son, 2s. 6d.) which has been edited by Dr F. C. NICHOLS, is described as an advanced ambulance handbook and is such as of great value. The chief alteration in the present edition is the greatly increased space given to the chapter on gas poisoning in warfare. This subject is receiving intensive study by the St John Ambulance Brigade which is training its officers and men in anti-gas precautions and the treatment of casualties. A new section on inflammation and sepsis aims at giving the first aid student a clearer idea of what these conditions mean and how they should be dealt with. The glossary has been doubled in size and various minor changes have been made in the text.

Le Métabolisme de l'Azote: les Problèmes Biologiques by Professor F. F. TERROINE of Strasbourg is No. 20 of the series of monographs which are being published by the University Presses of France (80 fr.). The author dealt with another section of nitrogenous metabolism in a previous monograph. He now takes up the digestion of protein under four heads: the utilization of proteins; the nature of the materials absorbed; the processes of digestion and absorption; and the mode of action of the digestive ferments. The author gives a detailed and critical account of his subject and a special feature of the monograph is the wide range of sources from which he has obtained his information. In addition to clinical and laboratory evidence he also has made use of information derived from work feeding and consequently gives an exceptionally full review of protein digestion in animals. The section on enzymes deserves no notice because the author

has done much to minimize confusion by distinguishing clearly between results obtained from the study of digestive juices and those obtained by the maceration of gland tissue. In his treatment of the subject Professor Terroine has endeavoured to follow the tradition of Claude Bernard—that it is the primary task of the physiologist to observe, describe, and analyse the phenomena that actually occur in living animals. He is a well-known authority on metabolism, and this volume gives a clear and well-balanced account of a very important aspect of nutrition.

Preparations and Appliances

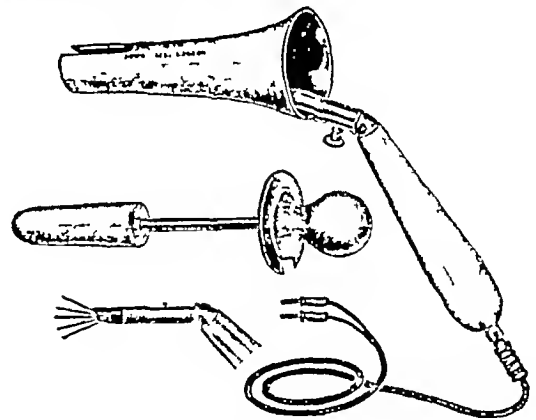
MODIFIED CLIFTON'S PROCTOSCOPE

MR A. LAWRENCE ABEL, FRCS, writes

This proctoscope is a modification of the already popular Clifton's proctoscope. It has been in use for two or three years and has proved very satisfactory. The chief points about it are:

It is long enough to allow a complete inspection of the anal canal in the fattest patient.

The fenestrum occupies about one third of the circumference of the distal third of the instrument. This allows the careful inspection of approximately one quarter of the anal canal and at the same time keeps the remainder of the passage away from the part under examination.



Its passage is completely guarded and rendered quite smooth by a well-fitting obturator.

Its proximal end is wide enough to allow clear vision and the easy insertion of instruments, needles, etc.

Its handle carries a light which shines into the lumen of the proctoscope and does not confuse the eye of the examiner.

Its interior is dulled, giving no reflection from the walls but an excellent view of the pile-bearing area.

The whole is easily cleaned. It is fitted up and taken to bits in a second and has proved a most useful instrument. It is strongly and lightly made with a good finish by Messrs Down Bros.

LIVER EXTRACT FOR PARENTERAL USE

'Examen' (Glaxo Laboratories Ltd.) is a concentrated liver extract for parenteral use. The makers claim that it is the purest liver extract hitherto prepared on a manufacturing scale. The preparation only contains between 5 and 7 mg solids per cubic centimetre, yet 2 c.c.m. contain the haemopoietic factor extracted from 100 grammes of liver. Clinical tests have shown that 2 c.c.m. doses at fortnightly intervals suffice for maintenance in pernicious anaemia. A special advantage of the preparation is that it is painless on injection and does not provoke allergic reactions. It can if necessary be administered intravenously.

THE PAGET TRADITION

PROFESSOR GREY TURNER'S ADDRESS

The eleventh Stephen Paget Memorial Lecture under the auspices of the Research Defence Society was delivered at the annual general meeting of that body on June 15 by Professor G. GREY TURNER. The Hon. Sir ARTHUR STANLEY was in the chair, and LORD LAMINGTON the president of the society, who had left the nursing home that day following upon an operation, put in a brief appearance.

Professor GREY TURNER took as his subject What Research Owes to the Paget Tradition. Stephen Paget, he said, was a professional man nurtured in an academic society who knew and highly respected those whose lives were devoted to the search after truth by experiment. His father, Sir James Paget, had also been interested in the development of surgery by the experimental method, and as long ago as 1881 contributed a thoughtful paper on the subject to the *Nineteenth Century* in which he compared the cruelty inflicted on animals in the name of sport and to serve various utilitarian purposes with the occasional cruelty then inflicted on animals in scientific experiment. Sir James Paget in that article summed up the general position in one sentence "Speaking generally it is certain that there are few portions of useful medical knowledge to which experiments on animals have not contributed."

Stephen Paget, the lecturer continued, was one of the kindest and most humane of men, a nature extremely sensitive, with a burning desire to discover truth and so relieve suffering. He recalled how he had lived with his parents in the warden's house of St Bartholomew's where his mother was distressed by the sounds of suffering which occasionally reached her from the operating theatre in pre-anæsthetic days. Paget's zeal for research and its defence led to a meeting being called in 1908 at his house in Harley Street at which the Research Defence Society was formed with Lord Cromer as its first president and Paget as its secretary. Until his death in 1926 Paget devoted a large part of his time to its affairs. To no single person had the society been so much indebted, although no one reading Paget's own history of the society would imagine that he himself had taken any considerable share in its work.

Stephen Paget A Knight of the Pen

Who was this Paget? He was born in 1855 when his distinguished father was struggling for recognition in the surgical world of London and he was the only one of four sons to follow his father's profession. From 1896 he was surgeon to the Ear, Nose and Throat Department of the Middlesex Hospital, but in 1910 largely for health reasons he resigned his hospital appointments and for the most part gave up private practice. In the early part of the war, when some misguided people were endeavouring to dissuade soldiers from inoculation, Paget threw himself into a counter-campaign, delivered innumerable lectures in many parts of the country, and used his pen also to good effect. He was a first rate organizer, a good speaker, but a little too impetuous to be a real orator above all else he was a writer. He always wanted to get at the real facts of the case and put them clearly before those whom he addressed. He had something of the driving force of a Savonarola.

As an operating surgeon he was not specially gifted and was far too sensitive and of too delicate a constitution for the stern wear and tear of a surgeon's life. But he was a pioneer in surgery and his book on *Surgery of the Chest* published in 1896 was one of the earliest to deal with that subject alone. It was no secret that he disliked operative work and he was temperamentally unsuited for the sudden emergencies with which a surgeon was called upon to deal. In writing he was unexcelled. His *Memoirs and Letters of Sir James Paget* was a truly great book, one that should be on the shelves of every

doctor, a classic of biography, disproving the suggestion that a biography should not be written by a near relative. His *Life of John Hunter* was also a perfect piece of biography, well documented and beautifully written, while his *Confessio Medici* (1908) should rank as one of the most remarkable works ever written by a medical man. Somebody had said that Charles Lamb might well have been glad to have been the author of some of Paget's essays. His *Life of Victor Horsley* was a most successful biography of another great exponent of the importance of research in medicine, and Paget's achievement was the more remarkable because he did not agree with everything in which Horsley believed. Another life which he treated with great success was that of Ambroise Paré. An essay on Paré was also included in *Confessio Medici* which the lecturer said should be read and re-read time and again.

Sir James Paget

In everything that Stephen Paget did some influence of the family tradition was to be found. He was immensely influenced by the example of his parents. To get an idea of what that tradition meant to Stephen something must be learned about the life of his father, one of the best-known London surgeons of the Victorian era and one of the most beloved of all time. Professor Grey Turner sketched briefly the career of James Paget, how he overcame the difficulties and handicaps of an impecunious youth, how he had an intuition for research what glory he brought to St Bartholomew's. He recalled an address which he gave to the Abernethian Society when he was eighty years of age. It contained the following "It is often said or implied that a man in our profession cannot be both practical and scientific. Science and practice seem to some people to be incompatible. The like of this has long been said, and it is utter nonsense."

James Paget was a man of many qualities. He was punctilious, averse from quarrels and yet, in defence of a righteous cause adamant, he was also a man of great family affection, insisting on having his children around him even when most closely engaged. He was the last great medical orator of his generation. His Hunterian Lecture delivered sixty years ago was still looked upon as a masterpiece in that respect. Gladstone, himself the greatest orator in the political field, said that mankind might be divided into two classes—those who had heard Paget and those who had not. It was easy to see what an example he must have been to his children.

"In reviewing the long history of scientific research" said Professor Grey Turner in conclusion "one sees how often it has sadly lacked protectors for its workers, for they themselves have been always so intent on their tasks that very few have bestirred themselves in their own defence. But it is a fine thing when someone not actively engaged in research puts on the armour and acts as champion for his maligned fellows. Such was Stephen Paget. James Paget during his lifetime did much for the promotion of research but nothing more valuable than the stimulus he gave to his son for his example fired the young man with his own indomitable ardour from which this society has so greatly profited."

Professor A. V. HILL and Professor C. LOVATT EVANS briefly spoke to a vote of thanks and a presentation was made by the chairman to Miss Burgess Brown, who has been secretary of the society since 1911. In the annual report which was adopted at the meeting attention was drawn to the fact that the opponents of orthodox medicine are making increasing use of the machinery for propaganda which the anti-vivisection societies have been able to organize. A campaign against accepted measures for preventing disease particularly diphtheria, had been brought to the notice of the society during the year. In certain areas the work of public health officers had been rendered more difficult and more costly to the community by these attacks. They had been met by a leaflet written by Sir Leonard Rogers 10,000 copies of which had been sent to medical officers of health in various parts of the country.

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NUTRITION IN AUSTRALIA AND
IN INDIA

The third report of the Advisory Council on Nutrition of the Commonwealth of Australia (over which Dr J H L Cumpston, Director General of Health, presides) is an interesting document,¹ revealing an admirable comprehensiveness of research activities on a subject of the first importance. It recounts the progress that is being made in the collection, compilation, and analysis of family budgets in the various States of the Commonwealth—an enterprise that can scarcely fail to yield valuable results. It deals with investigations made and to be made, into the prevalence of malnutrition in school children with a proposed investigation into the mineral contents of foodstuffs, of water supplies, and of special diets in common use and with popular education and propaganda. In regard to the last the Council recommends that a competition be held with a substantial prize for posters illustrating certain phases of nutrition—an idea that might well be followed in other countries.

An interesting report on a nutritional survey of school children in South Australia, by Dr F W Clements, is reproduced in full. It will repay study by those called upon to make such surveys. He found that among the 925 children examined nutrition was unsatisfactory in 135 or 14 per cent. Rickets was detected in 61 children representing 6 per cent of the total population examined. Dr Clements states that 'rickets was undoubtedly responsible for the unsatisfactory nutrition of a number of children. But is it not that the unsatisfactory nutrition was responsible for the rickets?' The numbers of children having carious, stopped or missing teeth varied within relatively wide limits in different parts of South Australia.

In those schools situated on the calcareous belt the incidence of affected mouths was 37 per cent against 65 per cent and 55 per cent in the schools in the shale belts. Dr Clements refrains from drawing conclusions in regard to the significant difference, contenting himself with assuming that some external factor or factors have been responsible for these differences.

In another appendix to the Council's report Professor Harvey Sutton has much of interest to say both in regard to the definition of the term "malnutrition" and to the estimation of malnutrition in populations. A complete review of the tests for malnutrition is he affirms, long overdue. Speaking of the numerical methods of estimation of malnutrition he makes the pertinent remark that "although many such numerical methods have been attempted, all have succeeded in part, failed in part, and it is likely that any future attempts will also fail if it is thought that the complex known as malnutrition can be expressed within a single formula, and that every individual who is imperfectly nourished can be automatically defined by a single qualitative test." He outlines a method of investigation of malnutrition in school children which the Council, while recognizing the difficulties associated with such an inquiry, agreed to adopt. Two resolutions were passed—the first dealing with the provision of a daily supply of milk for school children and the second with the desirability of formulating standards for bread. The Council was of opinion that the provision of milk for school children "would be a measure of great public health value. Its ultimate effect in reducing the amount of hospitalism would probably be very great." Because of its format the report is awkward to handle and difficult to read especially when it has been through the post.

Within recent years the Government of India has issued short official statements dealing with public health matters. Health Bulletin No 23 on the nutritive value of Indian foods and the planning of satisfactory diets² is the latest addition to the series. It has been prepared by the director and staff of the Nutrition Research Laboratories Coonoor, who are to be congratulated both on its matter and on the manner of presentation. Its purpose is to summarize the available knowledge about the nutritive value of Indian foodstuffs for the benefit of public health workers, medical practitioners, superintendents of residential institutions and others interested in practical dietetics. This purpose it admirably fulfils. Analyses including the calcium, phosphorus, iron and vitamin contents of over 200 foodstuffs are given with the aid of which it is possible to work out 'balanced diets' for individuals or groups. The meaning of the term 'balanced diets' is made clear and a brief statement outlining modern dietetic principles is given. An example shows how the average ill-balanced Indian diet may be made satisfactory at relatively little extra cost. This is effected by substituting whole or lightly milled cereals for part of the

highly milled rice in common use, and by adding milk, green leaf vegetables, and fruit to it. When available funds do not admit the addition of even half a pint of whole milk to the diets of necessitous children, butter-milk or skimmed milk reconstructed from skimmed milk powder, which is considerably cheaper, may be supplied. Careful experiments have shown that the giving of 8 ounces of skimmed milk daily to children fed on an average ill balanced Indian diet "results in a great acceleration of growth and a great improvement in health and well being." Emphasis is laid on the great value of fresh green vegetable foods—the fresher and greener the better, the cheaper varieties—amaranth leaves, coriander leaves, drumstick leaves—being as nutritious as the more expensive ones, such as lettuce. In this connexion we are reminded of such valuable vegetable foodstuffs to be found in country districts of Great Britain, as turnip tops, dandelion leaves, nettle tops, and nasturtium leaves. The nutritive value of pulses and of undermilled cereals is insisted upon, while an intake of animal protein well below that usually recommended is regarded as sufficient.

There are many things in this Bulletin that have an interest for public health workers, medical practitioners, and others in this country as well as for their brethren in India. Its chief lesson is that it is possible to ensure good nutrition, health, and well being on diets composed of whole cereal grains, milk and its products, green leaf vegetables, pulses and fruits without, or with but little, consumption of meat. The Bulletin is certainly worth the two annas or threepence it costs, and the Government of India has performed a notable public service in making it available at so trifling an outlay.

THE GENERAL REGISTER OFFICE

On March 20, 1837, the British Medical Association met in Southwark under the chairmanship of Mr George Webster of Dulwich who reported, among other things that he had had an interview with Mr Chadwick the secretary to the Poor Law Commissioners, on the medical aspects of the Poor Laws and that a petition was to be presented to Parliament relative to an amendment of the General Registration Act "in which, although there was a column for the registration of deaths, yet there was no provision made for ascertaining accurately, the cause of death of which it was very desirable to have exact returns". Whether the proposal emanated from Edwin Chadwick as has been claimed, or was suggested to him by the British Medical Association does not

appear, but it is interesting to recall that the Association which honoured William Farr on retirement nearly fifty years later took an active part in procuring the amendment which made his life work possible.

Perhaps there is no Government Department the growth of which has been so universally approved and in which the medical profession can legitimately take so much pride as the General Register Office. It is natural that in the publicity attending the present celebration more prominence should be given to such general topics as the romance of marriage registers than to more statistics. But the medical reader's point of view will be different. The harmonious co-operation of the staff of the General Register Office and the practitioners of the country was the foundation of medical statistical knowledge. The great man—whose name will be so rarely mentioned in the newspapers this week—who created medical statistics had himself been a general practitioner. Intellectually bold, almost to temerity, he was patient and sympathetic. He refused to irritate those who were to provide him with information by officially prescribing what might seem a logical system of nosology. Indeed he even annoyed some professional authorities of a century ago by expressing a preference for vernacular over "scientific" descriptions on death certificates. Chadwick tried to bully the public, and sometimes the profession, into the paths of sanitary virtue. Farr could be fierce enough about the high death rates of urban areas, he could indict water companies, but he did not try to drag on certifiers. No doubt he sometimes regretted the uninformative character of many death certificates, but he never sneered at general practitioners, and the changes he made in classification he introduced very gradually. Fifty seven years have passed since the Gold Medal of the British Medical Association was awarded to William Farr in recognition of "his long, unwearied, and successful labours in behalf of statistical and sanitary science." The annual reports of the Registrar-General have grown so much in bulk that the personal and individual note of the once famous "letters" has inevitably been lost. But the spirit of co-operation lives on. In Farr's official successors were found men who believed with him that, although practitioners made mistakes like other human beings no man, or committee by the adoption of ingenious rules of attribution could improve upon the simple plan of giving statistical effect to what the certifier said. When a successor of Farr's said that it was not the business of the General Register Office to tabulate causes of death but to tabulate what practitioners stated to be causes of death, he was not being cynical or humorous. He was

laying down a golden rule—a rule not universally followed by official statisticians

The century now ended has witnessed great progress, the century beginning will see greater progress, because there is still sympathy between certifying practitioners and official medical statisticians and the level of professional knowledge has risen. The whole profession will rejoice with Sir Sylvanus Vivian and his colleagues on the success of their festival and wish them heartily well in their future labours

THE NUTRITIVE VALUE OF RAW AND PASTEURIZED MILK

The value of pasteurization in destroying pathogenic bacteria in milk is beyond question. There is indeed a growing consensus of opinion among bacteriologists and medical officers of health that compulsory pasteurization offers the only adequate safeguard against the many infections that may be conveyed to man by this means—some of them arising in the cow itself, others conveyed to the milk by human carriers during handling and distribution. It is clear, however, that the prevention of infection is only one part of the problem to be solved. The milk in addition to being bacteriologically safe must retain its nutritive value. A number of papers have been published dealing with this point and it is fair to say that no decisive evidence has been obtained that pasteurization has any significant effect on the nutritive value of milk, but further and more precise experimental data are required before the problematic risks of this procedure can be accurately balanced against its undoubted advantages. A paper by Wilson Minett and Carling¹ in the current number of the *Journal of Hygiene* records an experiment that has yielded striking and unequivocal results. It was carried out on a herd of cows at the Berks and Bucks Joint Sanatorium. From July 1934 to September 1936 the calves born in this herd were hand fed for the first eight weeks of life after receiving the mother's colostrum for the first 31 days. They were fed on the mixed milk of the herd, but to one group of twenty-five calves this milk was given raw, while to another group of twenty-three calves it was given after pasteurization at 145° F. (62.8° C.) for 70 minutes followed by rapid cooling. Both groups were in addition given an unlimited ration of hay. In order to avoid any possible selection, alternate calves in order of birth were allotted to the raw and pasteurized groups. This resulted in two calves that were obviously sick at birth being allotted to the pasteurized group. Both died

the eight-weeks period was 53.72 lb in the group fed on raw milk and 53.86 lb in the group fed on pasteurized milk corresponding to a percentage increase in weight of 61.18 per cent. in the former group and of 62.94 per cent. in the latter. The greatest individual gain in weight among the bull calves (80 lb) and among the heifer calves (63 lb) occurred in animals fed on pasteurized milk. At no time during the experiment was any observer able to distinguish between the animals belonging to the two groups. Thus in two groups of animals reared on the same mixed milk derived from females of their own species and differing only in the fact that in one group the milk had been submitted to pasteurization there was no evidence that this procedure in any way affected the nutritive value of the milk.

INTESTINAL FLORA OF CHILDREN

The bacteriology of gastro-enteritis in children is a complicated subject. Widely different organisms have been incriminated for various small epidemics of an apparently infective origin occurring in children's institutions in which the milk supply is clean. It has been suggested that the infective agent in these cases may be an ordinary coliform bacillus, the virulence of which has become exalted by growth in an unusual situation—for example the small bowel. Recently A. W. S. Blacklock, K. J. Guthrie and I. Macpherson, working in the pathological department of the University and Royal Hospital for Sick Children, Glasgow, have carried out an investigation¹ on the organisms present at different levels of the gastro-intestinal tract in infants and young children. Four groups were studied. In one of these—fifty cases of acute, subacute or recurrent appendicitis which came to operation—the intestinal flora was investigated with the aid of a needle inserted obliquely through the bowel wall during operation. The findings were recorded as approximately normal and formed a basis for comparison with those obtained post mortem in three groups of patients. One consisted of thirty-six subjects whose death was not due to infection; a second of forty-two children dying of some diffuse paraneural infection; and the third of forty-six cases of primary acute non-specific gastro-enteritis. The first of these three groups served as a control for the other two. It is not possible here to give full details of the bacteriological findings. It is clear that in children with a normal gastro-intestinal tract there is an almost entire freedom from organisms, particularly coliform, in the upper coils of the small bowel. Similar results were obtained both from the patients operated on for simple appendicitis and also from the post mortem examination of those who died as a result of accident to the group during operation of paraneural infection coliform

down in the normal physiological functions, including the level of gastric acidity, which maintain a relative sterility in the upper part of the highly absorptive small bowel. In over 90 per cent. of the cases of gastro-enteritis purulent exudate was found in the middle ear but the authors believe that infection of this cavity was generally due to direct spread of organisms from infected material in the nasopharynx. It is evident from conflicting views in the literature that it is often difficult to decide whether otitis is secondary to gastro-enteritis or vice versa but the presence of coliform bacillus in cultures from the middle ear in a number of the cases investigated at Glasgow suggests that the primary lesion is generally intestinal. Apart from the question of the source of infection in primary gastro-enteritis it seems clear that imperfectly digested food in the small bowel is a rich nutrient medium for coliform bacilli and that ascent of such organisms is probably secondary to a disordered state of the stomach and of the upper part of the small bowel. It is interesting that even in dysenteric ileo colitis coliform bacilli were not abundant here. An attempt was made to determine the effect of pyrexia on the normal intestinal flora but the findings showed much discrepancy. Some authorities have noted that elevation of temperature causes a rich bacteriological flora to appear in the duodenum and in the Glasgow series this was to some extent confirmed for both the non septic group and the gastro-enteritis group. On the other hand in infants with parenteral infection there was a lower incidence of coliform bacilli at all bowel levels in those with marked fever as compared with those who were relatively apyrexial.

INTELLIGENCE OF A RURAL POPULATION

Investigations of the standard of general intelligence in various communities are of great value in sociological genetic and other research. Mr M V Matthews, Mr D A Newlin and Dr L S Penrose of the Research Department of the Royal Eastern Counties Institution have recently published¹ a survey of the intelligence of the 1,500 inhabitants of a rural district of about 7,000 acres. The number of children tested was 187 only a few being missed. About two thirds of them belonged to one clan in which all persons were related by consanguinity marriage or both. Every child of school age was tested with the Otis primary or advanced test, and every child in the age group 8-10 was tested with the Stanford Binet test. After correction for age the Otis scores were expressed in terms of the standard deviation from the mean and the distribution was found to approximate to a normal curve of error. The inter-related group had neither a higher nor a lower mean intelligence than the remaining unrelated group but was a little more compact. The children were divided up into pairs according to whether they were related, connected or unrelated and the degree of likeness of scores between any two related children was compared with the degree between any two unrelated children. The brothers and sisters, and even pairs of children related

in lesser degree, seemed more alike than any pair of children taken at random. There was however no noticeable degree of likeness between children related to one another by marriage and not by blood. Children were also classified in four groups according to whether their fathers were professional men, traders, artisans or labourers. There was a steady gradation down the groups and the children of unskilled labourers had a mean intelligence nearly a third of the standard deviation lower than the general level. The mean intelligence quotient of the Binet-tested group was between 95 and 96 and therefore below that usually found in urban populations. There was no evidence that people who intermarried were less intelligent than the remainder. A survey of mental defect included persons of all ages. Twenty-four cases were ascertained and the total incidence was high 1.6 per cent of the population. The chief anomaly was the large number of feeble-minded females between 20 and 40. This finding suggests according to the authors that a larger proportion of individuals in rural communities must be counted as defective than is officially recognized. There was rather more interconnexion among the defectives than among the general community. The seven cases of insanity were all in the interrelated group.

MALARIA IN EGYPT

Egypt, compared with many tropical and subtropical countries is not seriously affected by malaria. Nevertheless even a small incidence has importance and the extent to which malaria prevails the conditions responsible, and the control measures it is desirable to take against it have for some time engaged the attention of the health authorities. In the eleventh annual report¹ on the anti malaria campaign in Egypt, 1934 an account is given of the composition of the Anti-Malaria Commission, the expenditure sanctioned for anti-malarial work and the work carried out. Altogether in the financial year a sum of £E 20,000 (slightly over an equivalent sum in pounds sterling) was sanctioned for anti-malarial work, the actual expenditure which was a little short of this including £E 6,330 for various anti-malarial works in Cairo about £E 2,000 for certain drainage operations in the canal zone and various amounts for protective works in the provincial towns, rural areas and oases. The work has consisted chiefly in filling burkas (borrowpits and excavations) and constructing and improving drains and irrigation channels. Swamps have been stocked annually with fish "bolit" being used if these swamps are fresh and *Cyprinodon* if salt, the latter being brought from Lake Menzala and habituated to salty water in special breeding places. Over 3,000 cases of malaria were recorded in the year, chiefly between June and December the seasonal incidence being related to the flooding of the Nile. The largest number of cases was recorded from the Kalubia Province (head of the Delta) where the Khanka Malaria Research Station has been established. This station deals with an area of 45,000 feddans (about 100 square miles lying to the north east of Cairo along the region of the Ismailia Canal) and a population of 70,000. Out

¹ A Survey of Mental Ability in a Rural Community. Reprinted from the *Sociological Review* 1937, 29. London: The Le Play House Press.

² Bulaq, Cairo: Government Press, 1936. (Price P.T. 7.)

of 8,670 examinations made for malaria parasites 736 or 8.4 per cent were positive only 0.5 per cent being malignant tertian. The anophelines found were *A. pharoensis*, *A. multicolor* and *A. nautanensis*. *A. sergenti* also occurs in Egypt, the species in general being in the order mentioned as regards prevalence. (For a very complete account of the anophelines of Egypt see Kirkpatrick *The Mosquitoes of Egypt* Government Press Cairo 1925.) Oocysts were found in 1 out of 35 *A. pharoensis* sent from Edku (an endemic area). Though apparently one of the more severely affected areas the spleen rate at Edku was only 5.18 per cent. The previous annual report (for 1933) gave an account of the origin of the Anti Malaria Commission and the circumstances leading up to its formation. One of the features of its activities has been legislation empowering the competent authorities to inspect premises and compel proprietors to carry out work against breeding of mosquitoes or to perform such work themselves at the owners' expense. A Ministerial Arrêté dated April 24 1930 also added malaria to the list of notifiable infectious diseases.

EUTHANASIA FOR CATS AND DOGS

The National Veterinary Medical Association has issued the report of its committee which was appointed in 1933 to study "the most efficacious method of humanely destroying" cats and dogs.¹ With Major G. W. Dunkin of the National Institute of Medical Research laboratories, as chairman, the committee comprised two senior clinicians from each of the five veterinary colleges (London Edinburgh Dublin Glasgow and Liverpool). All are experienced investigators who have set forth their scientific observations with commendable brevity and clarity. The intravenous inoculation of magnesium sulphate is a satisfactory lethal agent but the introduction of chloroform hydrocyanic acid or strychnine without previous narcotization of the animal is condemned. Nembutal evipan sodium, and avertin (though not for cats) are satisfactory for inducing anaesthesia prior to the introduction of some lethal agent. The committee does not recommend euthanasia by various gases within "lethal chambers" such as chloroform combined with carbon dioxide motor car exhaust fumes or coal gas. Owing to its dangers to attendants shooting by the discharge of free bullets is unsatisfactory, but shooting with the captive bolt pistol is strongly recommended. Through the ingenuity of Mr. C. R. Gollidge M.R.C.V.S., various electrical devices under the names of electrolethal and euthanator are becoming more widely used by veterinary practitioners; the committee finds them satisfactory and indicates a few minor improvements for the protection of the operator. The electrical lethal cabinet is also recommended though several improvements in its design should be made. The committee clearly defines its conclusions on the efficiency of each lethal method, but on the moral or humanitarian aspect of the problem its directions are muddled. Surely the committee could have answered on each method the simple question

Is it reasonable to assume that the animal has any sense of impending unpleasantness when subjected to the particular method? If the answer was in the affirmative the committee should have unhesitatingly condemned the method however efficient cheap or easy it might be. Had this criterion been applied the committee might have found that either the captive bolt pistol or the electrical killer was "the most efficacious method of humanely destroying" cats and dogs.

HEALTH EDUCATION

If the British public are not health conscious it is not for lack of organization or material. The *Health Education Year Book*¹ reveals a great profusion of societies energetically distributing posters and pamphlets and arranging lectures exhibitions and the projection of films and lantern slides. One might fear that the multitude of counsellors would confuse understanding but there is a certain amount of specialism among these bodies—some concentrate on care of the teeth some on care of the eyes some on diet some on social hygiene and so forth—and there seems to be very little overlapping. We count seventy-seven organizations which are wholly or partly concerned with health education. Their publications range from leaflets to textbooks. An extraordinary amount of art has been expended on poster propaganda and many of the posters in arresting colours have the true admonitory touch. Thus the Eugenics Society bids one to "Live love and marry wisely" the Association of Maternity and Child Welfare Centres asks "Why is your child naughty?" and the National Ophthalmic Treatment Board "Do you find it easy to thread a needle?" The Dental Board for a statutory body strikes an almost frolic note both in its posters and in its films with such titles as "Smile if you dare" and "A brush with the enemy." The film as a means of appeal and instruction has been eagerly seized upon by these bodies and a surprising number of films on health subjects sound and silent and of both the 16 and the 35 mm size are available. The list given runs to a couple of hundred reels some of them ambitious productions indeed one issued by the British Social Hygiene Council, and illustrating the manifestations diagnosis and treatment of syphilis is over 10,000 feet in length and takes two and a half hours to show. Some of the titles of the films are alluring. "Castles in Chalk Farm" is presented by the St. Pancras House Improvement Society, "Managing Molly" comes from the National Baby Week Council and "The eyes have it" is a happily entitled film from the National Ophthalmic Treatment Board. There are also films designed not so much to strike the eye as to instruct in a routine. One of these is issued by the public health department of Hounslow and shows the running of a diphtheria immunization clinic "without tears" as its producer says it includes "shots" of the children's faces while immunization is taking place. Another series of films issued by the National Council for Maternity and Child Welfare illustrates various phases of infant management and Kodak Ltd. have

¹ Report on Small Animal Euthanasia (1937) Issued by the National Veterinary Medical Association 36 Gordon Square, W.C.1 (5s.)

Health Education Year Book 1937-8 Central Council for Health Education (5s. 6d. post free)

three films illustrating procedures in home nursing. Many of the societies arrange exhibitions with models and charts. Some of them stage plays—"Beauty's Bloom" by the British Red Cross Society, and "The Terrible Twins" by the Health and Cleanliness Council, for example. Panels of lecturers competent to deal with every side of health on which the public can usefully be instructed are available, most of them medical men and women at very modest fees. This *Year Book* will prove a very useful compilation for medical officers of health, directors of education, secretaries of health associations and friendly societies and any who have to do with health education work. The difficulty we should say is not in the availability of material for instruction in personal and civic hygiene but in bringing it before public audiences or rather in securing public audiences of the type who need such instruction. The Central Council for Health Education which publishes the *Year Book* has at the invitation of the Minister of Health and the President of the Board of Education agreed to co-operate in conducting a national health campaign in the autumn of this year. The campaign is to extend over a period of six months and special emphasis will be laid on such matters as maternity and child welfare services, school health services (including the milk in-schools scheme), social hygiene and tuberculosis. This is an important move in the application of preventive medicine and we wish it all success.

TERRITORIAL ARMY GENERAL HOSPITALS

The War Office has decided to organize twenty-nine Territorial Army General Hospitals for duty in this country in time of war and a statement showing the peace and war establishments of officers which have been approved for each unit is published in our *Supplement* this week (p. 414). It is intended that each hospital should be able to accommodate 600 patients in the first instance and be capable of extension up to 2,000 beds should necessity arise. It will be observed that the part-time visiting staff are to be civilians who will be appointed in peace time. The other civilian appointments also part-time will be of medical practitioners for general duties and will be made after embodiment. Part-time officers will be not less than 50 years of age. The establishments have been drawn up with a view to providing an adequate staff while interfering as little as possible with the medical care of the civilian community.

AMBULANCE UNITS IN ETHIOPIA

The report of the British Ambulance Service in Ethiopia Committee is published by the British Red Cross Society. This is a most unusual report and consists of a vivid straightforward narrative of the formation of the service—despite almost insuperable difficulties of finance and the trials of red tape—and the movements and work of the two units in Abyssinia. The greater part of the report is devoted to the first unit which originally intended for the Southern front travelled from Berbera to Addis Ababa whence it followed the

Northern armies to the Ashangi Plain. Crippled by an aerial bombardment, the unit continued its work in a mountain cave until obliged to return to the capital for reorganization. There despite the untimely death of its devoted leader, Dr. Melly, it performed further valuable services during the three days' anarchy which preceded the arrival of the Italians. The second unit entering Abyssinia from the Sudan at a later date only reached Gondar a few days before the Italian troops and its work came to an end almost before it had been begun. This report, which includes an excellent map and is illustrated by numerous photographs, is well worth reading. Copies may be obtained from the Secretary, British Red Cross Society, 14 Grosvenor Crescent, London S.W.1.

EPSOM COLLEGE

The eighty-fourth annual general meeting of the Governors of Epsom College was held at the office, 49, Bedford Square, W.C.1, on June 18, with Lord LEVERHULME the president, in the chair.

The results of the last election of pensioners, foundation scholars, and annuitants were announced by the chairman, as follows:

Foundation Scholarships

Adie William A. C.	Bridger Peter J. D.
Berry Oswald	Milne, Dennis G.
Robinson Neville A.	

For a Pensionership (£40 p.a.)

Hutton, Mrs. Bertha L.

For an Annuity (£34 p.a.)

Hitchins Miss Fanny V.

(In addition grants were made to various unsuccessful candidates.)

Lord Leverhulme referred to the continued increase in the number of boys, and said that in 1936 the average was 446, of whom ninety-three were day boys. He also referred to the Royal Patronage which King George VI had graciously consented to extend to the school to the fine record in scholarship work that the school had attained, no fewer than five open scholarships having been secured. One of the boys had won the public school quarter mile at the White City, and one master had gained his rugby cap for England. The president drew special attention to the paragraphs in the annual report dealing with tax-free subscriptions to charities. He pointed out that if all the Governors would sign the deed of agreement (which could be obtained from the office) it would mean an increase of from £1,500 to £2,000 a year for the funds of the Royal Medical Foundation at no cost whatever to the subscriber.

The following ten members of the Council were re-elected for a further period of three years: Dr. J. W. Carr, Dr. Ronald Cove-Smith, Mr. F. S. Fleuret LL.B., Sir William Hale White M.D., Mrs. Robert Hutchison, M.B., Dr. Reginald L. Langdon Down, Dr. Arnold Lyndon, Dr. Philip H. Manson Bahr, Mr. Arthur W. Ormond, F.R.C.S., and Mr. Julian Taylor, F.R.C.S. Professor John A. Nixon M.D., and Dr. Henry Robinson were elected vice-presidents of the College. Colonel Norman C. King, Mr. H. H. Rew, and Mr. H. A. Decker A.C.A., were appointed auditors for the ensuing year and the chairman of the College proposed a hearty vote of thanks to all honorary local secretaries, the British Medical Association, the Medical Insurance Agency, the Charities Committee of the British Medical Association, numerous Panel Committees, and the Editors of the *British Medical Journal* and the *Lancet* for all the work that they had done on behalf of the Foundation.

THE NEURO-PSYCHOLOGICAL BASIS OF CONDUCT DISORDER

MORISON LECTURES BY DR R G GORDON

The Morison Lectures, under the auspices of the Royal College of Physicians of Edinburgh were delivered by Dr R G GORDON of Bath a Fellow of the College on June 17 and 18. Dr Gordon took as his subject 'The Neuro-psychological Basis of Conduct Disorder'.

In his first lecture he premised that conduct disorder would depend upon one or more of three principal factors: (1) an interference with the functional integrity of the body; (2) a similar interference with that of the mind; (3) an environment pressing too hardly upon the individual or demanding too much of his unaided effort. The angle from which he proposed to discuss the subject was one not usually taken in current polemics—namely the abnormal event which was taking place in the nervous system of an individual when performing an unusual or asocial act.

Modern psychology held that the dynamic basis of behaviour was emotional and that when behaviour was erratic or ill adapted it was because there was an incoherence in the emotional reactions. It was necessary to understand the neurological basis of emotional life and those functions of the brain which subserved affective experiences. The knowledge of the working of the brain was increasing rapidly: old conceptions of localization were being revised and corrected almost every day. It was beginning to be realized that in many respects the brain worked as a whole, but that certain areas possessing cyto-architectural structure and arrangement had the duty of organizing and controlling special functions. 'However much we study the brain as a whole we must not forget the function of its parts, and however much we study the parts we must not forget the function of the whole.'

It was not only in the cortex that new knowledge of functional localization was being obtained. The centres in the diencephalon and mesencephalon, which concerned in the one case the various autonomic activities and in the other the tonic variations in skeletal musculature, were known, and in the thalamic area there were known to be centres which played an important part in the affective life of the organism.

Disturbance of Control

In the realm of abnormal behaviour, according to modern psychiatry it was distorted and confused affective impulses and reactions that were primarily concerned, and distorted ideas and conduct were secondary to these; therefore it was clear that disturbances of diencephalic and mesencephalic function or control must be explored if these conditions were to be interpreted on a neurological basis. The lecturer was careful to point out, however, that the majority of examples of conduct disorder were reversible—that is to say, they did not represent permanent changes in character. It was an alteration of function, not of structure, that had taken place, and therefore the clue was likely to be found not in the diencephalic centres themselves, but in the inhibitions and releases impinging upon them from above. Moreover, it was behaviour disorders of an essentially cortical nature which were being investigated and consequently it must be determined exactly how cortical influences were conveyed to the diencephalic centres and vice versa. Here was one of the most noticeable gaps in exact neurological knowledge. Very little was known of the anatomy and physiology of cortico-autonomic connexions.

It was convenient in psychological discussion to speak of cognition, affection and conation, and if the brain were thought of as divided laterally by the central sulcus rather than longitudinally, the neurological correlates to

this grouping could be to some extent envisaged. Behind the central sulcus was the receptive area of the brain: the parietal, temporal and occipital lobes subserving not only the areas for the reception of common sensation, but also the areas concerned with the integration of these sensory impressions into images. Here the lecturer briefly discussed the possibility that the hinder part of the brain might be regarded as the correlate of cognitive activity, though any such division was to some extent misleading because at these high levels the brain worked as a whole and in order that the ideas derived from visual or auditory imagery might be expressed the effector frontal or pre-central part of the brain must be brought into play. In front of the central sulcus were areas largely effector in function, and this part therefore might be correlated with conation. It was difficult to demarcate affective and conative behaviour from one another, so that if a central area of brain comprising the thalamus, hypothalamus, and their cortical connexions was regarded as essentially subserving affection it must also be thought of specially in relation to the prefrontal area which as Kuntz said 'plays an important role in the emotional drive which is a major factor in much intentionally directed effort'.

Excitation and Inhibition

Dr Gordon went on to point out the importance of realizing that two functions were to be observed when stimuli reached the cortex—namely excitation and inhibition. Pavlov in his studies on conditioned reflexes had pointed out that when a stimulus reached a certain point in the cortex a widespread radiation of excitation might ensue followed by an antagonistic radiation of inhibition, which would ultimately limit the field of excitation to a strictly defined area. The generalized convulsion illustrated the more or less unlimited radiation of excitation and sleep the more or less unlimited radiation of inhibition.

Some people were less capable of inhibition than others, and it had been suggested that this relative defect was due to faulty control of higher neuronic structures over lower ones. An important factor in determining conduct disorder was a failure of the inhibition and regulation demanded by the social code, and it was possible that when two brothers were brought up in exactly the same domestic environment and under the same code the reason why one of them became a thief and the other did not, given apparently the same set of stimuli was that in respect of a particular pattern the relative irradiation of excitation and inhibition was different. That acquired and inherent emotional attitudes differed in individuals, even in twins was obvious, and therefore it was not surprising that the thalamo-cortical patterns should show wide variation in their susceptibility to excitation and inhibition, and consequently that the choice of one out of a multitude of possible responses to a situation should not always be the same.

Organic Factors

The lecturer expressed his belief that by far the greatest number of cases of conduct disorder in children were due to psychological and environmental causes. In a series of 200 'conduct' cases no organic factor could be discovered in 76 per cent. Even in cases in which there was a prominent organic factor this was by no means the only operating cause. Indeed, it might be said that the organic cause merely loosened the controls or unbarred the gates so that an uncoordinated emotional drive easily carried the individual into abnormal behaviour.

A boy of 8 was brought to him for regular nocturnal enuresis. Clinical examination suggested the presence of a spina bifida occulta: x-rays disclosed an absence of the sacral laminae and it seemed reasonable to assume that the enuresis was due to an early malformation of the regulating sacral centres and that therefore not very much could be done. There were however certain circumstances in the home and a typical attitude of petulant despair on the part of the mother

which made him suspect an emotional factor such as was at work in the vast majority of cases of enuresis. The boy was taken into hospital and improved under treatment. Then the situation was carefully explained to the mother that the boy had less power of control than most children of his age owing to congenital abnormality and that it was of the utmost importance that the home environment and her attitude towards him should be scrupulously correct. She co-operated reasonably well with the result that the bed wetting occurred only now and then and the frequency of these accidents was steadily if slowly diminishing.

In his opinion the same kind of thing happened in most conduct disorders, more than one factor was operative certain influences weakened the control and disturbed the integration, while others fired off the unchecked emotional disturbance which determined the homicide, assault theft or whatever it might be. Were it not for integration and control by higher levels of personality every threat to the person would result in precipitate flight every thwarting of desire in violent assault, and every stimulus to the acquisitive instinct in theft. The problem was not so much why a theft was committed as why it was not prevented, what had interfered with the normal integration of the personality. The answer was in the interference with the proper integrative action between the cortex, both receptor and effector, and the affective mechanisms of the thalamus.

Conduct Disorder Due to Epidemic Encephalitis

Disturbance of the orderly sequence of response was well illustrated in conduct disorder due to epidemic encephalitis. It was probable that in certain sequelae of encephalitis vascular changes occurred which became more or less permanent lesions, interfering with normal cortical control and especially upsetting the physiological relationships between cortex, thalamus, and hypothalamus. Such lesions would readily account for the temper outbursts, the change in affections, and the mischievous behaviour as opposed to normal conduct. In the encephalitis case the passage from stimulus to response was interrupted and confused by the organic lesions, and yet it had been shown that careful training, suitable occupation, and freedom from conflicting and inappropriate stimuli would do good even in these cases and prevent the worst manifestations of conduct disorder. Where one particular behaviour manifestation was persistent it was worth considering whether in the environment there was an undue weight of stimulus for this instinctive reaction. If outbreaks of temper were the characteristic manifestation it would be well to ensure for the child as non irritating an environment as possible although in many cases this might not make much difference.

Dr Gordon closed his first lecture with some remarks on chorea in which behaviour disorders were by no means uncommon though usually of a minor character. Choreic children were jerky in mind as well as in body. He cited one fatal case which was investigated microscopically. It seemed clear from this case, which was typical of others that while the main incidence of trouble was upon the thalamo striate and midbrain regions the cortex, with the exception of the pyramidal projection system might be considerably and seriously involved. It might be assumed therefore that there was a considerable interference with general cortical control, and especially with the cortico thalamic apparatus and it was not surprising that these children were excitable restless subject to outbursts of temper and crying for the proper sequence of response to stimuli was interrupted and diverted by the lesions which were scattered more or less irregularly through the brain.

The Epileptic Personality

In his second lecture Dr Gordon considered the condition of epilepsy. Epilepsy, he said, was a biological

defect and rendered the individual incapable of adequate social adaptation, so that the adult reactions became necessarily abnormal. The epileptic was solitary, selfish and incapable of the normal affections. He showed egotism morbid sensitiveness, and poverty of ideas. He was often moody, with periods of lethargy, alternating with outbursts of hastiness.

This "personality" might quite frequently be recognized, and was not seldom guilty of conduct disorder or the subject of some form of psychoneurotic reaction. It was a manifestation of a special type and degree of cortical inefficiency. Among the effects of this inefficiency was the occurrence of epileptic convulsions, but these depended also on other factors, and might, and often did arise in the life history of individuals who did not manifest this personality. While it seemed likely that the effector area of the brain was not altogether normal, such a personality might be a highly integrated egocentric individual, with great intellectual capacities, though with a defective power of social adjustment, the extreme example was the epileptic Napoleon. As a rule, however, the epileptic personality manifested, in addition to egocentricity a lack of general control, irascibility temper outbursts, and emotionalism, suggesting a failure of the controlling or inhibiting function which the higher levels of the cortex exerted on lower level activities.

In the symptom of epilepsy, whether fit or its equivalent, the projectile elements involved were in a state of undue sensitivity or irritability, or an undue number of cells were receiving stimuli from the afferent division of the nervous system, or there was an imperfect inhibition or control by higher levels in that system. Probably in most cases all three factors played a part. The first probably depended on biochemical changes involving either cells or synapses. The second might be a factor which was responsible for many forms of psychogenic conduct disorder, and not only psychogenic epilepsy, and the third was of importance in traumatic (Jacksonian) epilepsy, when controlling cells had been destroyed, but might also operate when normal cortical controls were inhibited.

The crime which might be committed in the phase of epileptic automatism was in rather a different category. The process was really the same as that which took place in the somnambulistic dream.

A boy of 18 was a popular and successful member of a public school. He was in his last term and was about to leave to go into a satisfactory job. Without warning or apparent reason he began to create serious disturbances in the dormitory at night. He would begin by talking in a cheerful but bombastic way and presently would get out of bed with the avowed purpose of protecting some small boy. If anyone opposed him he responded with considerable violence with the result that it was necessary to isolate him and have him watched at night by a male nurse. He had no recollection whatever of this behaviour and no clear recollection of dreams. Psychological investigation showed a somewhat deep-seated feeling of insecurity which had no doubt been helpful in pushing him on to the achievement of success in school but was stirred unduly when the change to the uncertainties of a business career was imminent. In waking life, with full cortical function such deep-seated impulses were controlled and repressed but in light sleep when higher cortical patterns were incapable of preventing lower emotionally charged impulses from breaking through these somnambulisms took place. In these the inner conflict was dramatized. He saw himself as the insecure small boy and also as the brave hero striding through all opposition to the protection of that other self.

In this and another case he described he thought there was evidence of the three factors—the lack of proper cortical integration and control the mass discharge of stimuli from the perseverated emotionally charged idea and the spread of excitation and withdrawal of inhibition from certain violent aggressive behaviour patterns.

SUPPLEMENT TO THE BRITISH MEDICAL JOURNAL

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NOTES OF THE WEEK

Diphtheria Immunization in Manchester

Dr R Veitch Clark, medical officer of health for Manchester, has submitted to the local public health committee a report on the results in the city of the immunization of children against diphtheria. A scheme for the immunization of children of school and pre school age was approved by the city council in June, 1928, and the work is carried out at schools municipal centres and hospitals, and by private practitioners. The medical officer of health says that the average annual incidence of the disease in Manchester during the period 1931-5 was 102 which is a decrease of 14 per cent when compared with the figures for 1923-7. He adds that there is no other known cause for this difference than that of the immunization of the children of the city. Comparative figures of the attack rate per 1,000 show that the average attack rate in children not protected by immunization is fourteen times as great as that in immunized children. The medical officer of health believes that if the immunization scheme could be extended to cover all the child population diphtheria would virtually disappear.

Maternity Service in Inverness-shire

The Public Health Committee for Inverness shire has considered the establishment of a maternity service for the county. The chief medical officer had reported to the Department of Health that apart from a few beds in private and voluntary institutions there was no provision in the county for maternity services and he suggested the establishment of a central institution in Inverness which would be connected with a number of centres in other parts of the county. The Public Health Committee therefore appointed a special committee to confer with representatives of the local authorities in the county and the directors of the Royal Northern Infirmary and to formulate a scheme.

Award to Dr W T F Davies of Natal

The Gold Medal of the Federal Council of the Medical Association of South Africa (British Medical Association) has been awarded to Dr William Thomas Frederick Davies of Natal for meritorious services rendered to the profession. Dr Davies was born in Swansea and is M D of London University. He began practice in Johannesburg in 1890 and soon became one of the leading surgeons in the Transvaal. He has taken a prominent part in medical politics in South Africa and his special object has been the promotion of a high ethical standard in the profession. The vigorous action of Dr Davies was a very important contributory factor in the passing of the Medical, Dental, and Pharmacy Act of 1928.

Dr G W McIntosh has received a presentation from his professional colleagues on the occasion of his retirement from the post of medical officer of health for Kirkcaldy.

Dr James Fenton, medical officer of health for Kensington has been elected president of the Society of Medical Officers of Health for 1937-8.

In consequence of ill health Dr G R Jeffrey has resigned his appointment of medical superintendent of Bootham Park Mental Institution, York which he has held for twenty five years.

The Egyptian Government has appointed Dr A Cecil Alport of St Mary's Hospital Paddington to be professor of clinical medicine and director of the medical unit at the Egyptian University Cairo.

Lord Nuffield who is an Honorary Member of the Association has been awarded the Albert Medal for 1937 by the Council of the Royal Society of Arts for his services to industry, transport, and medical science.

NURSING PROBLEMS

REPORT BY BRITISH MEDICAL ASSOCIATION ON QUESTIONS RAISED BY THE COLLEGE OF NURSING

1 In a communication dated April 28 1936 addressed to the Association the Council of the College of Nursing stated that it had been engaged in considering the following important matters affecting the nursing profession

- Interchangeability of pensions
- The establishment of a domiciliary nursing service.
- The supply of and demand for, the services of the trained nurse by the community
- The care of the chronic infirm
- The problem of the tuberculous nurse.
- The Report of the Joint Council of Midwifery

and that it sought the consideration of the Association to these questions with a view to obtaining, wherever possible its assistance and active support. The College submitted memoranda on each of the above questions

2 The Council has carefully considered the questions raised by the College of Nursing and the Council has had the advantage of conferring with representatives of the College on the subject. The Council of the Association submits the following report

Interchangeability of Pensions

3 The Council of the College has pressed for the principle of interchangeability of pensions since the establishment of the Federated Superannuation Scheme for Nurses and Hospital Officers (Contributory) in 1928. This scheme is one which applies to voluntary hospitals only it is a voluntary arrangement, and it is understood that approximately 75 per cent of voluntary hospitals are co-operating in the scheme. In 1934 a series of conferences between the Council of the College of Nursing and the Ministry of Health were convened and it was hoped that some solution of this problem would result and that the matter might be dealt with by legislation in the near future. All parties represented at the conferences were in agreement upon the principle involved, the only serious difficulty being the means of effecting a practical solution

4 The general outcome of the conferences was that the College arranged a meeting with the officials of the National Association of Local Government Officers, when it was agreed that the National Association of Local Government Officers should consult with the Secretary of the Federated Scheme and prepare, in relation to the Local Government and Other Officers Superannuation Act, 1922, an amended Bill embodying a joint scheme for interchangeability of pensions for nurses serving in and migrating between municipal and voluntary services

5 The Council understands that such a draft Bill is in course of preparation. The object which the College desires to attain is one with which the Association is in full sympathy, as is evidenced by the following resolution of the A.R.M., 1935

It is desirable in order to promote the interchangeability of hospitals staffs (medical nursing, and other) that such staffs should be entitled to carry superannuation rights with them on transferring from the service of a voluntary to a council hospital, or vice versa,"

which has already been pressed upon the Ministry of Health by a deputation. The Council has asked that the Association should be kept informed of developments and has indicated that if the draft Bill is on the lines suggested the Association would be prepared to give it cordial support.

Domiciliary Nursing

6 A Domiciliary Nursing Services Bill (not sponsored by the College of Nursing) was introduced into the House of Commons in June 1934 but after its second reading it met with opposition from the County Councils Association which recommended that such a development should only be inaugurated as the result of Government legislation and after very careful investigation of the administrative financial and medical issues involved. The Bill accordingly lapsed

7 The College of Nursing, recognizing the need for an adequate domiciliary nursing service, interviewed the Minister of Health, and urged that there was need for a domiciliary nursing service that such a service should be effected by Government legislation and should include the following principles

- (i) that the domiciliary nursing service should be available for the whole community
- (ii) that the body providing this service should have the right to recover the cost of the service except in necessitous cases,
- (iii) that all types of disease should be nursed
- (iv) that the authorities to provide, or make provision for this service should be (a) The County Councils, (b) The County Borough Councils and, in the case of London, the Councils of the Metropolitan Boroughs,
- (v) that local authorities should act through a committee to be known as the Domiciliary Nursing Services Committee of which not less than one half should be elected members of the local authority, and the remainder co-opted from organizations having special experience in or engaged in such work
- (vi) that the nursing should be carried out by State registered nurses with district training,
- (vii) that on framing a scheme the local authority should avail itself of the services of existing District Nursing Associations operating in the area of the authority, and should subsidize these associations on a scale to be agreed,
- (viii) that whenever possible the local authority should encourage the formation of new voluntary associations on approved lines,
- (ix) that in any scheme for a domiciliary nursing service provision should be made for safeguarding the interests of nurses engaged in private practice

8 The representatives of the College stated that a survey made by the Queen's Institute of Nurses, with which they were acting in close collaboration, had led both bodies to the conclusion that an adequate trained nursing service did not exist in all parts of the country. They were anxious to evolve a scheme under which the country would be covered by an efficient and adequate nursing service. In their view there was a large volume of sickness much of it of the chronic type, for which no proper nursing facilities existed. In reply to questions raised by the Council representatives of the College agreed that there would be practical difficulties in making provision for the nursing of all types of disease in the manner suggested

9 The representatives of the College also stated that in their view control of any section (or branch) of the profession of nursing should be taken out of the hands of those whose primary interest was commercial. It was stated that many nurses were attached to nursing co-operations and that commonly a high proportion of their fees was paid to these bodies that some of the co-operations employed women who although termed "nurses" were in fact unregistered and not fully trained. This state of affairs was obviously contrary to the public interest. Many co-operations existed primarily for profit, and the provision of efficient nursing services was a secondary consideration. The College hoped to establish a voluntary register of ethical co-operating bodies, but up to the present no attempt had been made to put an end to the exploitation of private nurses

10 While the Council is in agreement with the desire of the College of Nursing that full provision should be made for an adequate nursing service, it considers that the service should, for the present at all events, deal with the type of work being performed by the District Nursing Associations, and should be wherever possible an extension or development of existing District Nursing Associations. Also that it should relate only to domiciliary visiting nursing. It feels that such schemes should preferably be organized and financed on a provident or contributory basis with the addition of voluntary subscriptions where necessary. The local authorities should be urged to make adequate grants and should be represented on the management committee

11 The Council believes that it would be a mistake to couple with such a proposal a suggestion for the control of the nursing co-operations. In the view of the Council these are two distinct problems which should be dealt with separately. The Council suggests therefore that the College of Nursing should in the first place, concentrate upon both the outline and details of a scheme for improving the existing domiciliary visiting nursing

service. The College might also consider schemes for the reform of nursing co-operations. It is suggested that control of those bodies might possibly be achieved by legislation on lines similar to that of the Nursing Homes Registration Act.

Supply of, and Demand for, Services of the Trained Nurse by the Community

12. A conference of representatives of the medical and nursing professions and of the lay public was convened by the College of Nursing on December 8, 1933, to consider the question of the supply of, and demand for, the services of the trained nurse for the sick public. A special committee was appointed to investigate the problem, and this committee came to the conclusion that, while as a result of the economic conditions at that time prevailing there was evidence of some unemployment amongst private nurses, the real cause of the problem lay in the faulty distribution of nurses amongst the civil population.

13. In view of the uncertainty regarding the relationship between the supply of trained nurses and the demand for their services, and of the difficulties encountered in attempting to obtain accurate and comprehensive data regarding the annual output of training schools, and of the actual requirements of the organizations which employed trained nurses, the College of Nursing came to the conclusion that there was a need for inquiry on a much larger scale than could successfully be undertaken by an individual organization. The College presented this view to the Minister of Health, and pointed out that the nursing problem was intimately related to other problems connected with the health services of the community. The Minister was urged to take appropriate action as soon as feasible.

14. The Council understands that at the present time there is relatively little unemployment in the nursing profession. It appreciates the difficulty in obtaining adequate information as to the supply and demand for the services of trained nurses and considers that a comprehensive inquiry conducted by the Ministry of Health might furnish useful information on this subject.

Care of Chronic Infirm and the Essex Scheme

15. The College of Nursing in its memorandum on the above subject stated that it had very fully investigated the problem of providing adequate nursing care for the chronic sick in institutions. This matter had recently been brought into prominence by

(a) the initiation of a scheme by the Essex County Council whereby a particular grade of nurse was to be trained to work under a fully qualified staff, the authorities having found it impossible to procure a sufficiency of suitable nurses for this purpose;

(b) the findings of a Joint Committee composed of representatives of the County Councils Association and the Association of Municipal Corporations, which, in considering the plans of the Essex County Council had recommended that the care of the chronic sick should be recognized as a special service for the improvement of which there should be a special form of training and a diploma, this training to be supervised by, and arranged in conjunction with, the General Nursing Council.

The College of Nursing expressed its opinion that, whilst it was essential that proper nursing should be provided for this particular type of patient, this scheme, if developed throughout the country, might prove a menace to the economic conditions of the nursing profession. The College held the view that it would be impossible for the General Nursing Council to recognize any standard of training lower than the basic standard prescribed for admission to the registers. It suggested that the ideal method of caring for these patients was the employment of non-resident trained nurses under the supervision of trained State registered sisters and the provision of the necessary accommodation in isolated districts. Where this was impracticable and if it was found necessary to employ untrained persons the College proposed

(i) *Title*—That the official title for women taking up this work be 'Attendant on the Chronic Infirm' to be shortened for practical purposes to the word 'Attendant'.

(ii) *Training*—That the local authorities themselves be responsible for such training as is deemed necessary.

(iii) *Testimonials*—That testimonials rather than certificates or diplomas, be granted at the termination of the period of

service, bearing the title 'attendant on the chronic infirm' rather than "nurse".

(iv) *Permanent Posts*—That every effort be made to appoint these workers on termination of their contract to permanent pensionable posts in similar institutions in order to prevent them from undertaking duties for which they are not qualified and also to prevent them from competing with trained nurses working amongst the sick of the community.

16. As a result of a questionnaire the College ascertained that nearly half the institutions concerned had difficulty in procuring trained staff, but that there was comparatively little difficulty in procuring the services of an 'assistant nurse'.

17. It was apparent to the College that in taking up this particular branch of nursing the trained nurse felt that she was losing professional status. It seemed that in most localities efforts were being made to improve the accommodation of the nursing staff and that in most cases practical instruction *only* was given to the assistant nurses or orderlies.

18. The Council of the College called a round table conference consisting of members of the Council of the College, representatives of the Queen's Institute of District Nursing, the Mental Hospital Matrons Association, the County and County Borough Hospital Matrons Association, and the Association of Hospital Matrons, at which the result of the Council's inquiries into this matter was considered. The meeting discussed how best these problems could be solved and it was agreed that it was necessary

(i) to gain the co-operation of the matrons of the county and county borough hospitals, matrons of all recognized public assistance hospitals and the matrons of voluntary hospitals in an endeavour to raise the standard of nursing of the chronic infirm and to urge the importance of this type of work.

(ii) to organize a crusade in the various hospital training schools to endeavour to instil into the staff the need for pioneer work in this branch of the profession.

(iii) to explore the possibility of including in the future some experience in nursing the chronic sick during the period of training laid down by the General Nursing Council.

(iv) to use every influence to improve the economic conditions for nurses working in 'chronic' institutions.

19. Hospital authorities are experiencing great difficulty in obtaining enough trained nurses for the care of the chronic sick. The representatives of the College, while insisting that a second type of 'nurse' is necessary for this work, do not favour the idea that this second type should be included in any State Register of Nurses. She would not be likely to reach the basic standard of general education now demanded for members of the nursing profession and any attempt to include her would tend to lower the standards of the profession.

20. Amongst the suggestions made by the Council of the College of Nursing in its memorandum is one that the local authorities themselves should be responsible for such training as is deemed necessary. Upon this point the Council desires to state its view that the local authorities are entitled to look to the nursing profession itself for a lead as to the kind of training which should be given to the assistant class of nurse.

21. It appears to the Council that the question of differentiation between these two classes of nurse is of the utmost importance and that by making such a differentiation it might be possible to deal *inter alia*, with certain of the undesirable features at present existing in relation to the Nursing Co-operations. The Council believes, moreover, that a solution of the problem is likely to be found only if it is examined from a broader point of view, and it has therefore given careful thought both to the present position and the possible methods of regularizing an admittedly unsatisfactory state of affairs.

22. It will be remembered that the Nurses Registration Act, 1919, established the General Nursing Council for England and Wales. This Council was empowered to lay down the conditions of nursing training to approve the institutions in which such training could be wholly or partly given to examine candidates for entry into the nursing profession to keep the register of nurses and to act as a disciplinary body.

23. The Act was intended to protect the properly qualified nurse from unqualified competitors, and to safeguard the public from exploitation by similar persons. The Council decided that the education of the State registered nurse must reach a high standard

in both theoretical and practical subjects and that if desired specialist experience should be added to the minimum three years training. Recognition was also given to shorter periods of training in special subjects such as the nursing of children and fevers.

24 The result has been a steady output of trained nurses reasonably well equipped. These nurses have found work in hospitals as staff nurses or sisters or have entered private nursing or the public health services. The larger general hospitals have found little difficulty in maintaining an adequate nursing staff, but small hospitals and particularly public assistance or municipal (formerly Poor Law) hospitals where there is a considerable proportion of beds for the chronic sick, have found great difficulty in attracting a well-qualified staff for ordinary nursing duties, partly because of the nature of the nursing itself and partly because of the conditions under which it is carried out. This difficulty has been met (a) by the use of probationers, and (b) by the appointment of assistant nurses. The use of probationers depends on the recognition of the hospital as a training school but even where they are accepted there is still great difficulty in obtaining trained staff nurses.

25 The employment of the assistant nurse is often thoroughly unsatisfactory. Under present conditions she has a well-established position in the public assistance nursing service though the General Nursing Council neither controls nor recognizes her. She may be a probationer who for some reason has not completed her training, or she may start with no training at all. She may be employed as a temporary staff nurse (for responsible work) not infrequently at a higher salary than a full trained staff nurse receives. She is frequently in and out of a post, with no lasting responsibility. She sometimes drifts from the public assistance service into a nurses' co-operative society from which she may be sent out to an ill-informed and unsuspecting public as a trained nurse.

26 On the other hand, it must be remembered that the assistant nurse is often a valued officer in a public assistance institution. Many non training hospitals are regularly nursed by assistants working under trained staff nurses and some of these assistants have been most carefully taught the nursing of senile or chronic patients by the head nurse or sister under whom they work and carry out their duties faithfully and well. It is professionally wasteful to use the highly qualified nurse for this type of work, and there is a clear need for the services of a less-skilled officer in certain institutions.

27 At the same time the nursing of chronic patients is not merely a matter of putting them to bed, feeding them, and keeping them clean and free from bedsores. A patient may easily become prematurely and permanently bedridden, a condition which is often unnecessary and bad for both patients and nurses. The nursing of the chronic sick might well be far more intelligent and curative than it often is, and the bed fast condition resulting from kindly but ill directed care could often be avoided.

28 The establishment and recognition of a second grade or class of nurse is a difficult and controversial subject. It is a proposal which would be likely to meet with keen opposition from a certain section of the nursing profession. Some nurses would probably feel that it had taken many years to win the status and recognition accorded to them by the Nurses Registration Acts. They would resent any step which might appear to lower or to damage in any way the position, prestige or financial outlook of the State registered nurse, and might consider that any formal recognition of a lower grade of nurse would have this effect.

29 On the other hand, many nurses evidently realize that nursing covers an extremely wide field and that the qualities and experience required by the highly educated women who reach the top of the profession are largely different from those needed by nurses who are in charge of chronic sick and infirm patients, and who may seldom see a case of acute illness. They are disposed to think that the time has come to reconsider the whole question of training in the light of experience gained by the General Nursing Council, the transfer of the Poor Law hospital to the local authority and the possibility of an extension of visiting nursing services. The question was mentioned in the report of the *Lancet* Commission on Nursing, and has been discussed from time to time in nursing journals. It has recently come to the front by reason of the action of the Essex County Council in setting up a scheme for a training of their own staff for nursing the chronic sick in the County public assistance hospitals.

30 At least it seems clear that the matter is ripe for discussion. The continued employment of unqualified nurses who are under no general professional supervision or control is undesirable. As there is no likelihood of replacing such persons by a fully trained staff it is highly desirable that their position should be defined and regularized and a clear demarcation made so that the public could readily distinguish between the trained nurse and the unqualified assistant.

31 There are three classes of women who may have duties in regard to the sick: (1) the State registered nurse, (2) the unqualified or assistant nurse, and (3) the wardmaid or attendant. The first two have nursing duties, the third should be concerned only with the environment of the patient, though there is some times a tendency to expand the work into minor nursing.

32 There is often confusion as to the proper sphere of the assistant nurse or whatever name she goes by, and if the duties could be defined and an accepted designation given to her there would be a better chance of a clear distinction being made between the different persons responsible for the welfare of the patient. The nursing profession is naturally unwilling to see the title of 'nurse' bestowed upon anyone who is not a fully trained woman but the title is in such general use, both in nursing and domestic work that in practice it would seem impossible either to limit its use or to protect it (as the term midwife is protected). If suitable terms could be found to define (a) the State registered nurse and (b) the nursing assistant it should be possible to restrict such titles to women with prescribed qualifications and defined duties. We should then have

(1) *The State Registered Nurse*—A well-educated woman trained in the various branches of nursing and equipped for the higher and more responsible positions as well as for practical nursing. She would be as at present under the control of the General Nursing Council.

(2) *The Nursing Assistant**—A woman drawn more often from the elementary than from the secondary schools, and given a practical training of, say, two years mainly in the wards for the chronic sick. She should not be required to pass any entrance or leaving examinations, but should show practical aptitude for this type of work. At the end of the training period she should be given a statement of satisfactory service which would permit her to use the title nursing assistant, but she should not be formally enrolled or admitted to any form of State Register.

33 Such women would be extremely useful in proper conditions and under the direction of a trained staff. They would relieve qualified nurses of much routine work which elsewhere is done by probationers, and indeed they are often much better suited to the inevitable ward drudgery of chronic nursing than a more skilled staff. If at the same time the trained nurses in such hospitals were offered a definitely higher status and better living conditions than the nursing assistant there should not be difficulty in obtaining the trained supervisor needed to safeguard the work of the second grade nurse.

The Tuberculous Nurse

34 This question was discussed at the Ministry of Health by the deputation from the College on November 28, 1935 when it was suggested

(a) that prolonged treatment and after-care be provided for members of the nursing profession who are suffering from tuberculosis, and that local authorities be urged to consider the provision of suitable accommodation and conditions of work under which they may remain as normal members of the community

(b) that nurses in all training schools be medically examined at least once a year to ensure that their physical fitness is maintained.

The College of Nursing also approached the Joint Tuberculosis Council asking them to draw up a list of precautions for the use of nurses in general hospitals when nursing patients suffering from tuberculosis.

35 The Council does not consider that it would be advisable to try to induce local authorities to give preferential treatment facilities to the nurse who is suffering from tuberculosis. The

* This term applies also to assistant nurse referred to in paras 24-5 and is used for convenience but it is not to be interpreted as being a term recommended by the Council.

great majority of local authorities are discharging their responsibilities in this matter to the utmost and it appears to the Council that if any attempt were made to lay down special conditions for the tuberculous nurse, as distinct from other persons for whose treatment the local authority is responsible, difficult questions would be raised. For this reason the Council considers it undesirable that action should be taken on the lines suggested in the Memorandum of the College.

36 A problem of importance and one which needs urgent consideration is the widespread practice under which patients suffering from active pulmonary tuberculosis are treated in general hospitals. This necessarily involves added risk of infection to those in contact with these patients and the Council considers that this is a problem to which attention might well be devoted.

Report of Joint Council of Midwifery

37 In view of the passing of the Midwives Act, 1936, and of the steps which are being taken to apply that Act, the Council desires to make no observations on this part of the memoranda submitted by the College of Nursing.

Summary

1 There should be interchangeability of pension rights for the staffs (including nursing and medical) of council and voluntary hospitals, and any Bill which gives effect to this principle will receive the cordial support of the Association (para 5).

2 Provision should be made for an adequate domestic nursing service which should at present deal only with the type of work now being carried out by the District Nursing Associations—namely domiciliary visiting nursing. The College of Nursing should concentrate upon both the outline and details of such a service (paras 10 and 11).

3 It would be a mistake to couple with any such scheme as is suggested in (2) above, proposals for the control of nursing co-operations. The College of Nursing might formulate model schemes for such bodies (para 11).

4 Accurate information as to the supply and demand for the services of trained nurses is undoubtedly difficult to obtain, and a comprehensive inquiry conducted by the Ministry of Health might furnish useful information on this subject (para 15).

5 Hospital authorities are experiencing great difficulty in obtaining trained nurses for the care of the chronic sick, and the proposal that a second less highly qualified type of nurse is necessary for this work should be examined from a broad point of view. The continued employment of unqualified "nurses" who are under no general professional supervision or control is undesirable. As there is no likelihood of replacing such persons by a fully trained staff it is advisable that their position should be defined and regularized so that the public may readily distinguish between the trained nurse and the unqualified assistant. It seems desirable that the function of (a) the State registered nurse and (b) the nursing assistant, should be clearly differentiated and suggestions are made to this end (paras 19-33).

6 It would be inadvisable to try to induce local authorities to give preferential treatment facilities to the tuberculous nurse in a formal manner although the majority of local authorities are at present discharging their responsibilities in this matter very fully (para 35). Attention might well be devoted to the consideration of the widespread practice under which patients with active pulmonary tuberculosis are treated in general hospitals (para 36).

NATIONAL REGISTER OF MEDICAL AUXILIARIES

A copy of the *National Register of Medical Auxiliary Services* which was reviewed in the *Supplement* of April 24 (p 232) will be sent free and post free to any medical practitioner on application to the Board of Registration of Medical Auxiliaries, Tavistock House (North), 19 Tavistock Square, W.C.1. The Board is anxious that all members of the medical profession shall be acquainted with the aims and objects of the *National Register* and co-operate with it in its efforts to encourage the employment of duly qualified assistants and prevent the exploitation by untrained persons of medical auxiliary work. It is stated that over 3,000 copies of the *Register* have already been issued to medical practitioners, hospitals, and kindred institutions and the auxiliaries themselves. One of its primary purposes is to afford a mutually beneficial means of maintaining contact between registered medical practitioners and duly qualified medical auxiliaries.

THE ORGANIZATION OF THE PROFESSION IN INDIA

REPRESENTATIVE MEETING OF INDIAN BRANCHES AT BOMBAY

The representative meeting of the Indian Branches of the British Medical Association was held at the Grant Medical College on March 4, and among those attending were Dr G C Anderson, Secretary of the British Medical Association, Major S K Engineer and Dr B B Yodh (Bombay), Major Chawla and Dr Agarwal (Lahore), Dr Nayak (Secunderabad), Dr B B Bhatia (Lucknow), Dr Nayar (Madras), and Dr G C Ramsay (Assam and North Bengal). The subject for discussion was the organization of the profession in India, and Dr Anderson opened the proceedings with an account of his impressions of the Indian Branches gained during his three months tour of the country.

After a very full and frank discussion on the work of the Branches in which most of the representatives took part, the following resolutions were passed:

1 That medical men and women registered in the United Kingdom or in the Provincial Medical Registers should be eligible for membership of the Association in India. Where there is no Provincial Register graduates and licentiates should be eligible.

2 That a central office in charge of a part time secretary in a place like Punjab or Delhi which would co-ordinate the work of all the Indian Branches was necessary. This office should be under the control of the president of the representative body for the year.

3 That there should be an annual representative meeting of the Indian Branches at different centres in India. Each Branch should send at least one representative return first-class fare being met from the funds of the Branch.

The meeting was continued on March 5 when there was some discussion concerning the place of the proposed central office. Lahore, Delhi, and Bombay were mentioned, and it was unanimously agreed that Bombay would be the most suitable place. The following resolutions were then passed:

4 That this meeting believes that the Branches would be prepared to forgo a part of the capitation grant (two shillings per head) for the current expenses of the central office. If there is a deficit in any Branch as a result of this it may apply to the Head Office for assistance. Those Branches that have a surplus fund lying with them may be requested by the Head Office to help in the maintenance of this secretariat by voluntary contribution.

5 That in the opinion of this meeting Branches should be encouraged to form as many divisions as possible in their areas.

The meeting closed with a vote of thanks to the Council of the British Medical Association for sending Dr Anderson to study conditions in India, to the Bombay Branch and its representatives Major Engineer and Dr Yodh, for excellent arrangements, and to Lieut-Colonel Bhatia, the dean of the Grant Medical College, for the loan of the staff room for the meeting.

Bombay Branch and the Resolutions

At the annual meeting of the Bombay Branch on April 30 the resolutions of the representative meeting with minor modifications, were approved. The Branch also discussed the recent Government of India proposals for the reorganization of the I.M.S. under the new constitution and passed the following resolutions:

1 The Bombay Branch of the British Medical Association condemns the Government of India's scheme of reorganization

of the I.M.S. under the new constitution and is surprised to find that instead of abolishing the civil side of the I.M.S., as recommended by the services subcommittee of the first R.T.C. the Government have thought fit to perpetuate the civil side and thus hamper the legitimate growth of the medical services in India envisaged by full provincial autonomy

2 The Bombay Branch considers the provision of European I.M.S. officers for the medical treatment of Europeans and their families in the covenanted services a highly objectionable procedure which is derogatory to the self respect of fully qualified and equally competent Indians now available in the bigger centres in India

3 The Bombay Branch is of the opinion that the distinction between the method of selection and nomination of the European and Indian members of the I.M.S. should forthwith be abolished. While considering that the method of open competitive examination was the best till it could be arranged all the officers should be recruited on the same basis without distinction of race

4 The Bombay Branch is further of the opinion that I.M.S. posts on the civil side should only be reserved in those areas where well-qualified medical or specialist aid is not available and that selection of these men should be made on merit only

United Provinces Branch

The meeting of the council of the United Provinces Branch was held at Lucknow on April 19, when Colonel R. S. Townsend was in the chair. Captain Nigam was appointed representative and Lieut.-Colonel Stott delegate to the Annual Meeting to be held at Belfast in July. The resolutions of the representative meeting of the Indian Branches were unanimously approved.

There was some discussion on a letter from the Bombay Branch containing a copy of the latter's resolutions concerning the Government of India's scheme of reorganization of the I.M.S. under the new constitution, the following resolutions were passed

(1) "That this Branch does not approve of the complete removal of the I.M.S. from the civil side and they do protest that the Government found it necessary to reserve certain districts for the European members of the Service"

(2) This Branch also protests against distinctive method of recruitment of the European and Indian members in the I.M.S.

It was decided that a copy of the latter resolution be forwarded to the Bombay Branch for its information

TERRITORIAL ARMY HOSPITALS

PEACE TIME CADRES TO BE FORMED

The War Office announces that it has been decided to form peace time cadres for Territorial Army General Hospitals for home service on similar lines to those which existed before the war. There will be twenty-nine hospital units and these will be distributed between the various Military Commands. Their exact location has not yet been determined in all cases.

The serving personnel for each hospital unit will consist of three officers and twenty four other ranks, who will be members of the Royal Army Medical Corps, Territorial Army. The officers appointed will be the Officer Commanding, a Registrar, and a Quartermaster. The other ranks may be enlisted for home service only, and the upper age limit for enlistment or re-engagement will be 50 years. In addition medical men will be appointed who will constitute the visiting and resident staff on embodiment but who will not be required to do duty in peace.

A further announcement will be made by the War Office when recruiting can begin. In the meantime application should not be made for enlistment into these units.

ESTABLISHMENT OF MEDICAL OFFICERS FOR A TERRITORIAL ARMY GENERAL HOSPITAL (600 Beds—Including 60 for Officers)

PEACE ESTABLISHMENT

Lieutenant-Colonel*	1	Commanding Officer
Major, Captain, or Subaltern	1	Registrar
Quartermaster (non medical)	1	

* Commanding Officer holds the rank of Colonel on embodiment

ESTABLISHMENT ON EMBODIMENT

(i) Visiting Staff (Part-time)			
Physicians	2	Appointed in peace time	Civilian
Surgeons	4	" "	"
Ear, Nose and Throat Surgeon	1	" "	"
Ophthalmic Surgeon	1	" "	"
Anaesthetist	1	" "	"
(ii) Resident Staff (Whole-time)			Nature of Commission
Major	1	Physician	Appointed in peace time
"	1	Surgeon	" "
"	1	Pathologist	" "
"	1	Radiologist	" "
Captain	1	Anaesthetist	" "
Captains or Lieutenants	4	General duties	Post Embodiment
Captain or Lieutenant	1	Dental Surgeon	Appointed in peace time

(iii) Additional Staff on Part time Employment for General Duties

Civilian Medical Practitioners	4	Post-embodiment appointments	Civilian
(May be last year medical students)			

Notes

- 1 Proportionate increases in establishments are authorized as hospitals expand
- 2 Hospitals for the treatment of special cases would have appropriate staffs selected accordingly
- 3 Part time officers to be not less than 50 years of age

TESTING THE EYES

NEW OPHTHALMIC BENEFIT REGULATIONS

We publish below a letter which the Minister of Health Sir Kingsley Wood has addressed to Sir Francis Fremantle concerning the new ophthalmic benefit regulations. It will be remembered (SUPPLEMENT June 12 p 373) that in those regulations the Minister proposes among other things to give statutory recognition to the examination of the eyes by sight testing opticians. We also publish the comments of the Medical Secretary of the British Medical Association on the Minister's letter.

Ministry of Health
Whitehall S.W. 1
June 1937

My dear Fremantle,

You will remember that when I met a deputation from the Medical Committee of the House of Commons on the subject of the new regulations governing ophthalmic benefit under the National Health Insurance scheme I promised that I would send you a letter which could if the committee so desired be published, making clear the position as explained to the deputation.

It is, I think, accepted even by those who most dislike the regulations that under present conditions in this country it is not possible to insist that insured persons obtaining glasses must do so on the prescription of a medical man and, that consequently the regulations must admit of payment being made by approved societies to sight-testing opticians. I had hoped that it would be possible to word the regulations in such a way as to meet the representations of the medical profession, and the draft regulations first published were worded accordingly. These regulations were, however, challenged, and, after taking the highest legal opinion available to me, there was no option but to retain in the regulations certain words referring to services rendered by an optician incidental to the provision of an optical appliance to which objection had been taken but which had been there since 1930.

This change should not be taken to mean that I have departed in any way from the opinion which I have already expressed on many occasions that if the services of a medical eye specialist are available any person suffering from eye trouble would be well advised if in a position to do so, to avail himself of such services and I should be glad to see this opinion grow, as I think it is growing among the people of this country. This is evidenced by the increasing use which is being made of the service provided by the National Ophthalmic Treatment Board which now covers many parts of the country. I am, however, compelled to have regard to the practical position at the present time and until it can be said that medical specialist treatment is always and everywhere possible and available it is my duty to make provision for whatever other treatment can now be given.

From what was said when I met you and from the correspondence published in the press, it seems that it is not generally understood that an insured person cannot obtain ophthalmic benefit until he has, as a first step, been examined by his own insurance doctor. Moreover, the new regulations expressly provide that every person claiming ophthalmic benefit shall be informed of his right to go to a medical eye specialist if he so desires whether that is the normal arrangement made by his society or not.

As regards the list of opticians to be drawn up by the new committee to be appointed under the regulations I wish to make it clear that the object of this list is to enable approved societies to have a list of persons to whom members can go for the purposes of obtaining glasses. The list will be described as a list of opticians recognized by the committee for the purpose of the supply of optical appliances to insured persons.

Finally, I would emphasize that under the new regulations there should not be any setback whatever to the progress of useful schemes for a service of medical eye specialists working in co-operation with qualified opticians. Indeed, I would venture to express the hope that the medical profession may see their way to co-operate with the new committee to be set up under the regulations so as to secure a satisfactory and constantly improving service for the insured population, and I trust that with this object in view they will be able to nominate one or more representatives to serve on the new committee.

Yours sincerely,

KINGSLEY WOOD

Comments of the Medical Secretary

The Association agrees that it is desirable to ensure that persons in receipt of ophthalmic benefit shall obtain their glasses from reputable opticians. It is also agreed that insured persons should have the right to exercise their freedom to decide whether their eyes shall be examined by a medical practitioner or an optician. Provision can be made for both these, however, without the Minister recognizing the practice of sight testing by anyone who has not had a medical training. This is the essence of the Association's objection to the Amending Regulations. Under the 1930 Regulations the selection of opticians for the purposes of ophthalmic benefit rested with the individual approved society, it is now to be within the discretion of a special committee appointed by the Minister. This fact, together with the reference in the Amending Regulations to the inclusion of a scale of charges to be drawn up by the approved committee, "which scale may include as a separate item any charge for a service rendered by an optician whether an optical appliance is supplied or not," means recognition by the Minister of the practice of sight testing by opticians which in the opinion of the Association, is not in the public interest.

The Minister suggests that one of the main reasons for his present action is the paucity of ophthalmic surgeons. The Association challenges this contention. It is able to produce a list of approximately 1,000 medical practitioners who have received special training in ophthalmology and who are willing to provide a service to suit the economic needs of those for whom the Minister is making these regulations. This list could be extended in a very short time if the work were available. The Minister emphasizes that an insured person claiming ophthalmic benefit has the right to go to a medical eye specialist if he so desires, but he omits to say that little or no encouragement is given to insured persons to seek that advice and that unless the right is exercised at the time of application for ophthalmic benefit the insured person must follow the instructions of his society, which means, in the vast majority of cases, that he will receive an examination from a sight testing optician.

The Minister says that, acting on legal advice, he has no option but to retain in the regulations a reference to services rendered by an optician incidental to the provision of an optical appliance. It is doubtful, however, whether legal opinion is so definite on this point as to make it obligatory upon the Minister to succumb to the pressure of the sight testing opticians. It is satisfactory to note that the Minister is wholeheartedly of opinion that any person suffering from eye trouble would be well advised to avail himself of the services of a medical eye specialist but it is very disappointing to find him making regulations which will be likely to have the opposite effect. The claim of sight-testing opticians as diagnosticians will be strengthened, and it will be increasingly difficult to educate the public in the way that the Minister would have us believe he wishes people to be educated.

June 23 1937

DENTAL BENEFIT

DEPUTATION TO THE MINISTER OF HEALTH

The following official report has been received for publication

Sir Kingsley Wood the Minister of Health who was accompanied by Mr Bernays the Parliamentary Secretary to the Ministry of Health recently received a deputation representing the British Dental Association the Incorporated Dental Society and the Public Dental Service Association. The deputation consisted of Mr Bryan J Wood Mr W J Senior Mr R G Heegaard Warner Mr C H Oliver Mr A. H. Condon Mr H Parker Buchanan Mr F J Ballard and Professor Gilmour and the chief spokesman was Mr Bryan J Wood.

The deputation referred to the effect of dental defects and disease upon the health of all classes of the community and emphasized the need for a comprehensive dental service as an essential sequel to the school dental service which would provide dental inspection and treatment for every insured person. This could only be made possible by means of a statutory dental benefit. The service should be organized on a panel system similar to that in force for medical benefit and the dentists like the insurance medical practitioners should be remunerated on a capitation basis.

Sir Kingsley Wood said in reply that over 10 million persons—two-thirds of the whole insured population of England and Wales—were already entitled to dental treatment as an additional benefit and that the scope of the existing scheme would be considerably extended by the new proposals for bringing juveniles into National Health Insurance. It was clear that the cost of providing dental benefit as a statutory benefit would be very heavy and it would of course raise the question of an appropriate increase in the rates of contribution at present paid by insured persons and their employers. Important considerations were involved by the suggestion that dentists should be remunerated on a capitation basis.

Sir Kingsley Wood said he was much impressed by the representations which the deputation had made and promised to give them his careful consideration.

Correspondence

INSURANCE CAPITATION FEE

SIR—May I congratulate you on the excellence of your leader on the capitation fee in the *Journal* of June 12. Nothing so cogent has appeared in your columns in my time. For there emerged at the inquiry points which as you so properly point out were profoundly disquieting. The evidence given by one of the medical officers must have appalled the profession. It is impossible to believe that that evidence represents the real view of the Ministry of Health. If it does not and had not the approval of the Ministry why was it allowed to be given? If it does reveal the real opinion of officialdom regarding our N.H.I. work the outlook is black indeed. To some of us who have been working the N.H.I. Act since its inception that opinion seems nothing less than a gross libel.

Who steals my purse steals trash
But he who filches from me my good name

—I am etc.,

Edinburgh June 12.

J. K. WELSH

SIR—As a member of the British Medical Association of long standing I was pained to read the penultimate paragraph of your editorial comments on the recent inquiry regarding the capitation fee for insurance practitioners (*Journal* June 12 p. 1211). This paragraph contained a reflection on the bona fides of members of our profession who are quite unknown to me but who had given evidence at that inquiry and who had been subjected as I gather from your report of the

proceedings to an able and searching cross-examination by my friend Dr Dain who was also allowed to call rebutting evidence. Surely the matter should have been allowed to rest there seeing that their position as civil servants prevents the gentlemen whom you have pilloried from making any statement in their own defence—I am etc.

Harrogate June 14

ADAM FULTON

SIR—The thanks of the profession are due to Dr Dain for the able way he conducted the case for an increase in the capitation fee and also to Drs Anderson and Hill for the fair way it was presented. The profession will be more than disappointed. We were let down in statements made in support of the Ministry. More unfair and stupid statements by medical men have never been heard by the colleagues of these men before. Dr Dain did all he could to refute this evidence but the Court of Inquiry believed their statistics and ridiculous opinions of medical practice. Our statistics could not have been believed. Never again a Court of Inquiry. We must make a real stand and say: A 10s. capitation fee we must have or resign. The best line of defence is attack. I am too old to lead but surely there is some younger man on the Insurance Acts Committee. Let him come forward and be up and doing.—I am etc.

Birmingham June 15

F. A. L. BURGESS

SIR—I would like to join with Dr Flemming in appreciation of your admirable leading article on the findings of the Court of Inquiry into the insurance capitation fee. That the Ministry of Health is out of touch with medical practice, or rather out of touch with all but one type of medical practice was shown by its own statements and witnesses. The type of practice Dr Furness outlines is by no means exceptional but the Ministry does not recognize it in its estimates and though Dr Furness has every reason to demand some encouragement, he will never get it. To read the biased and extraordinary evidence of the deputy regional medical officers and others an impartial observer would be led to think that the modern improvements in diagnosis and treatment had not affected the general practitioner at all. It is a moot question to me whether the insurance practitioner should do the work in the type of practice mentioned by Dr Furness or whether he should confine himself strictly to his agreement of "general practitioner" services only. It is probably a question each doctor will have to answer himself but judging by the evidence of the Ministry at the Court of Inquiry he will get no thanks for doing his work well nor any recognition for it—I am etc.

Surrey June 21

RALPH G. SMITH

SIR—In reply to Dr C. E. S. Flemming's letter (*Supplement* June 19 p. 401) there are a few points which he makes that will certainly not find favour with most of us younger practitioners who have still many years of national health insurance practice before us. He says "No one has I presume any wish to dispute the justice of the findings of the Court on the evidence put before it. I still very definitely dispute this so-called justice. Secondly he says 'The evidence of the approved societies showed none of that animus and a more real appreciation of the quality and character of the work done by panel practitioners.' In the evidence given Mr Duff says 'The approved societies were satisfied that the opinion expressed in the Ministry's memorandum that a case existed for a reduction in the capitation fee on the grounds set out and to the extent there mentioned were well founded' (*Supplement* June 5 p. 356). This may not be animus but it is certain that although the approved societies are not our bitter enemies they are still our enemies in this matter.

There are other lessons to be learned from the result of this Court of Inquiry. The first of these is that the Minister of Health has no use for the general practitioner although when he requires his help he will say nice things about him, leave him purring with pleasure and then go back and with the politician's code of honour to ease his conscience promote

legislation to take some more of the general practitioner's work from him or reduce the remuneration for the work he already does. Secondly there is to be no reward for work well done. The Ministry apparently is content if the regulations and terms of service are satisfied. It is prepared to pay no more for a service which is really good than one which merely fulfils our contract with the Government and all of us in practice know what a vast difference there is between the two.

I suggest that the fight must continue and if the Minister will not be reasonable, then we must give him just that service for which he pays. We must put our own house in order with regard to the keeping of records of all 'A's and 'V's,' for on these alone must our remuneration depend in future. We must remember that the figures quoted by the Ministry were from records which we keep so badly and if on the next occasion these figures are quoted we must make sure that they are accurate, and so all 'A's and 'V's' must be entered.

It is impossible to find suitable words to express our admiration for Dr. Dain not only in the way he worked for us at the Court of Inquiry but for his preparation of the case beforehand. I am sure that any panel doctor in this country will say a very heartfelt "thank you" to him and to the secretariat. Failure is not defeat but learning how—I am, etc.,

Birmingham June 21

ARTHUR BEAUCHAMP

OPHTHALMIC BENEFIT

SIR—The Minister of Health appears to be determined to enforce his Additional Benefits Amendment Regulations 1937 and so recognize certain opticians as fit not only to prescribe glasses but to diagnose ophthalmic disease. This in spite of expert medical opinion and advice to the contrary and of his previous failure to enact by legislation.

Should and when the proposed Regulations become operative the principal reason, no doubt, will be that the Minister is convinced that it is in the public interest that the opticians concerned should be and are well able to recognize ophthalmic disease when they see it. If that be so and the opticians themselves loudly protest that it is no objection can be raised by anyone—least of all the opticians—to compulsory notification of all diseases of the eyes which come before them. This would serve three useful purposes: (1) It would promote the welfare of those members of the approved societies and others who may not have been aware that they were suffering from such complaints as, for example, glaucoma, optic atrophy, retinitis, detached retina or neoplasm. (2) It would test the bona fides of the opticians. (3) It would greatly assist in the compilation of the incidence of ophthalmic disease on a vastly extended scale—hitherto impossible of attainment—the importance of which is obvious. I cannot conceive of objection being seriously taken by the examinees of the approved societies or the opticians for it would be to the advantage of all concerned—I am, etc.,

London W.2 June 15

R. GALWAY MURRAY

Naval, Military, and Air Force Appointments

ROYAL NAVAL MEDICAL SERVICE

Surgeon Captain P. L. Gibson to the *Pembroke* for Royal Naval Barracks.

Surgeon Commander E. B. Pollard to the *Pembroke* for Royal Naval Barracks.

Surgeon Lieutenant H. E. B. Currel to be Surgeon Lieutenant Commander.

Surgeon Lieutenant C. J. Mullen to the *Pembroke*.

ARMY MEDICAL SERVICES

Colonel J. Healy Spencer CBE, late R.A.M.C. having attained the age for retirement has been placed on retired pay.

Lieut.-Col. W. H. O'Riordan M.C. from R.A.M.C., to be Colonel with seniority December 20, 1936.

ROYAL ARMY MEDICAL CORPS

Major G. S. McConkey to be Lieutenant Colonel.

ROYAL AIR FORCE MEDICAL SERVICE

Flight Lieutenant H. C. S. Pimblett to be Squadron Leader.
Flight Lieutenants W. G. S. Roberts to R.A.F. Station Dhubban, Iraq; H. E. Bellinger to R.A.F. General Hospital, Iraq; Hinaidi W. J. L. Dean to No. 84 (Bomber) Squadron, Shaibah, Iraq; G. H. J. Williams to No. 6 Flying Training School, Netheravon.
The following Flying Officers are to be Flight Lieutenants with seniorities in parentheses: J. R. R. Jenkins (May 4, 1936); E. W. R. Fairley (November 10, 1936); S. G. Gordon (November 23, 1936).

Flying Officer R. C. O. Grady to be Flight Lieutenant.

AUXILIARY AIR FORCE MEDICAL BRANCH

J. H. Altwood to be Flying Officer.

MILITIA

ROYAL ARMY MEDICAL CORPS

Major S. R. Armstrong, O.B.E., has relinquished his commission and retained his rank of Major.

TERRITORIAL ARMY

ROYAL ARMY MEDICAL CORPS

Captain G. L. Pillans M.C. has resigned his commission and retained his rank.

Lieutenant W. Bruce, from 6th Battalion Gordons to be Captain with seniority May 1, 1934.

T. G. Armstrong late Cadet, Felseld School Contingent Junior Division O.T.C. to be Lieutenant.

INDIAN MEDICAL SERVICE

Colonel H. C. Buckley to be Major-General.

Lieut.-Col. J. F. James has retired from the Service.

Captain M. H. Shah has been appointed temporarily as Civil Surgeon, New Delhi.

Captains T. R. Pahwa M.A. Gaffar M. Hafizuddin Gopal Singh K. L. Malhaura and K. V. R. Choudari have relinquished their temporary commissions.

Lieutenant A. Haq has relinquished his temporary commission.

British Medical Association

ANNUAL REPRESENTATIVE MEETING, BELFAST, 1937

The Annual Representative Meeting of the British Medical Association will be held in the Assembly Hall, Assembly Buildings, Fishervick Place, Belfast, on Friday, Saturday, Monday, and Tuesday, July 16, 17, 19 and 20, 1937.

RESOLUTIONS BY DIVISIONS AND BRANCHES FOR THE REPRESENTATIVE BODY

IMMUNIZATION FOR DIPHTHERIA

Motion BY CAMBERWELL. That (with reference to para 103 of the Annual Report of Council) the Council be instructed to consider an appropriate scale of fees to be paid by the local authority to practitioners doing immunization work having regard to the varying number of attendances involved in the different immunizing methods in use at the present day.

PUERPERAL PYREXIA AND FEVER

Motion BY CUMBERLAND. That where a medical practitioner furnishes information by means of a questionnaire to local health authorities in connexion with investigations into cases of puerperal pyrexia or fever a fee should be payable for completing the questionnaire.

VOLUNTARY HOSPITALS COMMISSION

Motion BY EXETER. That (with reference to para 182 of the Supplementary Report of Council) the Representative Body expresses its warm approval of the main principles recommended by the Commission appointed by the British Hospitals Association in its Report published April 1937, and urges the Council to do all in its power by co-operation with that Association and otherwise to secure that those recommendations be implemented.

DENTAL BENEFIT REGULATIONS

Amendment BY SUNDERLAND. That (with reference to para 83 of the Annual Report of Council) the fee for all general anaesthetics administered for dental should be one guinea.

British Medical Association

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TAVISTOCK SQUARE, W.C.1

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Irish Free State Medical Union (I.M.A. and B.M.A.) 18, Kildare Street Dublin (Telegrams Bacillus Dublin Tel. 62550 Dublin)

Diary of Central Meetings

JUNE

30 Wed A.R.M. Agenda Committee, 11.15 a.m.

JULY

9 Fri Journal Board 2 p.m.
19 Mon Council Board Room Assembly Buildings Belfast 9 a.m.
21 Wed Council Senate Room Queen's University Belfast 9 a.m.

BELFAST MEETING

Annual Dinner and Dance

Owing to the large number of members unable to obtain seats at the Annual Dinner and Dance on Thursday, July 22, the Dinner Committee have decided to issue a limited number of tickets for the dance only. These will entitle holders to admission to the dance following the Annual Dinner, at 10.30 p.m. The price of each ticket is 5s. Early application for these tickets is advised, as their number is limited.

Branch and Division Meetings to be Held

BORDER COUNTIES BRANCH—At Cumberland Infirmary, Carlisle, Thursday July 8 3.30 p.m. Annual general meeting. Election of officers etc. Presidential address B.M.A. Annual Meeting at Melbourne Australia.

LINCOLNSHIRE BRANCH LINCOLN DIVISION—At North Kesteven Rural District Council Offices Clasketgate, Lincoln, Wednesday June 30 3 p.m. Annual general meeting. Election of officers etc.

METROPOLITAN COUNTIES BRANCH—At B.M.A. House Tavistock Square W.C. Friday July 2, 4 p.m. Eighty-fifth annual general meeting. Agenda Report of Branch Council and financial statement report of representatives of Branch on Central Council report as to election of officers for 1937-8, presidential address by Dr. William Paterson Preventive Medicine and the General Practitioner.

METROPOLITAN COUNTIES BRANCH CITY DIVISION—At Metropolitan Hospital Kingsland Road E. Wednesday June 30 9.30 p.m. Annual general meeting. Election of officers Dr. V. Freeman Maternity and Child Welfare Services in Islington.

METROPOLITAN COUNTIES BRANCH KENSINGTON DIVISION—At Kensington Town Hall Friday June 25 8.45 p.m. Dr. Henry Wilson The Approach to the Neurotic At British Post-Graduate Medical School Monday June 28 8.30 p.m. Lecture and demonstration on air raid precautions by Colonel J. Mackenzie Home Office Medical Instructor for the London Centre.

METROPOLITAN COUNTIES BRANCH NORTH MIDDOLESEX DIVISION—Thursday July 1 Summer meeting.

METROPOLITAN COUNTIES BRANCH WEST MIDDOLESEX DIVISION—Tuesday June 29 9 p.m. Meeting to instruct representative at the Annual Representative Meeting.

NORFOLK BRANCH—At Overstrand Thursday July 8 Annual meeting.

SOUTHERN BRANCH PORTSMOUTH DIVISION—Thursday July 1 Meeting to instruct representatives.

SOUTH WESTERN BRANCH—At Royal Devon and Exeter Hospital Wednesday July 7 3 p.m. Annual meeting. Election of officers etc. Inaugural address by Dr. F. W. Morton Palmer The Progress of Medicine in Thirty-five Years 7.30 p.m. Dinner at the Royal Clarence Hotel.

WILTSHIRE BRANCH—At Devizes Mental Hospital Wednesday June 30 3 p.m. Annual meeting. Election of officers etc. Miss Margaret Bond Maternity and Child Welfare in Central Africa.

YORKSHIRE BRANCH—At Royal Bath Hospital Harrogate Saturday June 26 3 p.m. Annual meeting. Election of officers. Presidential address by Dr. Geoffrey Holmes Menopausal Arthritis Demonstration of plaster work by Mr. T. Vibert Pearce 6 p.m. Tour of the Royal Baths 8 p.m. Dinner and Dance at the Hotel Majestic.

YORKSHIRE BRANCH SHEFFIELD DIVISION—At Church House St. James Street Sheffield Friday July 2 8.30 p.m. Consideration of Annual Report of Council etc.

POST-GRADUATE COURSES AND LECTURES

JULY

The following post graduate courses and lectures, to be held in London during July have been notified to the British Medical Association. Further particulars may be obtained direct from the hospitals concerned or in the case of arrangements made by the Fellowship of Medicine (F.M.), from the Secretary of the Fellowship, 1, Wimpole Street, W.1.

Subject	Date	Place of Meeting	Nature of Instruction
Dermatology	July 12-24	Hospital for Diseases of the Skin Blackfriars	F.M. course including two special demonstrations
Heart and Lungs, Diseases of	July 3-4	City of London Hospital for Diseases of the Heart and Lungs, Victoria Park, E.2	F.M. week end course
Medicine and Surgery	July 10-11	Miller General Hospital Greenwich Road S.E.10	F.M. week end course
Proctology	July 5-10	St. Mark's Hospital for Diseases of the Rectum City Road E.C.1	F.M. course of lectures and demonstrations
Urology	July 12-30	All Saints Hospital Austral Street, West Square S.E.11	F.M. course of clinical and cystoscopic demonstrations

POST-GRADUATE NEWS

The Fellowship of Medicine announces the following courses: proctology at St. Mark's Hospital, July 5 to 10; dermatology at Hospital for Diseases of the Skin Blackfriars S.E., July 12 to 24; urology at All Saints Hospital July 12 to 31; heart and lung diseases at Victoria Park Hospital July 3 and 4; general medicine and surgery at Miller General Hospital July 10 and 11. A special demonstration on the fundus oculi intended for M.R.C.P. candidates will be given on Tuesday, July 6 at 8.30 p.m. Courses are open only to members of the Fellowship of Medicine (1 Wimpole Street, W.)

WEEKLY POST-GRADUATE DIARY

BRITISH POST-GRADUATE MEDICAL SCHOOL Ducane Road, W.—Daily 10 a.m. to 4 p.m. Medical Clinics Surgical Clinics and Operations Obstetrical and Gynaecological Clinics and Operations Tues 4.30 p.m. Dr. D. Hunter Occupational Diseases Wed 12 noon Clinical and Pathological Conference (Medical), 2 p.m. Dr. Belt Pathology of Pneumomonocytosis 3 p.m. Clinical and Pathological Conference (Surgical) Thurs 2.15 p.m. Dr. Duncan White, Radiological Demonstration 3 p.m. Operative Obstetrics Fri 3 p.m. Clinical and Pathological Conference (Obstetrics and Gynaecology)

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION 1 Wimpole Street W.—West End Hospital for Nervous Diseases Welbeck Street W. Afternoon M.R.C.P. Course in Neurology City of London Hospital Victoria Park, E. Wed and Fri, 6 p.m., M.R.C.P. Course in Heart and Lung Diseases Sat and Sun, Course in Heart and Lung Diseases Brompton Hospital S.W. Twice weekly 5 p.m. M.R.C.P. Course in Chest Diseases Preston Hall near Maidstone All-day Tuberculosis Demonstrations for M.R.C.P. candidates

HOSPITAL FOR SICK CHILDREN Great Ormond Street W.C.—Thurs 2 p.m. Clinical Lecture Dr. Robert S. Frew Enuresis 3 p.m. Clinical Pathological Lecture Dr. W. W. Payne Control of Obesity Out patient Clinics mornings 10 a.m. to 12 noon Ward Visits afternoons 2 p.m. to 3.30 p.m.

ST. PAUL'S HOSPITAL Endell Street W.C.—Wed 4.30 p.m., Mr. Claude H. Mills Some Interesting Urological Cases, with demonstrations of pathological specimens and radiographs

SOUTH WEST LONDON POST-GRADUATE ASSOCIATION St. James Hospital Ouseley Road Balham, S.W.—Tues 4 p.m. Mr. J. P. Monkhouse Hearing Aids

DIARY OF SOCIETIES AND LECTURES

ROYAL SOCIETY OF MEDICINE

Section of Psychiatry—Tues., 8.30 p.m. Annual General Meeting Election of Officers and Council for 1937-8 Paper by Dr Erich Wittkower Influences of the Emotions on Bodily Function

Section of Comparative Medicine—Wed. 4.30 p.m. Laboratory Meeting at National Institute for Medical Research Farm Laboratories, Mill Hill NW Demonstrations by Dr C H Andrews Dr Stuart Harris and Dr Wilson Smith Current Investigations in Influenza Dr A S Parkes and Mr C W Emmens, Endocrine Studies in Poultry Dr Wilson Smith Technique of Egg Inoculation for Virus Culture Miss E Salmon Sexing of Day-old Chicks

VACANCIES

All advertisements should be addressed to the Financial Secretary and Business Manager and NOT to the Editor

- ASHFORD HOSPITAL.—R.M.O. (male, unmarried) Salary £150 p.a.
ASHTON UNDER LYNE DISTRICT INFIRMARY.—(1) Casualty H.S. (male) (2) H.S. Salaries £180 p.a. and £150 p.a. respectively
BARNESLEY BECKETT HOSPITAL AND DISPENSARY.—(1) J.H.S. (2) H.S. Salary £200 p.a.
BARROW IN FURNESS NORTH LONSDALE HOSPITAL.—R.C.O. (male) Salary £150 p.a.
BARRY URBAN DISTRICT COUNCIL.—R.S.O. for the Accident and Surgical Hospital Salary £350-£50-£450 p.a.
BARRY URBAN DISTRICT AND PORT.—Deputy M.O.H. Deputy Port M.O., and Assistant School M.O. (male) Salary £600-£25-£700 p.a.
BATH ROYAL UNITED HOSPITAL.—(1) H.S. for General Surgery and Ear, Nose, and Throat (2) H.S. for the Gynaecological and Obstetric Department Males unmarried Salaries £150 p.a. each (3) Hon. Assistant to Fracture Service (4) H.P. (male unmarried) Salary £150 p.a.
BIRMINGHAM GENERAL HOSPITAL.—H.S. to the Throat and Ear Department
BIRMINGHAM AND MIDLAND EYE HOSPITAL.—H.S. Salary £130-£150 p.a.
BIRMINGHAM MIDLAND HOSPITAL.—H.S. Salary £200 p.a.
BIRMINGHAM QUEEN'S HOSPITAL.—Resident Anaesthetist Salary £70-£100 p.a.
BLACKPOOL VICTORIA HOSPITAL.—H.P. (male) Salary £200 p.a.
BOLINGBROKE HOSPITAL Wandsworth Common SW.—H.P. (male, unmarried) Salary £120 p.a.
BOLTON COUNTY BOROUGH.—A.M.O. (male) for Townley's Hospital Farnworth Salary £225 p.a.
BRADFORD ROYAL EYE AND EAR HOSPITAL.—Two H.S.s (females). Salaries £180 p.a. each
BRIGHTON T.F.W. SUSSEX HOSPITAL FOR WOMEN.—(1) H.S. (2) H.P. Females Salaries £100 p.a. each
BRIGHTON ROYAL SUSSEX COUNTY HOSPITAL.—Casualty H.S. (male) Salary £120 p.a.
BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Hon. P. to Out patient Department
BURY INFIRMARY.—(1) R.S.O. (male) Salary £300-£350 p.a. (2) C.O. (male) Salary £150 p.a.
BUXTON DEVONSHIRE ROYAL HOSPITAL.—H.P. (male) Salary £150-£175 p.a.
CAMBERWELL METROPOLITAN BOROUGH.—Tuberculosis Officer and Deputy M.O.H. Salary £750-£937 10s. p.a.
CAMBRIDGE ADDENBROOKE'S HOSPITAL.—Resident Anaesthetist and Emergency Officer (male, unmarried) Salary £130 p.a.
CAROIFF KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION.—R.M.O. (male, unmarried) Salary £350 p.a.
CARLISLE CUMBERLAND INFIRMARY.—H.S. (male) for the Special Departments Salary £155 p.a.
CHARING CROSS HOSPITAL W.C.—(1) Hon. Orthopaedic S. (2) Hon. Clinical Assistant to the X-Ray and Electrotherapeutics Department
CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL.—H.S. (male) Salary £150 p.a.
CHESTER SOUTH WEST CHESHIRE JOINT COMMITTEE.—M.O.H. for the Rural Districts of Chester and Tarvin Salary £800 p.a.
CHICHESTER ROYAL WEST SUSSEX HOSPITAL.—J.H.S. Salary £125 p.a.
COVENTRY AND WARWICKSHIRE HOSPITAL.—(1) H.P. Salary £160 p.a. (2) R.H.S. (3) C.O. Salaries £150 p.a. each
CROYDON COUNTY BOROUGH.—Assistant M.O.H. and Assistant School M.O. (male) Salary £500-£25 £700 p.a.
DARLINGTON MEMORIAL HOSPITAL.—H.S. Salary £150 p.a.
DURHAM COUNTY MENTAL HOSPITAL.—Locumtenent A.M.O. Salary £1 1s. per day
EASTBOURNE ROYAL EYE HOSPITAL.—Non resident H.S. Salary £175 p.a.
FAREHAM KNOWLE MENTAL HOSPITAL.—J.A.M.O. (male unmarried) Salary £350-£25 £450 p.a.
GLOUCESTER GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—(1) H.S. (2) H.P. Males Salaries £150 p.a. each
GUILDFORD ROYAL SURREY COUNTY HOSPITAL.—H.S. (male) Salary £150 p.a.
HALIFAX ROYAL HALIFAX INFIRMARY.—First H.S. (male unmarried) Salary £200 p.a.
HERTFORD COUNTY HOSPITAL.—H.S. (male) Salary £180 p.a.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST Brompton, S.W.—(1) Three H.P.s (2) H.P. (male) for the Sanatorium at Frimley Honorariums £50 p.a. each
HOSPITAL OF ST JOHN AND ST ELIZABETH Grove End Road NW.—R.H.P. (male) Salary £100 p.a.
HOSPITAL FOR SICK CHILDREN Great Ormond Street, W.C.—R.M.O. (unmarried) for the Country Branch Hospital, Tadworth Salary £250 p.a.
HOSPITAL FOR TROPICAL DISEASES Gordon Street W.C.—Ophthalmic S.
HUDDERSFIELD COUNTY BOROUGH.—R.M.O. for St Luke's Hospital Salary £230 p.a.
HULL CORPORATION.—A.M.O.s for the Beverley Road Institution Salaries £350 p.a. each
HULL ROYAL INFIRMARY.—(1) Second H.P. (2) H.S. Males Salaries £150 p.a. each
ILFORD BOROUGH.—(1) Assistant M.O.H. (male) (2) Assistant M.O.H. (female) Salaries £400-£25-£700 p.a. and £400-£25 £550 p.a. respectively
ILFORD WEST HAM MENTAL HOSPITAL Goodmayes.—J.A.M.O. (male unmarried) Salary £350-£25 £450 p.a.
IPSWICH EAST SUFFOLK AND IPSWICH HOSPITAL.—(1) C.O. (2) H.S. to the Orthopaedic and Fracture Department (3) H.S. to a General S. (4) Genito-urinary S. Males Salaries £144 p.a. each
KEIGHLEY AND DISTRICT VICTORIA HOSPITAL.—R.M.O. Salary £180 p.a.
KETTERING AND DISTRICT GENERAL HOSPITAL.—H.S. and H.P. (male) Salary £160 and £140 p.a. respectively
KING'S COLLEGE HOSPITAL, Denmark Hill S.E.—Assistant Neurologist
KING'S LYNN WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL.—H.P. Salary £125 p.a.
KINGSTON-ON-THAMES SOUTH MIDDLESEX AND RICHMOND JOINT HOSPITAL BOARD.—A.R.M.O. for Mogden Fever Hospital Isle worth
LEEDS CITY.—A.R.M.O. (male, unmarried) for Killingbeck Sanatorium Salary £250 p.a.
LONDON CHEST HOSPITAL Victoria Park E.—Assistant Tuberculosis Officer Salary £600-£25 £700 p.a.
LONDON COUNTY COUNCIL.—(1) Part time Consulting Dermatologist (2) Temporary District M.O. for Area IV (Hampstead) District A Salaries £125 p.a. and £120 p.a. respectively (3) Senior A.M.O.s (Grade II) for (a) Colindale Hospital N.W., (b) High Wood Hospital for Children, Brentwood Salaries £500-£25-£600 p.a. each (4) A.M.O. (Grade I) for King George V Sanatorium, Godalming Salary £350-£25 £425 p.a. Unmarried
LOUTH AND DISTRICT HOSPITAL.—(1) Hon. Consulting Orthopaedic S. (2) Hon. Consulting P.
MANCHESTER ANCOATS HOSPITAL.—H.S. to the Ear, Nose and Throat Department. Salary £100 p.a.
MANCHESTER CITY.—(1) Assistant Pathologist (non resident) for Crumpsall Pathological Laboratory Salary £500 £25 £700 p.a. (2) R.A.M.O. for Withington Hospital Salary £200 p.a.
MANCHESTER EAR HOSPITAL.—R.H.S. Salary £120 p.a.
MANCHESTER NORTHERN HOSPITAL.—(1) R.S.O. Salary £150 p.a. (2) R.H.P. (3) R.H.S. Salaries £100 p.a. each
MANCHESTER ROYAL MANCHESTER CHILDREN'S HOSPITAL.—(1) R.M.O. (unmarried) (2) R.H.S. Salaries £150 p.a. and £100 p.a. respectively
MANCHESTER AND DISTRICT GENERAL HOSPITAL.—H.S. (male) Salary £150 p.a.

MARIE CURIE HOSPITAL Fitzjohns Avenue NW—Assistant Director Salary £500 p.a.

MENBOROUGH MONTAGU HOSPITAL—R.H.S. (female) Salary £120 p.a.

MIDDLESBROUGH NORTH ORMESBY HOSPITAL—H.S. (male) Salary £5 5s per week.

MIDDLESBROUGH NORTH RIDING INFIRMARY—(1) Senior H.S. (2) Third H.S. Males unmarried Salaries £175 p.a. and £140 p.a.

MIDDLESEX COUNTY COUNCIL—(1) A.M.O. and (2) J.R.A.M.O. for North Middlesex County Hospital, Edmonton Salaries £350 p.a. and £250 respectively (3) Visiting Dental S for West Middlesex County Hospital Isleworth Salary £2 2s per session (4) Non resident S (Grade 1) and (5) Assistant Pathologist for West Middlesex County Hospital Isleworth Salaries £1 000 £50-£1 500 p.a. and £650 £25 £800 p.a. respectively (6) Senior Dental Officer Salary £700-£25 £900 p.a.

NEWCASTLE UPON TYNE HOSPITAL FOR SICK CHILDREN—(1) H.P. (2) H.S. Salaries £100 p.a. each (3) Anaesthetist Fee £1 1s per session.

NEWCASTLE UPON TYNE ROYAL VICTORIA INFIRMARY—Assistant Radium Officer (non resident) Salary £350 p.a.

NORWICH INFIRMARY—R.A.M.O. Salary £350-£25 £450 p.a.

NORWICH NORFOLK AND NORWICH HOSPITAL—(1) General H.S. (2) H.S. to the Orthopaedic Department (3) C.O. Males unmarried Salaries £120 p.a. each.

NOTTINGHAM GENERAL HOSPITAL—(1) H.S. to the Ear Nose and Throat Department (2) R.C.O. (male) Salaries £150 p.a. each.

OLDHAM COUNTY BOROUGH—R.A.M.O. (unmarried) for the Municipal Hospital Salary £200 p.a.

OXFORD RADCLIFFE INFIRMARY—R.M.O. Salary £120 p.a.

PLYMOUTH PRINCE OF WALES'S HOSPITAL Greenbank Road—(1) H.S. (2) H.P. Salaries £120 p.a. each.

PLYMOUTH PRINCE OF WALES'S HOSPITAL Devonport—J.H.S. Salary £120 p.a.

PORT-OF-SPAIN CITY—Medical Officer of Health Salary £800-£25 £1,000 p.a.

PORTSMOUTH CITY MENTAL HOSPITAL—Locumtenent A.M.O. (male) Salary £7 7s per week.

QUEEN MARY'S HOSPITAL FOR THE EAST END E—(1) Casualty and Out patient Officer (unmarried) Salary £150 p.a. (2) Surgical Anaesthetist Honorarium £52 10s. p.a.

QUEEN'S HOSPITAL FOR CHILDREN Hackney Road E—Visiting Anaesthetist Fee £1 15s per attendance.

ROTHERHAM HOSPITAL—H.S. for the Ophthalmic and Ear Nose and Throat Departments Salary £150 p.a.

ROYAL FREE HOSPITAL Gray's Inn Road WC—In patient Obstetric Assistant (female).

ROYAL LONDON OPHTHALMIC HOSPITAL City Road EC—(1) Assistant S. (2) Out patient Officer Salary £100 p.a.

ROYAL MASONIC HOSPITAL Ravenscourt Park, W—Two R.S.O.s (males) Salaries £250 p.a. each.

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL Great Portland Street W—Two H.S.s (males unmarried) for the Brockley Hill Branch, Stanmore Salaries £150 p.a. each.

St JOHN'S HOSPITAL Lewisham, S.E.—H.S. (male) Salary £100 p.a.

SALFORD CITY—A.R.M.O. (male) for Hope Hospital. Salary £200 p.a.

SALISBURY GENERAL INFIRMARY—R.M.O. (male) Salary £250 p.a.

SEAMEN'S HOSPITAL SOCIETY Gordon Street WC—Resident Medical Superintendent (unmarried) for the Hospital for Tropical Diseases Gordon Street WC Salary £400 p.a.

SHEFFIELD CHILDREN'S HOSPITAL—H.S. (male unmarried) Salary £100 p.a.

SHEFFIELD ROYAL HOSPITAL—Whole time Clinical Assistant to the Ophthalmic Department Salary £700 p.a.

SHEFFIELD ROYAL INFIRMARY—(1) C.O. Salary £150 p.a. (2) Ophthalmic H.S. Salary £120 p.a. (3) H.S. (4) Aural H.S. Salaries £50-£100 each.

SHREWSBURY ROYAL SALOP INFIRMARY—R.H.S. (male unmarried) Salary £160 p.a.

SMITHWICK COUNTY BOROUGH—(1) Senior Assistant M.O.H. Clinical Tuberculosis Officer and Deputy Medical Superintendent at St Chad's Hospital Male Salary £750-£937 10s. p.a. (2) Assistant M.O.H. and Assistant School M.O. (male unmarried) Salary £350-£25 £550 p.a.

SOMERSET COUNTY COUNCIL—A.M.O. (male) Salary £500-£25 £700 p.a.

SOUTHAMPTON ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL—(1) C.O. (2) Resident Anaesthetist and H.S. for the Ear, Nose and Throat Department Males unmarried Salaries £150 p.a. each.

SOUTH LONDON HOSPITAL FOR WOMEN Clapham Common SW—Two H.S.s (females) Salaries £100 p.a. each.

STAFFORD STAFFORDSHIRE MENTAL HOSPITAL—R.A.M.O. (male unmarried) Salary £530 £25 £580 p.a.

STOKE-ON-TRENT BURSLEM HAYWOOD AND TUNSTALL WAR MEMORIAL HOSPITAL—R.H.S. Salary £175 p.a.

STOKE-ON-TRENT LONGTON HOSPITAL—H.S.—Salary £160 p.a.

STOURBRIDGE CORBETT HOSPITAL—H.S. Salary £100 p.a.

SURREY COUNTY COUNCIL—Dental S. Salary £500 £20-£600 p.a.

SWANSEA GENERAL AND EYE HOSPITAL—H.S. (male unmarried) Salary £150 p.a.

TUNBRIDGE WELLS KENT AND SUSSEX HOSPITAL—H.S. and C.O. Salary £150 p.a.

VICTORIA HOSPITAL FOR CHILDREN Tilt Street, SW—(1) H.P. (2) H.S. Salaries £100 p.a. each.

WAKEFIELD CLAYTON HOSPITAL—Fourth H.S. (male) Salary £150 p.a.

WEST END HOSPITAL FOR NERVOUS DISEASES W—(1) Hon Medical Psychologist (2) Hon Clinical Assistant (3) Two R.H.P.s (males) Salaries £125 p.a. each.

WEST HAM COUNTY BOROUGH—A.R.M.O. (male) for Whipps Cross Hospital, Leytonstone E Salary £350-£25 £450 p.a.

WEST SUFFOLK COUNTY COUNCIL—County M.O.H. and School M.O. Salary £1,000 p.a.

WOKING AND DISTRICT VICTORIA HOSPITAL—R.M.O. (unmarried) Salary £120 p.a.

WORKSOP VICTORIA HOSPITAL—Junior Resident Salary £130 p.a.

YORK CITY COUNCIL—Two District M.O.s Salaries £130 p.a. each.

CERTIFYING FACTORY SURGEON—The appointment at Shelf (Yorkshire West Riding) is vacant. Applications to the Chief Inspector of Factories Home Office Whitehall SW1 by July 6.

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings.

Notifications of offices vacant in universities medical colleges and of vacant resident and other appointments at hospitals will be found at pages 43 44 46 47 48 49 50 51 55 and 56 of our advertisement columns and advertisements or to partnerships assistantships and locumtenencies at pages 52 and 53.

APPOINTMENTS

COYNE William Joseph M.D., M.R.C.P.I. D.P.M., Resident Medical Superintendent Counties Cavan and Monaghan District Mental Hospital Monaghan.

GRUNDY Fred M.D., D.P.H. Medical Officer of Health for Luton.

PORTER, Eleanor G. M.R.C.S. L.R.C.P. D.P.H., Assistant Medical Officer Public Health and School Medical Department Middlesex County Council.

BIRTHS, MARRIAGES, AND DEATHS

The charge for inserting announcements of Births Marriages and Deaths is 9s which sum should be forwarded with the notice not later than the first post on Tuesday morning in order to ensure insertion in the current issue.

DEATHS

CARSWELL—Dr Robert Carswell M.A. M.B. Ch.B., of 61 West Side Wandsworth Common on June 16 1937.

MACKINNOY—On June 19 1937 at St Thomas's Hospital after two days illness Murdoch Mackinnon M.D. D.P.H. beloved husband of Lily Mackinnon of Poplar Lodge East Twickenham, and formerly of Nairobi Kenya Colony Funeral Twickenham Cemetery Wednesday 3 p.m.

Conduct Disorder in Mental Deficiency

Cases of conduct disorder in mental deficiency were not nearly so common as the laity supposed. Cyril Burt had found that of juvenile delinquents whom he had tested with the Binet-Simon tests only 8 per cent were mentally defective. In a large institution for mental defectives the lecturer had found less than 4 per cent. of 1 000 consecutive admissions noted as morally defective. Many of the low-grade cases screamed and kicked when interfered with in any way and were consequently difficult to examine, but this seemed to be a perseverated fear reaction. A stethoscope or tendon hammer was interpreted in their "one-track" minds as an implement with which they were going to be hurt. The really low-grade cases were quite incapable of planning any coherent asocial act, and in the higher-grade cases the same lack of planning ability was noticeable, though coherent behaviour was more possible so that while the defective did not take the initiative in delinquency he might give trouble as a result of persuasion or suggestion by others.

In any case of asocial conduct in the defective it seemed that integration and inhibition were imperfect, and the response to any relevant stimulus too direct and uncontrolled. This might mean a sudden reaction as when a defective was thwarted in his desire and bit out at all and sundry, in which case he might commit an aggravated assault, but this was quite easy to understand and was simply a direct uncontrolled and immediate instinctive response. Dr Gordon cited two cases of his own in which there was not so much an impulsive sudden response to a stimulus as a stupidity of action which failed to weigh consequences.

A deformed dwarf of low mentality earned a pittance by taking in a little laundry. Her one passion in life was affection for her sister's baby. One day she was given the baby to mind, and put it into an empty clothes basket as a convenient cradle. The infant began to cry and thinking he was cold she decided to cover him with some of the clothes which she had been washing. This idea seemed to persevere in her mind as she continued to pile on clothes until the infant was suffocated. There was no doubt that she would not deliberately have hurt a hair of its head. She was tried for murder but on the testimony of Professor Berry and himself pronounced guilty but insane.

Generally speaking, the conduct disorder of the mental defective might be taken as being due to the too direct response of primitive behaviour patterns not far removed from instincts consequent on the poorly developed power of inhibition. This prevented the individual from exerting a normal selection of a socially desirable response to a relevant stimulus or of inhibiting an easy response even to an allied but not strictly relevant stimulus. The deficiency of inhibition depended on a failure of development or an early destruction of cortical neurons resulting not only in a paucity of their numbers but also, what was more important in an irregularity of their arrangement and the formation of a cortical area lacking the differentiation appropriate to the adult brain.

A Transition Group

The transition from the case of conduct disorder which might justly be attributed to organic changes in the brain to the case of purely psychical origin might be illustrated by what the lecturer described as the biochemical group. He mentioned the case of a girl who had been found guilty of persistent stealing but only of sweets or of money to buy sweets. She was found to be suffering from definite hypoglycaemia and on being put on regular supplies of glucose both the physical and the moral trouble cleared up.

It was well established that centres in the diencephalon controlled the carbohydrate metabolism of the body and especially the level of the blood sugar, and low blood

sugar created a tension or disturbance in the diencephalic centres which was in turn transmitted to the effector areas in the frontal lobe. It was not of course true that every person with hypoglycaemia stole sweets but who should say what conditioning might take place in the upbringing of children? A pattern of behaviour was here being established for whose activation the chief stimulus was apparently the hypoglycaemia.

From biochemical needs to biological needs was no far cry. Again to take the dream as an illustration, explorers had related how when deprived of food they were apt to dream of succulent beef-steaks and well-browned welsh rarebits. In the sexual dream the imagery no doubt owed just as much to the messages transmitted to the cortex from an overtense vesicula seminalis as the increased tension of the vesicula and consequent reflex emission owed to the sexual image. The same mechanism emerged in relation to fear, anger, and other instinctive reactions.

Bodily tensions were thus seen to be determining the activation of cortical patterns which were largely ideational and affective in the dream, but these might easily pass over into conative patterns, as might happen in hysterical somnambulism, fugue, and double personalities. In these states as a result of dissociation inhibitions were lifted and centres of excitability were allowed to radiate more freely than when the personality was fully integrated. Presumably Mr Hyde is only Dr Jekyll let loose.

Psychological Types of Conduct Disorder

With regard to psychological types of conduct disorder the lecturer maintained that the great majority of those who committed such asocial acts were not obviously psychotic, or even psychoneurotic and if the attempt were made to classify them into the clinical groupings such as hysteria and anxiety and obsessional states the issue would not be greatly clarified. The key to the situation was usually to be found in some quite obvious condition (as C. H. Town had stated) 'in that complex unity built up by the individual in his interrelations with the home, school, street, church, playground, club and all other institutions and individuals making up his world'.

It was obviously desirable, therefore that in young children stimuli which were likely to evoke undesirable responses should be avoided. As the child grew older the impulses—or instincts, if that word was preferred—became adjusted to each other and to the demands of the environment until a system of ideals and internal inhibitions to the outside world had been built up and began to serve as a means of self-regulation of conduct. What exactly determined the inhibition or lack of inhibition in a given pattern was not exactly known.

That it depends on the biochemical changes involving release of acetylcholine at the synapses may be taken as reasonably certain and we are beginning to find that certain substances have an effect on this process but we are as yet in ignorance of the influences which determine wholesale but at the same time coherent inhibitions or releases. As has already been said the irradiation of excitation or inhibition may be due to inherent factors or acquired influences whether psychogenic or due to organic causes but the same process would seem to be at work in these psychogenic cases from the neurological point of view as in all the other types of conduct disorder. Whatever be the origin of the disturbance we must confess to a great deal of ignorance of the details of the underlying neuronic process. In this respect we must admit that so far histopathological methods are inadequate to answer this question.

In thinking of conduct disorder the brain must be regarded as acting as a whole. Localized lesions could only be "disorders of mental tools" though there was no reason why these mental tools should not continue to be studied for thereby it was possible to understand how the brain worked as an organ and how mental function

described by psychology depended on neuronic function described by physiology. Dr Gordon discussed the different kinds of intercommunication between the various parts of the entire system of thalamo cortical functional areas, and spoke of the thalamus as the principal switchboard of incoming sensory messages. The thalamus might well be assigned a functional role congruous with their central anatomical positions in the central nervous system. The thesis he had presented in his lectures seemed to require that they be functionally regarded as organs contributing largely to what Sherrington had termed the integrative action of the nervous system and this conception seemed useful in assisting the understanding of the neurological basis of conduct disorder with its undoubted affective drive thus linking up the findings of modern psychology with those of modern neurology.

In conclusion, he said that if in these lectures he had disclosed yawning gulfs in exact knowledge and had proved nothing he hoped he had stimulated interest and had encouraged the expectation that one day the two great subjects of neurology and psychiatry might be welded into one harmonious whole. This indeed, with the increased knowledge of these two subjects, was the presumed purpose of the Morison Lectures.

INTERNATIONAL TECHNICAL CONFERENCE ON AERIAL RELIEF

The following report has been received from Colonel E. M. Cowell DSO, of the Surrey Branch of the British Red Cross Society.

The League of International Red Cross Societies, in conjunction with the Hungarian Red Cross have recently held their first International Conference at Budapest. Twenty-five nations including Great Britain, and fifty organizations took part. Two British Monospar machines, three French Caudron biplanes and an Italian three-engined converted bomber (Caproni) proceeded to the rendezvous by air. The journey of 1,225 miles from the Air Port of Croydon was most enjoyable and took about ten hours of actual flying.

The objects of the conference were an exchange of ideas reports on practical experience and demonstrations of actual air medical transport work. Papers on various aspects of air ambulance work were read by French, Dutch, Polish, and British representatives. Two papers by a French and an Italian delegate respectively on the medical importance of the parachute were of great interest. Colonel Ferroni of the Italian Medical Service showed many lantern slides of air work in Abyssinia with especial reference to their method of dropping food, clothing and medical supplies from the air by parachute. The loads dropped averaged 120 kilos in weight.

One day was devoted to demonstrations on the aerodrome at Budapest. The first competition consisted in bringing in by air ambulance patients waiting at an aerodrome ninety miles away. In this event the British Monospar was only four minutes slower than the larger Italian machine. Great attention was paid to dropping supplies by parachute and the enthusiasm of the onlookers was aroused when four Hungarian Red Cross nurses made a graceful parachute descent from 6,000 feet. Previously two French doctors had demonstrated the safety of this method of landing.

The conference teaches the medical profession many useful lessons. In France there are some 200 doctors who have qualified as pilots and are capable of flying their own ambulance machines. Certainly all young doctors in this country should acquire first hand knowledge of air transport even if they do not go on to become pilots. The safety and value of air medical transport is now realized by all. It remains for the medical profession in this country to accept this and translate their air knowledge into practice whenever occasion arises. The profession is urged not only to become air minded but air worthy also.

LONDON AND COUNTIES MEDICAL PROTECTION SOCIETY

The annual meeting of the London and Counties Medical Protection Society was held, under the presidency of Sir CUTHBERT WALLACE on June 16. A tribute of respect was paid to the memory of the late Dr R. L. Guthrie, for several years treasurer.

The Year's Work

In moving the annual report, Sir Cuthbert Wallace said that 1,169 new members had been elected during the year and the membership now stood at 15,135. One tenth of the membership made application for advice and assistance during the year, and nearly 800 cases were dealt with by the solicitors. As president of the Society and studying the cases which continually came before the council the complexity of the modern operation had been brought home to him from a new angle. In the old days the surgeon, without an anaesthetic or with very little anaesthetic would perform an amputation in ninety seconds, but nowadays the operation might be a very long business, and moreover it was no longer the responsibility of one man but of a team. The responsibility of the anaesthetist and of the nurses would have to be defined at some time or other. The surgeon could no longer go on bearing all the risks entailed.

In dealing with the work of the year Sir Cuthbert Wallace mentioned the alteration of its articles recently made by the Society in order to meet the situation which might be created by the Law Reform (Miscellaneous Provisions) Act 1934 whereby it was possible for actions to be taken against the estate of a deceased doctor in regard to some act or fault during his lifetime. The wisdom of this decision on the part of the Society was shown in a recent case (that of Connolly v. Rubra reported in the *British Medical Journal* of December 5, 1936 p. 1174) in which for the first time the estate of a deceased doctor was sued £5,000 damages being awarded and the decision being sustained on appeal. The Society had been able to assist the widow and he thought the action taken whereby the privileges of membership were granted to the personal representative of any deceased member was an excellent instance of intelligent anticipation. Moreover the benefits of membership had been further extended to provide life membership for those members who had retired from practice.

Financial Position

Mr W. M. MOLLISON the new treasurer said that for the first time in recent years the accounts of the Society showed a deficit amounting to £246. This was due largely to the heavy expenses in the case just mentioned and to other cases. The total cost per member was £1 5s 7d., which was considerably more than the subscription received the difference being made up by interest on investments and accumulated balances. It was very important to get more members into the Society and even more important that members should as far as possible exercise circumspection in dealing with patients in matters which might have a legal bearing.

Sir Cuthbert Wallace was unanimously re-elected to the presidency the nineteen vice-presidents were also re-elected as were the retiring members of Council with the addition of Dr Marguerite Kettle and votes of thanks were accorded to the staff and to the legal advisers (Messrs. Le Brasseur and Oakley). Dr C. O. Hawthorne, in speaking to a vote of thanks to the president suggested that greater efforts should be made to bring to the attention of young medical graduates the need for joining a defence organization.

In their report to the Society the solicitors drew attention to the need for keeping professional records. The absence of these had been an embarrassing feature of a case which the Society had fought unsuccessfully during the past year. Members who were insurance practitioners they said would avoid much anxious labour and trouble at a later date if they made systematic entries on their record cards particularly of visits paid to patients. All pertinent correspondence should also be kept.

Reports of Societies

PROBLEMS OF BLOOD TRANSFUSION

The summer meeting of the Association of Clinical Pathologists was held on June 12 in the pathological department of the Royal East Sussex Hospital, Hastings. Dr P. LAZARUS BARLOW, pathologist to the hospital, was in the chair, and the meeting considered various aspects of the problems of blood transfusion.

Organization and Administration

Dr H. F. BREWER (London), medical officer to the London blood transfusion service, spoke on the organization and medical administration of a voluntary blood transfusion service. He made a plea for the co-ordination of all such services in the country in a single scheme. The routine running of a transfusion service was best carried out by a body independent of the hospitals making use of the donors. Medical administration of a service was preferably centralized in the hands of a clinical pathologist. Dr Brewer recommended a full re-examination of donors after every ten, and multiples of ten, donations. He considered the safe minimum time interval between bleedings to be three months for men and four months for women, but there was no need to limit the number of donations given. The needle method of extraction of blood was alone permissible. Certain desiderata were emphasized—the withdrawal of blood from a donor only in the supine position, the avoidance of direct arm-to-arm technique, the use of a local anaesthetic at the site of needle puncture, the exclusion of iodine in the dressing, and the elimination of over-bleeding. He paid a tribute to Mr P. L. OLIVER, the founder and honorary secretary of the London service, to whose large experience he was indebted for several points mentioned in his communication.

The President, Dr S. C. DYKE (Wolverhampton), described the blood transfusion service organized for the Royal Hospital, Wolverhampton by the Rotary and Round Table Clubs of that town. Not only blood donors but also the means of getting them to and from the hospital as required at any hour of the day or night were provided. Dr Dyke showed specimens of the various forms used in the enrolment and registration of volunteers; the system worked with such ease and efficiency that the record time for getting a donor had been two minutes while even at night the time had never exceeded two hours. With a view to ensuring that donors were subjected to no unnecessary pain or inconvenience through unskilful withdrawal of blood, the hospital had established the post of transfusion officer; this was held by the resident assistant pathologist. It was the special duty of this officer to make withdrawals of blood from service donors, to give or assist in giving transfusions, and to maintain all necessary apparatus and solutions in readiness for immediate use. The combined donor and transport service had proved of great benefit to the work of the hospital.

Storing Blood

Dr NORAH SCHUSTER (London) described some experimental work on the keeping properties of blood. The red cells in ordinary citrated blood remained intact for about twenty-one days after which haemolysis began. They could be kept longer by adding glucose to the blood and in certain physiological fluids they had remained intact for 190 days. Red cells were still physiologically active in the circulation of a recipient animal after having been kept for fourteen days; they could also be kept for four weeks and retain their power of absorbing oxygen. By the Russian method of storing blood taken from a

cadaver a few hours after sudden death, larger quantities could be collected from the donor, and there was no need for the addition of citrate on account of fibrinolysis. She also described methods used in France, Spain, and South America for the storage of blood from living donors. The medical service of the Government forces in Spain in the course of the present rebellion were using blood stored in ampoules under a positive pressure of two atmospheres for emergency work. The blood was usually of Group A or O, and was administered straight into the vein from the ampoule, as a rule by medically unqualified orderlies or nurses. The period for which it was kept was three to four weeks. Experience showed that there was no likelihood of damage from infection or the development of toxins in blood stored for one month.

In a brief discussion which followed Dr R. V. FACEY, Dr A. F. S. SLADDEN, Dr J. OLIVER and Dr BREWER took part.

Abnormal Reactions after Transfusion

After Dr J. A. BOYCOTT (London) had described three cases of anomalous blood grouping reactions, and stressed the danger of placing too much reliance on grouping alone and the necessity of careful matching of bloods for transfusion purposes, Dr R. J. V. PULVERTAFT (London) discussed certain abnormal reactions after transfusion. He referred first to some of the effects of infusion of simple saline. In a number of cases coming to necropsy after saline infusions he had found oedema of the lungs and of other viscera, particularly the heart. He suggested that physiological solutions such as that of Hartmann were preferable to normal saline. Certain reactions after the transfusion of blood were in his opinion allergic; he recalled one case in which a transfusion was followed by severe urticaria. Four transfusions with incompatible blood were described; in no case was the amount transfused over 300 c.c., and all recovered. Incompatible blood had been administered owing to wrong grouping, this being due to loss of potency of the grouping serum through the addition of phenol as a preservative. Dr Pulvertaft stated that he had injected doses of from 5 to 20 c.c. of incompatible blood at weekly intervals into patients over long periods, no untoward symptoms had occurred, and he considered sensitization to blood previously given from the same donor an unlikely cause of reactions. He had seen haemoglobinuria follow transfusion in four cases of haemolytic anaemia. The infused red cells being normal theoretically ought not to be susceptible of lysis, but perhaps in these diseases the organism attained a certain red cell level, and on infusion it was the subject's own red cells, and not those of the donor, that were destroyed. After splenectomy lysis following infusion of blood did not occur.

Dr N. H. FAIRLEY pointed out that American figures showed that infusion into an adult of up to 350 c.c. of incompatible blood had never caused death while infusion of 540 c.c. or over had invariably proved fatal. This suggested a critical level for the disposal of the products of haemolysis.

Dr NORAH SCHUSTER said that in any form of shock without severe blood loss transfusion was not required; she thought far too many transfusions were being performed. Many members agreed with this view. Dr JANET VAUGHAN believed that transfusions were given far too casually; many of the untoward incidents which followed were due to chilling of the infused blood; this was liable to give rise *in vivo* to haemolysis. The President, Dr S. C. DYKE, said that reactions after transfusion, apart from those dependent on incompatibility, were due to inattention to essential details. The most important of these were the temperature of the blood, the use in making up solutions of freshly glass-distilled water, and strict cleanliness of all apparatus. He employed a small glass reservoir from which the blood was run in by gravity. The rubber tubing was kept in short lengths, which were taken apart for cleaning and united by metal joints for use.

Methods of Transfusion

Drs H L MARRIOTT and A KERWICK (London) described the transfusion of blood in large quantities by the continuous drip method. The purpose of the method was to bring the red cells of the recipient's blood up to a suitable level as quickly as possible. When large quantities were infused slowly the red cells remained in the circulation but the fluid elements were excreted. The principal indication for continuous transfusion was persistent bleeding.

Dr LAZARUS BARLOW said that the direct method of blood transfusion was that of choice. The blood transfused was less interfered with and it did not entail the exposing of the veins of either patient or donor. In nearly four hundred transfusions, the great majority of which were carried out by the direct method, no donor's vein had been exposed. A Louis Joubé syringe of 5 ccm capacity was used. No 17 gauge Record needles being connected to the syringe by two pieces of thin pressure tubing each about six inches long. The essential point was to keep the piston constantly on the move once the transfusion had started in order to prevent clotting. It might be argued that this entailed giving the blood too fast, but no ill effects from this cause had been observed. The only contraindications were when a constant drip transfusion was required and when a comparatively large transfusion was needed in the case of a patient whose veins were too small to admit a No 17 gauge needle. Dr R OFFICER described a method for post-operative blood and saline transfusion. Patients recovering from long and severe operations required large amounts of water and salt in such cases the urine was free from or low in chlorides. Both blood and saline were administered by the "drip" method, and were kept in separate containers, he had devised a special apparatus by which a change-over from blood to saline could be effected without undue admixture of the saline and citrated blood. This was important, as the addition to citrated blood of saline often led to clotting. As a routine 500 to 700 ccm of blood was given immediately on the return of the patient from the theatre, this was followed by saline at the rate of three and a half to four pints in each twenty-four hours for forty-eight hours. In a series of twenty-seven cases of combined excision of the rectum in which this technique had been employed there had been only one death.

Transfusion in Blood Diseases

Dr F A KNOTT (London) represented in his absence by Dr CUTHBERT DUKES reported on four cases of aplastic anaemia treated by repeated transfusions. It was pointed out that the blood picture could by this means be restored to normal but there was no means at present of judging whether or not the haemopoietic system would be capable of maintaining normality. By a careful study of his cases Dr Knott had arrived at the conclusion that a continued reticulocytosis was a bad prognostic sign, indicating a state of strain on the part of the haemopoietic system. In three cases out of the four such a reticulocytosis had persisted and all had ended fatally, in the fourth case after repeated transfusions the reticulocytosis had disappeared and the patient was now doing well.

Dr N H FAIRLEY (London) reported observations on the formation of pseudo methaemoglobin in intravenous haemolysis. He pointed out that disintegration within reticulo-endothelial cells was the normal physiological fate of the erythrocyte. Lysis in the blood stream was a pathological event. The clinical syndrome was characterized by sudden rigor, fever, pain in the loin anaemia, haemolytic jaundice oliguria and perhaps anuria. The pathological lesions consisted of haemosiderosis blockage of the renal tubules toxic changes in their lining epithelium and possibly degeneration of hepatic cells. Extracorporeal haemoglobin was treated as a foreign substance some 10 per cent was excreted through the glomerulus and appeared in the urine if a pH of less

than 6.4 was reached in the tubules, methaemoglobin and possibly acid haematin was formed (Dodds). Sifting up effects followed under these circumstances, and led to oliguria, anuria nitrogenous retention with a high blood urea and renal acidosis with a low plasma bicarbonate level low serum calcium, and a high blood phosphorus. The remaining 90 per cent appeared to be disposed of by the reticulo-endothelial cell system and liver the oxy-haemoglobin producing haematin, which gave rise to haemosiderin and haemobilirubin.

Recent work on blackwater fever by Fairley and Bromfield had shown the presence of another pigment in the plasma allied to methaemoglobin, but having its spectroscopic band somewhat nearer the blue end of the spectrum (6240 Å). This band, unlike methaemoglobin, was not dispersed with Stokes's reagent, ammonium sulphide (10 per cent) ammonia, or hydrogen peroxide (10 vols). The new pigment was formed both *in vivo* and *in vitro* by the action of plasma on haemoglobin, and was probably an intermediate compound in the production of haematin. It was not excreted by the kidneys, and from this viewpoint its formation was a conservative process protective to the organism. It was constantly found in severe cases of blackwater fever, and was probably ultimately formed in all instances of intravascular haemolysis.

RECENT ADVANCES IN OBSTETRICS

At a meeting of the London Association of the Medical Women's Federation on May 25, with Miss E C LEWIS the president, in the chair, Miss KEREN PARKES read a paper on recent advances in obstetrics.

Miss Parkes said that for the purpose of discussion clinical obstetrics could be divided into the ante-natal, intra-natal, and post-natal periods. Ante-natal care could not be limited to the nine months of pregnancy, since the woman's adjustment to this would depend on the state of her health and nutrition for years past. For early diagnosis the Aschheim-Zondek and the Friedman tests had a high degree of accuracy and had other uses, notably in diagnosing the intra-uterine death of a foetus, the presence of a vesicular mole, and the onset of chorion epithelioma. A state of pregnancy having been diagnosed, the next problem was to maintain it. In cases of repeated abortion extracts of corpus luteum were now given. Since this extract was unfortunately still very expensive an alternative method was to give large doses of a substance stimulating luteal activity which was found in the urine of pregnant women, and marketed as antuitrin S or progynon.

There were three main objects in ante-natal work: the avoidance of difficult labour due to malpresentation and disproportion, the prevention and treatment of toxæmias, and the education of women in mothercraft and the hygiene of pregnancy. By radiological pelvimetry it was now possible to compare the actual diameters of the pelvis and of the foetal head. Unfortunately, estimates based on these elaborate measurements were all static, and failed to allow for the alterations in flexion and the moulding of the head which took place under the influence of the uterine contractions. In breech presentations external version was now undertaken rather earlier than it used to be—from the thirty-second to the thirty-fourth weeks, instead of from the thirty-fourth to the thirty-sixth. Where version failed and the legs were extended it was no longer customary to bring down a leg when pelvic measurements were normal unless there was delay in the second stage. In cases of acute hydramnios in which x-rays revealed a normal foetus, the tension of the liquor caused severe abdominal pain. It had been found possible to tap the amniotic sac through the abdominal and uterine walls if necessary on several occasions, without disturbing the pregnancy.

The toxæmias of pregnancy were now regarded as being primarily metabolic disturbances. The best protection

against, toxæmia was a good mixed diet, including fresh foods, with plenty of iron, calcium, and vitamins but it was still necessary to be constantly watching for early signs of toxæmia. Routine urine tests and blood pressure readings were now the rule, but in the estimation of oedema an interesting advance had been the recognition that much help could be obtained from regularly weighing patients, "occult oedema" being revealed by any excessive gain in weight. It appeared from Dame Louise McIlroy's work that the normal gain was greatest from the twenty-fourth to the twenty-eighth week, being on an average 3 lb, while in toxic cases the maximum gain occurred rather later, from the twenty-eighth to the thirty-second week, and was about 4½ lb. Miss Grace Jones had drawn attention to the state of the retinal arteries as an index of the condition of the arterioles elsewhere in the body, particularly in determining when the changes were such that permanent renal damage was likely to result. Any sign of retinal exudate or hæmorrhage was an indication for the immediate induction of labour.

Intra-natal Period

In the intra-natal period the general trend was to minimize interference of every kind. The passage of the head through the pelvis was a dynamic problem in which the uterine forces were quite as important as the relative sizes of passage and passenger. Induction of labour had now no place in the treatment of primigravidae with suspected disproportion. Doubtful cases of disproportion should all be submitted to a trial labour at term. If after the membranes ruptured there were good pains for some hours, but the head was not satisfactorily low in the pelvis, Caesarean section must be performed. The lower segment operation could safely be undertaken much later in labour than the classical operation. The routine use of anaesthetics was becoming more general, and for the normal delivery self-administration of gas and air was considered best.

One complication of labour which had received more attention lately was the contraction ring which occurred in otherwise perfectly normal cases causing prolonged delay and ultimately obstructing labour. When diagnosed early in the first stage the treatment was lower segment Caesarean section. Later, when infection had occurred and the child was dead, morphine, deep anaesthesia, and constant traction by weights attached to the perforated head were the only methods available to relax the ring. Should the contraction appear in the second stage forceps delivery might be accomplished under deep anaesthesia. In the third stage when fortunately the complication was rare, treatment was by manual removal of the placenta after dilatation of the ring—a very difficult procedure.

Puerperium

Finally Dr Parkes referred to the importance of droplet infection of septic foci in the patient herself and of conditions such as tonsillitis or ear discharges in other members of the family, in the prophylaxis of puerperal sepsis. The hæmolytic streptococci concerned had been differentiated into twenty-two different types varying in virulence, the eleventh being the worst. The use of prontosil album marked a great advance in treatment. A complication which might arise from its administration was sulphæmoglobinæmia which was manifested by cyanosis especially of the lips without any cardiac or respiratory distress. The condition seemed to be harmless provided the prontosil was stopped as soon as the cyanosis was noticed. Epsom salts should not be given to patients on prontosil nor in fact any drastic purgative for even those which did not contain sulphur increased the sulphides in the bowel by their irritating action.

An electrically driven breast pump was another recent innovation. Increasing interest was being shown also in the reconditioning of weakened abdominal and pelvic muscles by massage and exercises. More practical advice was being given to women about the proper spacing of

their pregnancies, and patients with heart or kidney disease were given careful instruction in birth control rather than a vague statement that they must not have any more babies. The available clinics giving advice on contraception were still woefully overworked and overcrowded, and there were large areas without any, but the need for them was being recognized and their numbers were increasing.

Dr Parkes illustrated her address with some films of a type of lower segment Caesarean operation of difficult cases of breast feeding, and of a case of pseudo-pregnancy showing the disappearance of the phantom tumour under anaesthesia.

THE HEART IN DIPHTHERIA

At a meeting of the Fever Hospital Medical Services Group of the Society of Medical Officers of Health in London on May 28 Dr H MASON LEETE, medical superintendent of the Hull City Hospital, read a paper on the heart in diphtheria.

Dr Leete said that during the past six years (in Hull) clinical observations had been made on many severe cases of diphtheria in an attempt to classify the varying degrees of cardiac dysfunction resulting from toxic effects on the myocardium. A clinical distinction was drawn between death from general toxæmia in the first week of disease and 'cardiotoxic' death in the second and third weeks. Characteristic pulse-rate curves were seen in severe and moderately severe cases of myocardial damage. Fairly constant changes in the relative intensities of the heart sounds occurred during the progress of a severe case, with extrasystoles and reduplications. It was possible perhaps to place these phenomena in a scale which showed increasing or decreasing cardiac impairment. The explanation of some of the phenomena called for a careful comparison of clinical and electrocardiographic findings.

General Discussion

Dr M MITMAN said that in the first week diphtheria was evidenced by local lesions and general toxæmia but electrocardiographic changes were rare. In the second week there were clinical and corresponding electrocardiographic manifestations of cardiovascular damage in the more severe cases. Of the electrocardiographic signs the most common were changes in the form and voltage of the QRS complex, in the direction of the T-wave in significant leads, and there was evidence of lesions in the conducting bundle and its branches. He believed that lengthening of the P-R interval was not common and that when damage to the main bundle occurred it produced a complete heart-block, which sometimes occurred with a normal pulse rate. An indication of serious cardiovascular damage could be obtained not only from the quantity of albumin in the urine, but also from the diminution in the amount of urine passed. He believed that the cardiovascular phenomena in the paralytic stage, as well as the paralyses themselves, were of central nervous origin. He had inquired of physiologists if the cardiac irregularities and the tachycardia of this stage could be produced by damage to the central nervous system, and had been assured that they could.

Dr H S BANKS said that of the various factors concerned in the production of the heart lesion in diphtheria not the least important was the dosage and route of injection of the antitoxin. He advocated larger intravenous doses of antitoxin as a means of preventing or modifying the heart lesion of toxic diphtheria. Dr E JAMES thought that gravis strains were not always responsible for a high case mortality. In a series of some 800 cases of diphtheria admitted to hospital from Dagenham, Hornchurch and Romford during the past two and a half years approximately 70 per cent of the strains of *C. diphtheriae* were classified as gravis and 20 per cent as intermediate strains, yet the latter had been nearly twice as lethal as the gravis type.

THE PSYCHOLOGICAL APPROACH

At a meeting of the Medical Society of Individual Psychology on June 10 Dr T A Ross read a paper entitled 'The Psychological Approach'

Dr Ross said there were two aspects presented by such an approach—namely, the understanding by the physician of his patient's illness and the understanding by the patient of the origins and causes of his illness in so far as these were psychogenic. From the standpoint of the physician two views might be contrasted. According to one there was no psychological approach. In the absence of physical signs people who said they were suffering quite clearly were not and in an ideal society would have been handed to the policeman or the priest but for the fact that in the world as it is neither of these functionaries would do their duty in this matter. According to the second view as expressed for example by Groddeck, psychogeny embraced the whole of medicine and was the key to the understanding of every patient. Whether an illness was traumatic or microbic the patient came by his catastrophe because he wished it, the catastrophe being preferable to something which it averted. For Groddeck intention was the key to everything. But this view was unprovable. Anxiety could be found in any case if it were looked for industriously enough, and there were many who wished for an illness but did not get it. Indeed many obviously refused the advantage which their physical illness might confer on them, and went about courageously when they might well be and could be, at rest. Illness, even if not psychogenic in origin, must soon be complicated by events. The average man did not want to be ill; he wanted to do a lot of things which illness prevented: to play or watch football, to play golf, or go to the cinema. Illness brought fear, anxiety, loss of confidence in the doctor, resentment against employers, hope of unearned increment, and other factors inimical to recovery.

The truth was intermediate between the doctrine of physical causation and that of pure psychogenic causation. It seemed obvious that every patient presented both a mental and a physical problem. For this reason, among others, medical psychologists of all people had much need to look more at patients and less at books. Medical psychology had suffered of late from having one clinical observer of outstanding genius, with no one quite competent to criticize him effectually who was surrounded by a cohort of praetorians ready to slay any outside critic.

Dr Ross said that when he began to study the effect of mind on bodily symptoms he was living and working in the Isle of Wight, in isolation from others interested in the subject. There were disadvantages in this, there were also considerable advantages. There were advantages in having a director to supervise one's earlier cases, but the pupil tended to become subservient to the teacher, to lose his critical faculties, to depend less on the picture provided by the patient and more and more on the master's ideas. With the regulation that every would-be therapist must himself be analysed before he started treating others there was an end to originality. No one ever quite recovered from an analysis. The patient might lose his illness, but every successful analysis whether of patient or of pupil must result in the more or less permanent adoption of the analyst's views. One might hope to get a number of people well without making them subjects of transference neurosis which might sometimes be an incurable neurosis meaning that the doctor shared the illness with the patient instead of some member of the latter's family doing so.

There were two possible strategic methods for the psychological approach: one was analysis and the other persuasion. Whenever a history was taken an interpretation was probably made; there was little difference between this and analysis. Whenever a prognosis was given persuasion was used. Persuasion might be divided

into encouragement and discouragement, each had its place. There was one pitfall and one only about encouragement: it might be the last thing the patient sought or desired in which case it might make him worse. The good doctor must believe in his treatment. No one could give encouragement, unless he were a rogue, about something in which he had no faith. The analytic approach was of value in the psychoneuroses and in every kind of chronic illness. The analytic approach did not necessarily mean deep analysis and many psychoneurotics could be got to remain well for years without any knowledge of their infancy or young childhood. Deep analysis had its uses, but every abdominal pain did not call for a laparotomy.

Local News

IRELAND

An Outbreak of Puerperal Fever

The report of the Rotunda Hospital, Dublin, which covers the twelve months to October 31, 1936, states that there has been a considerable advance in the programme of reconstruction under the auspices of the Irish Hospitals Sweepstakes Fund. During the six months following the opening of the new out-patient department an increase of 30 per cent in the number of patients attending is reported. An account is given of a serious outbreak of haemolytic streptococcal sepsis in March and April following a smaller epidemic in the two preceding months. Fourteen patients were affected and there were four deaths, a mortality of 28 per cent. The report points out that extensive building and alterations were taking place in the hospital at that time, and that it was therefore difficult to maintain general cleanliness. The outbreak also coincided with a severe epidemic of streptococcal throats in both the hospital and in the city. The sequence of events is frankly described. On January 3 labour was induced in a primipara Mrs A. A normal puerperium followed until the eighth day, when, the patient complaining of sore throat, a throat swab was taken, from which grew a pure culture of haemolytic streptococci. The two nurses attending this case subsequently attended Mrs B, who also developed a streptococcal throat. Mrs B elected to leave hospital with a temperature against the advice of the staff. Throat swabs were then taken from the two nurses, and both grew haemolytic streptococci, the two nurses were sent home. Meanwhile Mrs C, delivered by forceps on February 1, had been nursed in the bed beside Mrs B by these same nurses before their throat condition was recognized. Mrs C developed a rigor on the fourteenth day; a blood culture was positive for haemolytic streptococci, and she died twelve days later. The next case recorded was in a Mrs D, who had a spontaneous delivery on February 15, followed by a rise of temperature on the second evening. A cervical swab produced haemolytic streptococci. The patient recovered. In this case no contact with infection could be traced. An interval of calm now supervened until Mrs E delivered on March 25 and attended by a nurse subsequently found to have streptococci in her throat, developed a puerperal infection of haemolytic streptococci. Some ten days later several cases appeared in rapid succession. Of these one patient was delivered on April 5, two on April 7, two on April 8, the remaining cases were delivered on April 11, 14, and 21 and May 8. It is noted that in seven of these fourteen cases there was no vaginal interference of any kind. Six of them started in the same puerperal ward and eight were in direct contact with droplet or spray infection from a positive streptococcal throat. The report describes the thorough precautionary

measures taken, and it is stated that following this epidemic all those conducting cases in the labour ward and all nurses washing up puerperal cases in the lying-in wards have been ordered to wear masks. It is further suggested that the question of spray and droplet infection is not sufficiently stressed in the rules of the Central Midwives Board, and that under Rule 9a the infective danger of sore throats and colds should be clearly stated.

SCOTLAND

University of Glasgow

At the graduation ceremony of the University of Glasgow on June 16 Sir Daniel M. Stevenson, Chancellor of the University, presiding, doctorates in law were conferred upon thirteen persons, of whom six were members of the medical profession. Professor Gibb, in presenting these graduands in law, said that Professor Boeke, who is professor of histology and embryology in the University of Utrecht, was the foremost living authority on the histology of the nervous system. Dr. John Marshall Cowan was one of a family which for four generations had been eminent in the practice of medicine in Glasgow; he had won an international reputation in cardiology. Dr. Walter Elliot was a distinguished graduate of Glasgow in science and in medicine who had reached Cabinet rank as Minister of Agriculture in 1932, and was now Secretary of State for Scotland. Professor T. K. Monro had held the regius chair of medicine in the University of Glasgow from 1913 to 1936, and during these years had efficiently served the Glasgow medical school as the author of literary work he had shown himself to be a scholar of distinction. Sir Robert Muir had occupied the chair of pathology in the University of Glasgow for thirty-seven years, and during that time had contributed in abundant measure to the great advances in the science of pathology. Professor Ralph Stockman had held the chair of materia medica and therapeutics in Glasgow for thirty-nine years, justifying an already brilliant reputation by his work both in the wards and in the lecture room.

NEW BOTANY LABORATORY

After the graduation ceremony the new laboratory of the botany department was formally opened. Principal Sir Hector Hetherington, who presided, said that the previous botany building had been one of the earliest science buildings in the University and it required expansion. Sir Daniel Stevenson, the Chancellor of the University, had accordingly agreed to provide the sum necessary. Sir A. C. Seward, eminent professor of botany in the University of Cambridge, in opening the laboratory spoke of the aims of experimental inquiry and said that they were gradually getting nearer to the causes and the unseen mechanism that regulated living processes. They were hopeful of being able some day to demonstrate the chain of events connecting a stimulus in plants with the final reaction and responses that followed. This demanded not only a knowledge of plant structure but a considerable knowledge of chemistry and physics, and he expected that this new laboratory might construct one of the links still needed in this chain.

Problems of Mental Deficiency

At a conference of the Scottish Association of Mental Welfare held in Edinburgh on June 4, Sir William McKechnie, presiding, a paper on Mental Hygiene was read by Dr. Lewis C. Bruce, formerly medical superintendent of Perth District Mental Hospital. He said that according to statistics the mentally defective section of the population was increasing by 1 per cent in every ten years, despite the provision of hospitals, clinics, and child welfare centres. These institutions, however, patched up a large number of C3 people who, when discharged

married and reproduced more C3 people. In other words, civilization was slowly but surely producing race suicide. There had been great civilizations in the past and one might speculate what had destroyed them. Clinics were palliative not preventive, although child welfare clinics might in time prove preventive by educating future mothers. The question of sterilization was being constantly discussed, but this would not affect the class from which the mental defective was largely recruited, for not many people were willing to admit that they were of C3 calibre. The public must be educated to a knowledge that like produced like. Medicine had made great strides in the prevention of infectious diseases, and the deaths from tuberculosis had been reduced by 25 per cent in the last twenty-five years. Why should the increase of mental deficiency not also be reduced by research and the constant teaching of the laws of health? Dr. W. D. Chambers said that it was essential that the physical defects and disorders concealed behind more striking psychological disorders should not be overlooked, for at least 25 per cent of so-called mental deficiency was environmental and therefore open to attack. Professor D. K. Henderson, Edinburgh, said that there was a tendency to relegate the psychiatrist to the background and to call for him only in extreme cases, whereas he should be consulted at the beginning of mental disorders. Dr. T. R. C. Spence, medical superintendent of the Royal Scottish Institution, Larbert, in a paper on "Problems of Mental Deficiency," said that Scotland had eight defectives per 1,000 of the population or in the total population in round figures some 38,500. Taking into account the age distribution of these it might be said that for adults institutional accommodation was needed for 13,000 while 9,500 could remain at home under supervision. The education authorities would look after 11,500 of the children, 2,000 might remain at home, and 2,300 ought to have institutional care. At the present time only 4,410 mental defectives in Scotland were in residence in institutions or under conditions of official guardianship. There was great disparity in the proportion of mental defectives in different parts of the country, and this showed either neglect in ascertainment of their condition or a very serious shortage of institutional accommodation. The latter was certainly true for there were only 2,627 cases under care in Scotland outside Glasgow. Sterilization could not be regarded as a substitution for the segregation, training, and guardianship of the feeble-minded. Segregation was now regarded as the most humane and the most suitable method of controlling mental defect. Many low-grade mental defectives when retained in their homes were an intolerable burden, and though the apparent cost of caring for all these might be heavy, it was a true economy in the long run compared with the price which had to be paid for neglect.

Research in Animal Diseases

An extensive programme of investigation into the cause and prevention of disease in farm animals confronts the Animal Diseases Research Association, whose Institute situated at Moredun near Edinburgh is under the direction of Dr. J. Russell Greig, M.R.C.V.S. It has for some time become apparent that the existing laboratories and animal accommodation at Moredun were insufficient for the Research Association's rapidly extending work, and Treasury sanction has recently been given to the recommendation of the Agricultural Research Council and the Department of Agriculture for Scotland that a grant not exceeding £9,800 should be made available (after taking into account any receipts from other sources) from the Development Fund to enable extensions to be undertaken. In view of the economic importance of grass sickness it became clear that further extension and intensification of the research into the cause and prevention of this disease were necessary. Besides the capital sum already mentioned the Treasury has sanctioned an appropriation from the Development Fund to the Department of Agriculture for Scotland of such sum not exceeding

£3,200 as, after taking into account any funds provided from other sources, might be required by Moredun Institute to meet the expenditure for extended work on this disease during the current financial year. It will now be possible to test on a large scale in the field the value of vaccination of horses against infection with grass sickness, and additional temporary veterinary appointments have been made. While the cause of this fatal disease, which is reported to have killed some 1,200 to 1,500 horses last summer and is by no means confined to Scotland is suspected to be due to poisoning developed in the intestine by certain bacteria taken in on grass or in some other way during feeding this theory, though promising is not yet proved. The vaccination trial which is being made after careful preliminary experiments, is intended as a further test of the theory.

Child Welfare in Fife

In an address at Dunfermline on June 8 Dr R. A. Krause speaking of child welfare services in the county, said that an orthoptic clinic had been set up by the Carnegie Dunfermline Trustees at the Dunfermline and West Fife Hospital, and this had been of great service to children suffering from squint. At the ear, nose, and throat clinic the introduction of audiometers had resulted in renewed interest in defective hearing, and important researches were proceeding into the extent to which amplification of sound could be utilized in the education of partially deaf children. It had been shown that 87 per cent of such children could be expected to derive some measure of benefit from the use of the magnification of sounds in class. An orthopaedic clinic had been in operation for some years, and a register of children in the county with crippling conditions had shown the extent to which such aid was necessary. The increasing number of petty delinquents among children left no doubt as to the urgency for setting up child guidance clinics in different centres of the county.

ENGLAND AND WALES

Domiciliary Midwifery Service for London

At the meeting of the London County Council on June 22 the Hospitals and Medical Services Committee put forward its detailed proposals for submission to the Minister of Health for the setting up of a service of midwives for domiciliary midwifery and for domiciliary maternity nursing adequate for the needs of London, in pursuance of the provisions of the new Midwives Act. These proposals were provisionally set out in an article in the *Journal* of May 8 (p. 989). They provide that the service shall be maintained by salaried midwives employed by the Council either directly or by arrangement with voluntary organizations and that the county shall be divided into five areas for the purposes of the scheme. It is proposed that forty-two midwives shall be employed directly by the Council and that in making the appointments preference shall be given to thoroughly competent independent midwives practising in London. The committee has been in consultation with the Metropolitan Boroughs Standing Joint Committee on the subject and has argued that it is impossible to draft proposals on a borough basis. The need for large areas arises from the special conditions of London. There is a multitude of public and voluntary agencies many of them overlapping and some in active competition with each other which are concerned with the provision in London of institutional and domiciliary midwifery services and a completely co-ordinated maternity scheme can only be attained by the voluntary co-operation of all these agencies. The Council has every expectation of securing

the co-operation of practically all the voluntary organizations connected with domiciliary midwifery.

It is estimated that there are some 2,000 cases a year in which maternity nursing (non resident) is done by midwives in private practice or employed by district nursing associations. After an order has been made by the Minister applying to London Section 6 of the Act, which prohibits unqualified persons from nursing women in child birth for reward, it may be anticipated that there will be an increase in the demand for the maternity nursing service provided by the Council, although it is impossible to forecast its extent. An increase of 1,000 cases has been taken as a probable figure, making a total of 3,000 cases.

The committee is also recommending that when the new scheme is brought into operation no charge should be made in respect of the fees paid to medical practitioners called in by midwives in emergency. Recovery of these fees is at present made on a prescribed scale graduated according to income, but when the weekly income is £2 or under no assessment has been made. It has been found that in the majority of cases the assessment in respect of the services of the midwife will be less than the actual fee and in these cases recovery of medical practitioners fees, in addition to recovery of the fee in respect of the service of the midwife, will not be possible. The amount hitherto recovered in respect of medical practitioners fees is approximately £800 a year, and the cost of collection £420. Particulars as to the number of midwives to be employed, their remuneration, and the fees to be charged were given in the earlier article of May 8.

The Work of a Port Medical Officer

The report for 1936 of the medical officer of health to the Port Sanitary Authority of Liverpool is full of interest. Two cases of anthrax were treated at Fazakerley Hospital during the year. In one case which was very severe, the patient was a fruit selector, whose work necessitated attendance at the unloading of cargo from in-coming ships, the other, which was mild, was that of a woman from Runcorn whose husband worked at a tannery, although she herself was at no time in direct contact with infected material. Imported dangerous wools pass through a disinfecting process, and samples before and after treatment are examined by the city bacteriologist. The necessity for this disinfection is shown by the statement that out of 358 samples examined all those thus treated were found to be free from infection, while 104 of the untreated samples showed positive evidence of anthrax infection. That there were no cases of human plague may be attributed to the thoroughness and efficiency of the precautions taken. The section of the report devoted to 'The Hygiene of Crews Spaces' shows that a lamentable state of affairs still persists in many British vessels. A number of photographs illustrate crew accommodation. The first three show the scandalous conditions prevailing in a vessel built as recently as 1924. The men eat and sleep in the same cramped quarters food is strewn about the bunks the only means of washing is one solitary bucket. The report states that 'the worst type of crew accommodation is seen in this vessel, but such conditions are by no means uncommon. A second series of photographs give typical pictures of the average conditions in a modern British cargo steamer, the vessel in question was launched in 1935. Here there is indeed a separate mess room, but the sanitary arrangements are without privacy, only cold salt water is available for washing and hot fresh water has to be carried in buckets from the galley. The remaining photographs present a striking contrast to the foregoing examples. They show the accommodation that can be and should be provided ample lockers, separate chairs at tables instead of forms, and hot and cold fresh water and shower baths. The report states that 'it was particularly pleasing to notice the interest which all

members of the crew took in these quarters and there is no doubt that this environment added considerably to efficiency and well being." Still further improvements are shown in the case of a foreign owned vessel, which provides reading lights over the bunks, armchairs, separate tables, a wireless set, and constant hot water electrically heated and thermostatically controlled. It is suggested that the provision of such amenities involves only a negligible increase in the total cost of a vessel, and that the improved morale and efficiency of the crews must more than compensate for any additional expense. During the year 5,466 ships were inspected and in 605 of these defects or nuisances were detected. It is unsatisfactory to note that British ships compared most unfavourably with foreign ones in this respect. Whereas only one foreign ship in twenty-six showed sanitary defects, the British ratio was one in eight. Verminous quarters and dirty forecables were frequent in British ships. Greek and Spanish vessels provided an excessive proportion of the defects in foreign ships, in the sixty seven Finnish and fifty-four German ships inspected no defects were found.

Mobile X-Ray Service

One of the most notable advances in recent years in the services rendered by the Home Service Ambulance Committee of the Joint Council of the Order of St John of Jerusalem and the British Red Cross Society has been the establishment of a mobile x-ray unit, and at the risk of repetition a few words may be said here about the advantages of that unit and the very high standard of the work that is carried out. No expense has been spared in equipment and the committee has had the advice and help of leading radiologists, and has also secured the services of a highly skilled radiographer. The power generated in the car enables such speed of work to be attained that chest, gastro intestinal, gall-bladder, and kidney examinations, for example can be carried out with precision. The range of service afforded by this mobile unit approaches that of a first class stationary outfit to be found in large general hospitals. It operates chiefly in London and the Home Counties but it is to be hoped that it will not be long before similar units are available for other parts of the country. The possibility of carrying out effectively the most difficult radiological examination of patients in their own homes marks a definite advance in the range of resources at the disposal of doctors and surgeons. At the end of March 1937 the total number of ambulance stations in the country equipped by the committee was 142, in addition 227 stations were affiliated to the service making 369 in all. During the quarter ended March 31 the number of patients carried in the ambulances was 40,097 making a total since the inception of the service of 1,764,176.

Central Midwives Board

At the June meeting of the Central Midwives Board for England and Wales approval as a supernumerary examiner was granted to Mr Robert Leslie Dodds MCh. F.R.C.S. A letter from the medical officer of health for Gloucester regarding the calling in of medical aid by a midwife when she is recalled to a case after having ceased attendance thereon was considered and it was resolved to reply that

Under the provisions of Rule E. 17 (c) the minimum period of attendance by a midwife in a normal case is fourteen days. If any illness or abnormality of patient or child occurs during this period the midwife must to the utmost extend for medical aid in accordance with the provisions of Rules E. 12 to 15. In an abnormal case the period of attendance may be longer than fourteen days—the actual period cannot be specified because it will vary with the special circumstances of each case. If a midwife after completing attendance on a case in accordance with Rule E. 17 (c) resumes attendance on the case then the Rules E. 12 to 15 apply. The rules in Section F apply (as far as applicable) in the event of the mother or child

suffering from illness connected with the confinement. Among the rules which apply in such case are those (Rules E. 12 to 15) which relate to the summoning of medical aid. The Board desires to emphasize the fact that the rules relating to the summoning of medical aid are concerned solely with the calling in of a doctor in an emergency by a midwife to a case which she is attending in the capacity of a midwife. If a patient who has been attended during her confinement and the lying in period by a midwife acting as such sends, after the midwife has ceased attendance, for a doctor owing to the illness either of herself or of her child and the doctor instructs the mother to send for her midwife such midwife if she agrees to resume attendance will be acting as a nurse and not as a midwife, and consequently will not be entitled to issue a medical aid form under the provisions of Section 14 of the Midwives Act, 1918.

Correspondence

Treatment of Peptic Ulcer

- SIR,—The annotation in the *Journal* of May 8 (p 980) on the treatment of peptic ulcer draws attention once more to the poor results of such treatment, whether by medical or surgical means.

I would humbly indicate the probable explanation of this unsatisfactory condition of affairs which I have discussed in a recently published book, *The Colon as a Health Regulator* (price 2.50 dollars. The Macmillan Company, Toronto, whose London representatives are Macmillan and Co., Ltd.) My book was written with the intention of strengthening the chorus of widely separated voices crying in a wilderness of disinterestedness or even disbelief with regard to a condition complex which has pronounced and often far-reaching effects on the human organism, including a definite relationship with peptic ulcer.

The poor results of gastric therapy which are recorded are not likely to be much improved so long as the attention of the therapists is directed to the stomach. Such persistent concentration is remarkable nowadays when it is evident that peptic ulcers are ordinarily or chiefly due to a variety of extragastric causes. The most important of these are in my opinion, certain abnormal mechanical arrangements especially of the large bowel which are developmental in origin and which are unsuitable for, and the effects of which are aggravated by the upright posture assumed by man. The glandular secretions muscular activity and nervous control of the gastro-intestinal canal are collectively or separately, likely to be adversely influenced by such conditions. Indeed my special observations on this matter, extending over about thirty years lead me to believe that most of the diseased conditions (possibly barring those in the true pelvis) for which the surgeon performs laparotomy are mainly and primarily due to these mechanical shortcomings which some surgeons regard as normal.

Healthy function and interrelationship of intra-abdominal organs can exist only when their anatomical arrangements are approximately normal. Anatomists whose observations have been made on unselected material have defined what is normal. Disease selects the material for the surgeon hence the occasional disagreement with anatomists. A large proportion of individuals do not attain anatomical normality. My belief is that the structural developmental deficiencies which they show are probably the main cause of gastric and duodenal ulcer and other trouble in the gall bladder and appendix for

which the surgeon opens the abdomen. The abnormal developmental conditions of such people are not suited to the upright posture. Successful therapy is accelerated when the patient assumes the horizontal posture, or has certain of his loose dragging organs supported by suitable belts or adequate operative measures. Four footed animals rarely suffer from gastric ulcer¹. So long as the primary cause of disease is neglected therapeutic results are likely to be unsatisfactory and evanescent—I am, etc.,

Montreal, June 5

HENRY M W GRAY

Prevention of Constipation

SIR—The sweeping generalizations and caustic comments of some of the correspondents who have discussed the prevention of constipation are not worthy of us. There is no panacea for this common and resistant complaint. Imagination for the sufferer and careful diagnosis in each case are essential for progress in its treatment.

Some such title as *colon tardus* rather than the word constipation should be applied to the case of an individual who carries on comfortably with an average action once every two days. It is rather a matter of slow rhythm than disease. There is, however, a genuine constipation when with such slow rhythm the faeces become too firm. The results are

(a) Strain and trauma to the anus. Piles and fissure are natural sequelae. (b) Feelings of heaviness and discomfort in the pelvis when the faecal mass resists expulsion. (c) Mild transient toxic effects, headache, lassitude, anorexia and a dry mouth may occur and will vanish after an evacuation. (d) In rare cases and during the latter half of life invalidism develops from chronic intestinal stasis. Toxaemia shows itself in the sallow wasted patient. (e) Neurosis and nervous debility.

The victims of this train of troubles are not mere creations of injudicious purgation though often their troubles may have been aggravated thereby. Among them, as in other diseases, a small proportion of introspective individuals exist whose complaint is imaginary, but the majority are genuine cases and may be helped by the following forms of treatment.

1 Daily exercise preferably out of doors of a kind that activates and shakes the body such as riding, tennis, etc. Primitive man derived help from his more strenuous life by the mechanical aids and stimuli to the nervous and circulatory systems which movement affords.

2 The diet should be mainly vegetarian and roughage may be tried and continued if helpful (for example Kellogg's bran).

3 Medicinal paraffin is a most valuable lubricant and emollient taken once or twice daily a tablespoonful after a meal as progress dictates.

4 When necessary enemata of a half to one pint of warm water may be given and soap can be added if necessary. This is more scientific than oral medication by aperients. It acts on the recto-colon where the delay is and does not distress the unoffending small bowel. It is a valuable stand by which gives the patient security and is likely to be needed only rarely to reinforce the ineffectual expulsive mechanism.

5 Explanatory talks the length of which will usually be inversely proportionate to the physical factor in the malady may help. They should dispel any misconceptions on the subject and help those who are inclined to magnify trifling disorders.

Sympathectomy lumbar and presacral has been tried with little benefit. Right or even left hemicolectomy is applicable in the most aggravated cases in which radio-graphy shows the barium meal delayed two or three days in a stagnant right or left hemicolon. The operation has been wholly successful in six cases of mine and

produced a natural daily action in patients aged from 42 to 63 years who had had inveterate constipation. The patients have been well pleased. One was a woman who had derived no benefit from the sigmoidostomy done in France. Another male patient had been discharged from a large private clinic with the advice that he was not to think so much about his bowels!—I am, etc.,

Bristol June 13

A WILFRID ADAMS

SIR—I should like to thank Drs H Letheby Tidy (*Journal* May 29, p 1134) and F Parkes Weber (May 8, p 996) for their encouraging letters. The most interesting point raised in the correspondence on the prevention of constipation is the psychological question, Does constipation exist except as a result of mass suggestion?

Habitual constipation commonly begins as the result of an "acute" attack, which in many cases is continued because of the purgative habit. The defaecation reflex is disorganized and a vicious circle started. Omitting the purgative has not been sufficient to restore the reflex in many of my patients. As the causes of acute constipation are often recurring—for example, acute illnesses, pregnancy, neglect of the defaecation reflex, the abuse of purgatives for imagined ailments, etc.—it is reasonable to assume that a proportion of the patients concerned tend to develop habitual constipation. The 121 patients with habitual constipation included in my follow up—of whom 75 per cent. were women—represent approximately 3 per cent. of all my patients, and a further 1 per cent. must be added for the patients not followed up. I find, therefore, that 4 per cent. of that section of the community who have sought my advice in general practice gave a history of habitual constipation.

I would suggest to your correspondent "Mag Sulph" (*June* 12, p 1231) that not many of his 500 men were likely to suffer from habitual constipation. I doubt whether he would obtain similar results with 500 women. His avoidance of purgatives is laudable, and if more hospitals were to adopt this principle fewer patients would date their habitual constipation from their attendance at hospital. Before the advertising of aperients can be effectively countered a great deal of reform is necessary inside the medical and nursing professions. The history of medicine shows that the enthusiasm for depletion by venesection, emesis, diuresis, and purging has been slow to yield to rational methods. Of these treatments purgation is supported by the strongest advocates and lingers the longest (Professor Witts on Ritual Purgation, *Lancet* February 20, 1937).

Dr Robert Hutchison has been cited as an advocate of the use of purgatives (*Journal* February 22, 1936 p 374). He states that "drugs are usually indispensable and do no harm." This is contrary to the teaching of Sir Arthur Hurst who for years has been waging a crusade against the habitual pill taker (*Lancet* June 29, 1935). The fact that such an acute observer as Dr Hutchison has no high opinion of the dietetic treatment of constipation is probably explicable on the grounds that the patients with constipation that he sees in his consulting practice are a selected group—selected by their severity and hypochondriasis—and are not suitable material on which to form an opinion as to the treatment of the ordinary habitual constipation which is encountered in general practice.

I think that time will show the practical value of a high fibre diet for the prevention of constipation. My inclusion of salines amongst the undesirable habitual treatments of constipation was deliberate and I hope not prejudiced. There is a vast difference between the action of salines and

the action of mechanical laxatives which retain moisture within their substance. My experience of patients who take salines is that they have numerous minor ailments, particularly colonic flatulence, mild colicky pains, nervous irritability, and a liability to purgation followed by constipation. I have suggested bran as an alternative to thirty patients who were taking salines for habitual constipation. The fact that none of these patients have returned to regular salines, and only a few take an occasional "dose," is to my mind strong clinical evidence against the saline method—I am, etc.,

Broxbourne, June 14

E M DIMOCK

Health Problems in Malta

SIR—In your issue of June 5 (p 1179) Dr G Arbour Stephens raised the problem of the high mortality rate among the infants and children in Malta, which he attributes to defects of feeding caused by an insufficiency of good milk and fresh vegetables.

May I point out from the start that the problem is a much more complicated and difficult one to solve? Among the factors responsible the following should be remembered: (1) the overcrowding caused by a population of 2,434 persons per square mile; (2) the high birth rate of nearly 34 per 1,000; (3) the inclement weather during hot rainless summers which exceed four months in duration; and (4) the limited economic resources which entail a low standard of living among the poorer classes. Many mothers lack a good education, but it is always difficult for them to pay enough attention to their infants when they must cater as well for a family of six or seven other children with only their husbands' very limited earnings.

There is also the problem of proper feeding. Goat's milk is not used for infants on such a large scale as might be supposed, and if it were it might be preferable to many of the cheap artificial milks actually on the market—I am, etc.,

Floriana, Malta, June 10

WALTER GANADO

SIR—I read with particular interest the letter of Dr G Arbour Stephens dealing with infant mortality in Malta in which he attributes the high mortality rate among children to lack of vitamin B in their diet. As a local medical man who has had the opportunity to study the question on the spot I beg to differ. Of course lack of vitamin B in foodstuffs and bad nutrition in general, both in the pregnant mother and in the child, play a part, and a good one at that, in bringing about that appalling death rate which reflects so badly on our sanitation; but this is only a contributory cause. The real cause of infant mortality in Malta is overpopulation. All other causes (bad feeding, uncleanness, infections, etc.) follow in its wake and help to increase its ravages. Malta is a small island with the densest population in Europe, and a birth rate which surpasses by far that of any other country, and is out of proportion to our economic wealth. Our birth rate, which needs no alleviation of taxes and distribution of prizes to be encouraged as is done in other countries, is very high and alarming, only the usual indifference of the British Government and the fatalistic attitude of our own people not alarmed.

High infant mortality follows invariably overcrowding. If the high birth rate was common among the well-to-do or at least distributed equally among all classes of the population the infant mortality would not be so high. But it is especially more marked among the lower classes who cannot be expected to understand the responsibility of their actions and are incapable of being

morally and economically, of rearing large families. Usually young people of the lower classes and in the rural districts get married too early with the result that at the end of their period of fertility they can claim an average of fifteen to twenty children between dead and alive. They have to house, feed, clothe, etc., all this family on an average of 4s per working day. They have no hobbies and can afford no entertainments, their only enjoyment in life is sexual intercourse, which they practise without any moderation and without any thought for their future children. The natural consequence of this state of affairs is that after a few years of married life the mother has to look after six to eight children and the father has to pay for their needs. Generally they both fail in their duties, the mother, occupied in her housework, leaves her infants in the custody of the elder children, while the father, having spent long hours to earn his pitiful wage, has hardly any energy left for extra work to meet the demands put on him by his large family. Hence neglect of infants, malnutrition, lowered vitality, infections, and death.

From the above it is clear that fresh vegetables will not solve Malta's problem of infant mortality nor will any amount of artificial sanitation do it. In my opinion Malta is unable to rear the number of children that are born on it. So long as the birth rate remains so high so long will our infant mortality beat all records in Europe.

This is our diagnosis. What about the treatment? Reduction in our birth rate. How? Birth control is out of the question, as we Roman Catholics consider it anathema. The best thing that could be done is to dissuade young people from marrying early, bringing before their eyes the great responsibility they take in doing so, and to persuade married couples with yearly offspring to periods of sexual abstinence, or at least the practice of the safe period. Besides some social legislation to help the lower classes some increase in wages where and when possible, and above all emigration, will help. This last question emigration should concern the British Government. We are not expecting from London any help in finance or fresh vegetables, but with a little good will a lot could be done in finding an outlet for our surplus population and in helping us solve our problem of infant mortality, which is a serious blot both on the home Government and on the fair name of this little island—I am, etc.

Valletta, Malta, June 17

JOS BONNICI

Angina Innocens

SIR—Submammary tenderness is common enough especially in middle-aged women with a tendency towards obesity. Most people pay no attention to it, only in nervous subjects does it lead to pain, and the severity of the pain bears a strict relationship to the anxiety and the sensitiveness of the patient. The site of the tenderness is in the chest wall. The cause is uncertain, although in many cases a thickening of the subcutaneous tissues may be felt and rapid relief can usually be obtained by massage following the removal of any septic focus. Pain is likely to be noticed on exertion owing to the increased movements of the chest and the enhanced activity of the intercostal muscle. Although the position of submammary pain makes it easy to differentiate from angina, difficulties may arise when the pain is felt and the tenderness is found in the third and fourth intercostal spaces immediately to the left of the sternum. This pain and tenderness has been recorded by Bence Jones (1927, 1, 855) to be one of the symptoms of a certain type of angina.

ness is found just as commonly in the right hypochondrium, where it should be distinguished from tenderness due to lesions of the gall bladder

Angina has long been used to denote pain arising from the heart. Whatever may be the underlying cause of submammary tenderness it has nothing to do with the heart, and there would seem to be as little justification for the use of the term "angina innocens" in these cases as for "pseudo angina" and "secondary angina," now happily fallen into obscurity—I am, etc.,

Harrogate June 14

C W C BAIN

Early Diagnosis and Treatment of Heart Failure

SIR—I have read with much pleasure and profit the article on early diagnosis and treatment of heart failure by Dr William Evans (*Journal* June 5, p 1145). It bears the stamp of lucidity and common sense so characteristic of the writer's method of teaching, but while emphasizing the need for early recognition of heart failure, Dr Evans omits to mention the common clinical symptoms of nausea and vomiting which I regard as among the earliest signs pointing to the heart as the cause of the trouble. In many years of general practice I have come to look upon this clinical symptom of vomiting as of the utmost importance. I have met it in many cases of heart failure resulting from mechanical causes, but more often in toxic cases particularly in diphtheria and lobar pneumonia.

Dr Evans has discussed heart failure resulting from mechanical obstruction in the heart itself, as in mitral stenosis, aortic stenosis, etc., also that complicating hyperpiesia, emphysema and bronchitis, but he has omitted to tell us of the heart failure resulting from toxic conditions such as acute lobar pneumonia, erysipelas, the fevers, and, particularly, diphtheria which most concerns the general practitioner. It is not the breakdown of a mitral stenosis or the paroxysmal nocturnal dyspnoea of our hyperpiesics, but the acute heart failure of cases of pneumonia and of fever that try us.

Anyone who has had charge of a diphtheria ward will bear out what I say regarding vomiting as an early sign of impending cardiac failure. Even in patients known to be suffering from heart disease apart from undue breathlessness on exertion, or the brisk haemoptysis of a mitral stenosis, a complaint of persistent nausea and occasional vomiting or even an unaccountable indigestion should at once direct attention to the heart. I have known such patients be put on a milk diet and a bismuth and soda mixture instead of being put to bed and given digitalis. Digitalis is without doubt the best drug for mechanical failure but in toxic cases especially pneumonia, it is useless. Taking acute lobar pneumonia as an example when circulatory failure threatens far from finding that strychnine, camphor and pituitary have far survived their usefulness as Dr William Evans suggests, I have found them life saving. I have found especially useful 1 ccm doses of pituitrin given every two or three hours. It raises the blood pressure and although the effect is temporary by repeating the dose frequently we help to tide the heart muscle over a crisis. Strychnine does good indirectly by stimulating the vasomotor nerves and so raising the blood pressure. Camphor as coramine is less certain and must be given in fairly large doses (3 to 4 ccm) every few hours but in the cardiac failure of acute pneumonia it can sometimes be most useful—I am etc.

Bournemouth June 17 VINCENT NORMAN M.D., M.R.C.P.

Cancer of the Oesophagus

SIR,—I hope that my mentor, Mr Herbert Tilley, will not object to a respectful word of difference from one of his disciples. I was surprised at the statement in his article on cancer of the oesophagus in the *Journal* of June 12 (p 1199) that he could not out of his vast experience, 'call to mind a single patient who did not succumb to the disease within twelve months from the commencement of treatment (by means of radon seeds). We have been working intensively at this method, and out of our relatively small number of cases—fifty or sixty in all—we have had two three year survivals—one had a recurrence after this interval, the other died in his sleep without further symptoms. I recently saw two patients, both of whom had been treated by the insertion of radon seeds nearly eighteen months ago. One was treated through the mouth, and his obstruction was then returning, so he probably has had a recurrence. The other, who was dealt with by combined per oral and retrograde transgastric methods, was perfectly well and could swallow without difficulty.

Deep x ray therapy can it is true produce some very fine results, at any rate for the time being but I have seen too many cases of severe malaise during what is a fairly prolonged treatment, together with the serious complications mentioned in Mr Tilley's article, to be convinced that it is the treatment of choice in the usual case of the poor debilitated old man, particularly as the extent of his increased expectation of life is still somewhat doubtful. After all, the insertion of seeds through an oesophagoscope is a minor operation entailing no upset to the patient and will in most cases give the patient back his power of swallowing which is what he wants.

I freely admit that the majority of these cases do not, as Mr Tilley says see the first anniversary of their treatment, in fact most of them are dead within six or nine months. Such cases as the above, however, and also the healed scar which I am sure Mr Tilley has seen on oesophagoscopic his patients afterwards prove that radon seeds can destroy the growth, but, as he points out, seeding through an oesophagoscope is a haphazard attempt at even distribution of the seeds throughout the growth. It may be that a combination of seeding and x rays will prove better than either alone, the first lessening the amount of the second which is necessary, and thereby diminishing unpleasant reactions and complications.

Mrs Hilton is to be congratulated on the result of her case mentioned in the *Journal* of last week, but it would be interesting to know the average increase of life she attains with deep x rays, and the percentage of real improvement in swallowing—I am etc.

Guildford June 16

G H STEELE, M.S., F.R.C.S.

Ionization for Hay Fever

SIR,—It is a recognized fact that sufferers from those symptoms to which the diagnostic label of 'hay fever' is attached usually belong to the more leisured classes. This probably partly accounts for the fact that our hay-fever patients are relatively more commonly seen in the consulting room than in the out-patient department. So far as my personal experience goes this is not the case with vasomotor rhinitis of the non seasonal type. I still see a good many of the latter in the out-patient department, and it is a humiliating confession that in neither class of case can I satisfy my conscience that any improvement in the patients' condition can be undoubtedly

scribed to the effect of my treatment. I make this statement advisedly, because there are few conditions within my knowledge which suddenly for no apparent rhyme or reason may improve or disappear whilst undergoing no form of therapy whatsoever. This was so in my own case, when after undergoing every conceivable form of treatment for an intractable hay fever I wearied of trying to get well, and can now mow my lawn without a sneeze.

The point of this letter is to try to find out why it is that my own experience of the results of treatment by 'ionization' are apparently so very different from those reported by others. One is tempted to think that only the few failures happen to come within my ambit. In a very recent French textbook on the diseases of the nasal fossae, in which the subject of vasomotor rhinitis was very fully discussed, no mention whatever was made of treatment by ionization. What does it all mean? I trust my experience is unique. Or is it shared by some others?—I am, etc.,

London, W 1, June 15

MICHAEL VLASTO

Hobday Research Endowment Fund

SIR,—An appeal has been launched for funds for the purpose of making a presentation to Sir Frederick Hobday on his retirement from the position of Principal and Dean of the Royal Veterinary College as a mark of appreciation of his services to veterinary science in general and the Royal Veterinary College in particular.

Sir Frederick has intimated his wish to devote the sum raised to the furtherance of the collaboration between the medical and veterinary branches of medicine in their mutual crusade against the diseases of animals which are common to, or communicable between animals and man. Since the preliminary letters were issued the method of carrying this out has been considered by Sir Frederick, and he has intimated his desire to found a Research Scholarship Fund in order to encourage research by veterinary and medical men in connexion with the diseases of animals and man, which research it is hoped will further the liaison between the two professions and be of great benefit to the science of medicine in its widest sense—the fund to be called the Hobday Research Endowment Fund.

The committee feel that these details, and particularly the idea itself, will be of the greatest interest to members of the veterinary and medical professions. It is hoped that among his numerous friends and well wishers a substantial sum will be raised which will be sufficient to enable this scheme to be carried out adequately.—I am, etc.,

E. T. COV
Hon. Secretary

St Ermins Westminster SW 1 June 19

Animal Pathology

SIR,—In reference to Dr Tom Hare's remarks (*Journal* June 12 p 1229) on your leading article, I can quote a case where a medical practitioner did score off the veterinary profession.

Blackhead is a very deadly disease in turkeys, and apparently salvarsan and the various imitations thereof had been neglected in this disease until suggested by a local practitioner here. I understand the use of these arsenical preparations is now general in this condition.—I am, etc.,

Haslington Crewe June 19

W. L. ENGLISH, M.B.

Empire Conference on Tuberculosis

SIR,—The success of the Empire Conference on the Care and Aftercare of the Tuberculous promoted by the Overseas League and the Papworth Village Settlement has manifested itself in many ways, and the enthusiasm shown has exceeded all expectations. This is naturally most gratifying and I would not ask you to publish this letter were it not for an announcement made last week by the Joint Tuberculosis Council (*Journal* June 12, p 1225). This council have already offered their help and co-operation to the standing committee of the Empire Conference and the president of the conference the Marquess of Willingdon has gladly accepted their offer.

The Joint Tuberculosis Council now announce that they have formed a committee to consider what help this council can give the Colonies in their efforts to control tuberculosis. This seems to indicate that their enthusiasm for the cause has led them to misunderstand the objects of the Empire Conference, which consist in the mutual and personal exchange of knowledge and experience among tuberculosis workers in every quarter of the British Commonwealth of Nations. Whether the help of the council is intended to be in the form of funds or of information and advice I do not know, but financial help was never asked for, and if it were required there are already in existence official channels for such succour. As for the question of giving information, the Conference showed that the over-seas delegates were in possession of a vast amount of knowledge of their own particular sphere of work and that they were more than ready to put this at our disposal.

Were it not for the publication of the names of this new committee including those of three delegates who were especially invited to attend and speak at the Empire Conference, I should not, Sir, take this step of writing to you but I am anxious that our many friends over-seas and the heads of the Government departments concerned should know that the spirit and meaning of the Empire Conference has not changed, and that mutual service is its keynote. We have, as workers in the tuberculosis field, as much to receive as we have to give, and it is in this spirit that the standing committee of the Empire Conference is proceeding with the negotiations entrusted to it by the conference where, at the sixth session, the chairman Professor S. Lyle Cummins proposed a resolution which met with acclamation and unanimous approval. It is the present duty of the standing committee to place this resolution before those for whom it was primarily intended.—I am, etc.,

PENDRILL VARRIER-JONES
Joint Convener of the Empire Conference
on the Care and Aftercare of the
Tuberculous

June 14

Air Raid Precautions

SIR,—Is it not a pity that eminent members of our profession should damn with faint praise and even hold up to ridicule the efforts that are being made in the name of humanity, on the tremendous problem of air raid precautions—a problem to which some of the best brains in the country are being devoted?

It is strange to note how Professor Ryle and Drs Joules, Leys, and Ladell hasten to agree with each other, and yet, while Dr Ladell refuses to take part in air raid precautions, Professor Ryle mentions the 'one indisputable duty for doctors' to help the stricken multitudes. Professor Ryle talks contemptuously of playing at gas

attacks. How on earth can he or anyone else be efficient in helping the stricken multitudes if he has not done a gas course and learned the elementary principles of respirator drill, decontamination, etc? He infers that his conscience cannot justify his lecturing to lay audiences. I take it he would not withhold any knowledge he happens to possess of defence against gas from members of his own household. Why, then, should he withhold it from others, or be at all tiring with his conscience for doing so? He would try to decontaminate his own house wouldn't he? Why should he be conscience stricken if he lectures to Bill Smith on how to do the same?

Dr Ladell uses the expression "mass murder" three or four times in one letter. War is war, unfortunately, whether it is called murder or not, and I for one am perfectly prepared to put myself at the service of the armed forces of the Crown, whose job it is, among other things to shoot down and kill enemy airmen who are attacking this country.

I may be accused of aggressive militarism. May I make it clear that I abhor the idea of war. I hope and pray that war will never come. But I feel that this carping criticism of the air raid precautions, these suggestions of not lifting a finger to help our country in time of need, are to be condemned. I am certain that the vast bulk of the profession to which I have the honour to belong will if the time comes, do their duty, as they did it twenty years ago with dignity and with gravity, and in the spirit of the old tradition—I am, etc,

W A BELLAMY

London SE26 June 11

Lieutenant R.A.M.C.(T)

SIR—The letters of Dr Leys and Dr Macdonald Ladell in your issues of May 22 and June 5 have performed a useful service in bringing before the members of the medical profession the problems of air raid precautions. In support of their opinions may I quote the following extracts from recent publications. In his book, *Towards Armageddon* Major General Fuller writes: "I consider that gas masks will prove a god send—not that the enemy is more likely to use gas bombs than high explosive and incendiary bombs, but because they will give terror stricken people something to do. In any case, once they are adjusted they will prevent those wearing them shrieking and moving freely, and if they half suffocate their wearers, anyhow panic will be rendered suffocated in its turn." Again, in *Death From the Skies* Heinz Liepmann comes to this conclusion: "The more elaborate the experiments that have been made to discover protection against gas the more obvious has it become that there is no effective protection whatever."

Regarding protection against high explosive and incendiary bombs an expert lecturing to a medical audience informed us that owing to the thickness of concrete required to make a building proof against high explosive bombs there was no adequate protection possible for the civilian population. Incendiary bombs were to be rendered harmless by removing all furniture from the top flat of each house and covering the floor with earth to a depth of six inches. The utter futility of this suggestion, when applied to a densely populated area is apparent.

Might I suggest that in view of the gravity of this matter the B.M.A. appoint a committee to inquire into the efficiency of the air raid precaution scheme. Should the committee find the scheme as worthless as many of us believe it to be let the B.M.A. speak in no uncertain

voice against medical participation in a deliberate deception of the people.

If the full implications of aerial warfare against the civil population were even partially visualized by the general public, the people of the British Isles would make it their business to prevent an English Guernica, no matter what the cost—I am, etc.,

WILLIAM COLQUHOUN M.B.

Dunmurry, Co Antrim June 15

SIR—The main fallacy underlying Dr Frewen Moor's letter appears in the statement that poverty in the modern world is not due to lack of goods, for it is evident that in "goods" he includes food. I submit that the fertility of the world's inhabitants, thanks mainly to the Asiatics, is still so high that the rate at which they increase their food supply would need to be doubled or trebled if there were to be enough for all the adults and children and all the new mouths added annually. Dr Moor himself says that England is one of the richest nations and yet has a third of its population starving. While the world continues to have such a pressure on the means of subsistence we must needs study air raid precautions until the League of Nations can protect us—I am, etc,

London SW June 21

B DUNLOP

Osteopathic Colleges

SIR—It is idle for Dr Kelman Macdonald to pretend now that the promoters of the defunct Osteopathic Registration Bill of 1935 did not give their fullest sanction and support to the subsequently gravely discredited British School of Osteopathy in view of the fact that the Bill proposed that of the eight members of the Osteopathic Board to be constituted two should represent that school—one the 'graduates,' and one the governing body.

I pointed out that chiropractic, a cult obviously very similar in character to osteopathy but much more recent in origin, had twice as many adherents in the United States at present, osteopathy therefore, I said, was fighting a losing battle. As Dr Macdonald admits this ratio it is irrelevant to the argument to try and explain it away by suggesting reasons for it, for which incidentally others than those he adduces have been put forward. Much the most probable explanation is that osteopaths have tried to be imitators of the orthodox medical practitioner at the same time as claiming that they had an alternative and better method of dealing with disease. They have thus fallen between two stools, chiropractors have not made that mistake and are scoring in consequence.

Dr Kelman Macdonald evades the principal statement in my letter—namely, that the American osteopathic schools claiming to give adequate instruction in the medical science fall immeasurably below standards obtaining in the reputable medical schools in the United States and I may add now in Canada. The quotation from Sir Robert Stanton Woods contains no reference to schools and has no relation to this issue. In conclusion may I point out that the osteopaths in this country seeking registration have had ten years in which to comply with the requirement stressed by Mr Neville Chamberlain—namely that they should establish reputable schools in this country and they have not begun to do so. When we may ask, will the time be 'ripe' to supply this deficiency? Until this essential condition for registration is fulfilled Dr Kelman Macdonald and his friends are merely beating the air—I am, etc,

House of Commons June 21

E GRAHAM LITTLE

Medical Notes in Parliament

The House of Lords on June 17 read the Liverpool United Hospital Bill and on the same day it was read a first time in the House of Commons. Its purpose is to amalgamate the Liverpool Royal Infirmary, the David Lewis Northern Hospital, the Royal Southern Hospital, and the Liverpool Stanley Hospital. In the same House on June 21, the Ministers of the Crown Bill passed through Committee without amendment.

The Physical Training and Recreation Bill was read a third time in the House of Commons on June 11.

The Report of the Lord Chancellor's Visitors in Lunacy for the period October 1, 1936, to March 31, 1937, has been presented to Parliament.

Regulations laid on the Table of the House of Commons on June 22 included the National Health Insurance (Medical Benefit) Amendment Regulations (Scotland), 1937, the Dangerous Drugs Regulations, 1937, and the Raw Opium, etc., Regulations 1937.

On June 22 Sir Kingsley Wood introduced the National Health Insurance (Juvenile Contributors and Young Persons) Bill which amends the National Health Insurance Act, 1936, makes certain persons under 16 eligible for medical benefit, and facilitates the provision of medical benefit to such persons and other young persons.

Education Estimates

In committee of the House of Commons on June 14 the vote for the Board of Education was discussed. Mr KENNETH LINDSAY in introducing the vote said that the total increase in the vote over last year was £1,296,233. Part of the increase was due to general maintenance charges. There was another item provision for physical training under the Government's new scheme but that provision would be made in a supplementary Estimate. During the last eighteen months provision had been made for the youngest children by way of 7,500 nursery schools in eighty different areas. Fifty new schools with playing fields attached in 1935-6 and during the last year ninety such new schools were approved. During the last two years 111 playing fields had been acquired for separate schools and sixty-one to cater for a variety of schools had been acquired. Gymnasias had been provided for 117 elementary schools.

There had been progress along many lines of advance in regard to the school medical service of physical education. Since the recent circular was issued thirty four new proposals and five proposals for enlarging existing nursery schools had been received. The present position was that eighty nine nursery schools were recognized by the Board of Education and in addition thirty-one had been approved in principle and ten were under consideration. While the growth was rapid in proportion the total was still comparatively small and there were many areas where local conditions would justify providing these schools but where proposals had not been received. Their object was to obtain for all children under 5 years of age whose home conditions were unsatisfactory light airy rooms, special playgrounds play material and a happy environment which they needed for normal physical and mental development.

SCHOOL MEDICAL SERVICE

The school medical service was a wonderful service but it needed more staff. Since the recent circular was issued thirty two authorities had increased their staffs by the appointment of six whole time and twenty nine part time medical officers twelve authorities had appointed aural and eight ophthalmic specialists and one a specialist in rheumatism. One hundred proposals had been received for building school clinics and extending old ones and there were thirteen new schemes for

orthopaedics nineteen for aural treatment and fifteen for artificial light treatment. These were examples of how the staff was being increased but there was still leeway to make up. At the time of the issue of the circular it was estimated that there were less than two thirds of the number of school dentists required but sixty-one authorities had increased their staff by employing sixty two full time and twenty-three part-time dentists. The ideal they must achieve was an annual inspection of all school children otherwise he did not see how they could make good progress in this which was probably one of the most important aspects of the health services.

There were also day open air schools residential schools for delicate children, and the problem of the feeble minded was always with them. It was particularly difficult to deal with in the countryside. For some children the only solution was the residential school and on that score one new proposal had been received from a country district.

PHYSICAL EDUCATION

A number of training colleges had established advanced courses of physical training for their students. Out of 315 education authorities 178 had appointed physical training organizers. This meant that three quarters of the children in the country were in areas where there were physical training organizers.

Sir ERNEST GRAHAM LITTLE hoped that pasteurized rather than raw milk would be supplied in the schools. It was hopeless to contend against the overwhelming opinion on this subject. It was disappointing to learn that 800,000 children who in 1934-5 were reported as requiring it did not receive dental treatment. The situation was made still worse by the fact that only three fifths of the children in schools were inspected. He had authoritative information that in large numbers of cases the dental examination was both infrequent and perfunctory. They had a large volume of dental disease that was not detected and much that was not treated. He did not often agree with the London County Council but he thought their regulations for the dental inspection of school children might be regarded as a model.

A motion to reduce the vote was defeated.

Pensions for Local Government Officers

Sir KINGSLEY WOOD moved in the House of Commons on June 11 the second reading of the Local Government (Superannuation) Bill. He said it was designed to amend and extend the law relating to the superannuation of local government employees and also consolidated and qualified the existing law. The main object of the Bill was to secure reasonable uniformity in the provision to be made by local authorities for pensions for their staffs. It required provision to be made for the superannuation of all the whole time local government officers, and facilitated similar provision by local authorities relating to pensions for their other employees. The Bill brought the local government service in this respect into line with the long-established practice of the Civil Service. Officers looked for opportunities for advancement over the whole field of local government service and the absence of a superannuation scheme often restricted the number of suitable applicants for vacant posts. Provision was made that a married employee in return for surrender of part of his pension could secure an annuity for his widow for life and a female employee might make similar provision for the surviving husband. Provision was also made for transfer with full preservation of rights from the service of one local authority to another. Some modification of the actuarial basis of local government superannuation so far as future entrants to superannuation schemes were concerned was necessary in view of the change in interest rates since 1922. It was proposed that the appointed day under the Bill should be April 1 1939.

POSITION OF MEDICAL OFFICERS

Captain G S ELLISTON said that the Act of 1922 had been adopted by a majority of local authorities and its advantages were enjoyed by 350,000 designated officials, but there remained 587 local authorities and 20,000 officers who did not enjoy the advantages of superannuation with the result that

elderly officers were retained when no longer efficient for their duties. He was disappointed that no provision was made for the optional grants of added years by local authorities in the case of their professional officers. He had special experience of the conditions of service of medical officers. These men spent five or six years in acquiring their professional qualifications. At the end of that period they went for a period as house physician or house-surgeon in a hospital and then they had to acquire the further professional qualifications which enable them to take a public health appointment. In view of the varied character of public health work in these days a medical officer who hoped to secure a principal appointment had to acquire special experience in a number of directions. He might spend a period of residence in hospital in some cases he would serve for a period in a tuberculosis sanatorium. He had to acquire extra experience perhaps in diseases of women and children and in other directions. That meant that he was usually 30 years of age or more before he could obtain his first appointment. Owing to this late entry at a higher salary level the contributions of these officers in relation to their pensions were much higher than those of non professional officers. He asked the Minister to consider whether he could give local authorities the power if they so desired to add years not exceeding ten to the number which professional officers in such circumstances had actually served. Alternatively it was suggested that years spent in professional training should be allowed to count as service years within the meaning of the Act.

He knew the anxiety of the Minister to promote co-operation between the municipal hospitals and the great voluntary hospitals. Some members in that House would like to see it made possible by this Bill to provide for the interchangeability between the federated superannuation scheme of the voluntary hospitals and the superannuation scheme of local authorities. If this were practicable it would undoubtedly facilitate the interchange of personnel and raise the standard of the hospital services.

Mr W H GREEN regretted there was practically no distinction in the Bill between permanent and temporary employees. The London County Council had 3 400 nurses on probationary service and under the Bill these would be immediately placed under the superannuation scheme although many of them would drift out of the service.

SUPERANNUATION OF MIDWIVES

Sir FRANCIS FREMANTLE said among civil servants were men of the highest possible attainments, recruited largely from the universities and he wished to get the same type of men into local government service. One of the obstacles hitherto had been the absence of superannuation. Under the Bill the transition from one to the other might be made more easy. Voluntary associations were run with great public spirit but for a continuation of service a superannuation fund was necessary. The arrangements in the Bill were not satisfactory for bringing in the midwives who while working under associations in villages, were at the same time under a contract with the county council under the Midwives Act to provide a midwifery service. It was difficult to recruit the service of midwives and he urged the Minister to give consideration to the question of enabling them to secure the full advantages of superannuation.

Mr BERNAYS replying to the debate, said that in committee Sir Kingsley Wood would present an amendment to ensure beyond doubt that service qualifying for superannuation included war service.

The Bill was read a second time without a division and sent to a standing committee.

THE SCOTTISH MEASURE

The Local Government Superannuation (Scotland) Bill was brought up for second reading in the House of Commons on June 10 by Dr ELLIOT. He said it amended and consolidated existing statutory principles and its main new proposal was that superannuation should be compulsory in the case of all whole time officers of local authorities in Scotland. The term embraced administrative and professional officers and also

the clerical staffs. Of those officers 70 per cent were covered by schemes voluntarily adopted by local authorities under the Local Government and Other Officers Superannuation Act 1922, and by local Acts. The remaining 30 per cent numbering about 4 400 would be covered under the Bill. Local authorities would retain the discretion they already possessed to superannuate their other employees but the machinery for bringing them into superannuation would be improved. All past service would be reckoned for superannuation and periods of unemployment with absences on sick leave involving reduction of pay would be ignored. Where small towns had fewer than fifty whole time officers in their employment, these officers for the purposes of the Bill would be treated as employees of the county council. The day from which the Bill would operate was May 16 1939.

The Bill was read a second time without a division, being thereafter committed to a standing committee.

Maternal Mortality in Wales

On June 15 Mr J GRIFFITHS asked the Minister of Health what was the maternal mortality rate for each of the administrative counties and county boroughs in Wales for 1936 and the corresponding rate for England and Wales as a whole. Sir KINGSLEY WOOD circulated the following table.

Maternal Mortality Deaths for 1936 per 1,000 Total (Live and Still) Births		
	Puerperal Sepsis	Other Puerperal Causes
England and Wales	1.34	2.31
Cardiff C.B.	2.55	1.13
Merthyr Tydfil C.B.	1.02	—
Newport C.B.	0.59	1.77
Swansea C.B.	2.22	4.44
Administrative Counties		
Anglesey	1.30	5.20
Brecknock	1.25	4.99
Caernarvon	2.38	4.17
Cardigan	1.48	7.42
Cardiff	1.54	5.01
Denbigh	0.83	2.91
Flint	2.04	3.58
Glamorgan	2.42	2.92
Merioneth	—	1.82
Monmouth	2.96	3.52
Montgomery	—	1.43
Pembroke	2.25	1.50
Radnor	—	3.07

Ophthalmic Benefit Regulations

Sir ERNEST GRAHAM LITTLE asked on June 9 whether the National Ophthalmic Treatment Board was taken into consultation in the drafting of the Additional Benefits Amendment Regulations, 1937 and whether the arrangements made by these regulations for permitting sight testing by recognized opticians would in any way interfere with the development of the best possible ophthalmic medical service in this country.

Sir KINGSLEY WOOD said that before the Regulations were made the fullest consideration was given to the views expressed on behalf of doctors associated with the work of the National Ophthalmic Treatment Board. He saw no reason why any arrangements made under the Regulations should interfere with the development of a satisfactory ophthalmic medical service.

On the same subject Major H A PROCTER asked on June 10 what steps had been taken to obtain agreement between the sight testing opticians and the National Ophthalmic Treatment Board with regard to the question of sight testing in connexion with ophthalmic benefit. Sir Kingsley replied that repeated attempts had been made to obtain agreement between the different schools of thought on the subject. He himself had received representative deputations from both sides. Unfortunately it was not possible for any agreement to be arrived at.

Ophthalmic Treatment of School Children

Mr KENNETH LINDSAY announced on June 17 that during 1936 166,257 children attending public elementary schools in England and Wales were provided with spectacles under

arrangements made by local education authorities. With the exception of the authority for the Isles of Scilly all local education authorities had arrangements for the treatment of defective vision by a qualified medical practitioner who had had special experience in ophthalmic work. All children in whom any defect of vision had been found were re-examined from time to time. The interval between the examinations depended on the nature and extent of the defect.

Mr MACQUISTEN asked whether one of the causes of bad sight was not the fact that the small type of school books caused myopia.

No answer was returned.

Typhoid in Spanish Refugee Children

Sir ARCHIBALD SOUTHEY asked on June 10 how many Spanish refugee children had been admitted into this country and how many cases of typhoid or suspected typhoid had occurred among them. Sir KINGSLEY WOOD said that according to information with which he had been supplied 1881 children arrived at the camp at North Stoneham on May 23 and 24. Six cases of typhoid, including one not finally diagnosed and one of paratyphoid had occurred among them. Three children were at present under observation for this disease. A first inoculation against typhoid had been given to nearly all the children in the camp. The responsibility for the conduct of this matter rested with the voluntary committee. His department had given all the advice and assistance that could be given, and would continue to do so. He was anxious that, subject to satisfactory medical conditions these children should leave the camp as soon as reasonably practicable and possible. Any assistance that his medical officers could give to medical officers in districts where they had to go in order to ensure safety so far as health was concerned, would be given. Medical officers of health would be informed before arrangements were made to transfer these children. He believed that the medical officers were fully alive to the need for carrying out their duties.

In a previous reply Sir Kingsley Wood said he was unaware of any instruction or request that the children from Bilbao should be vaccinated or inoculated before reaching this country. Approximately 50 per cent were found to have been inoculated against small pox.

"Scandal" of Housing Conditions in Scotland

In the House of Commons on June 10 Mr HENDERSON STEWART drew attention to the report of the Scottish Housing Advisory Committee on Rural Housing and read many excerpts on the bad housing in Scottish rural areas. The committee he said emphasized the need for regional water and drainage schemes. It pointed out that no section of the population was compelled to live in such consistently bad conditions as farm labourers. Investigations in a number of parishes regarded as typical of Scotland showed that 75 per cent of the houses visited there were unfit for human habitation.

Dr ELLIOT said he welcomed this report. Many of its recommendations involved legislation and he had given it full consideration in conjunction with the general housing problem. In Glasgow and Coatbridge housing conditions could be found altogether worse than those which had been brought out in rural housing. In Glasgow there were choked-up closets one two or three floors up with the sewerage running into the floors below polluting everything. He did not deny that in rural housing there was a lack of water and of food storage places but in the country there was sunshine and fresh air. The general housing situation in Scotland was one of the scandals of the century. One third of the population of Scotland was living without separate water closets. They could not concentrate on removing this scandal either from the country alone or from the town alone. They must advance against both. The rural slum was as great a disgrace as the urban slum, but not greater and if they concentrated all their efforts on it they would be wrong. He did not take a light view of this matter nor did his officers.

So far as recommendations calling for administrative action were concerned Dr Elliot was in general agreement with the report. He proposed to communicate with the county councils and ask them to take administrative action under the Housing (Scotland) Act and Housing (Rural Workers) Acts in advance of any legislation which might be introduced to carry out the committee's recommendations. Valuable work had been done under the Housing (Rural Workers) Acts, and the committee as a whole favoured the further extension of those Acts. The Housing (Rural Workers) Acts would not expire until June 24, 1938 and up to that date local authorities might receive applications for assistance. Although legislation extending the Acts would not be passed until the spring of 1938 there was no reason why there should be any decline in the amount of work done. The number of dwellings in respect of which town and county councils had received applications for assistance was roughly 30,000, and applications made to county councils covered about 27,000 of these. This compared with 20,000 applications for the whole of England and the number of dwellings on which work had been completed was 23,000 for Scotland compared with 11,800 for England. He trusted he might rely on the efforts of local authorities and members on all sides of the House in remedying the defective housing conditions in rural Scotland. He for his part would do his best in seconding any efforts that were put forward. The House then adjourned.

On June 15 Mr WEDDERBURN informed Mr Westwood that eight local authorities had indicated to the Scottish Department of Health that they proposed to postpone further housing developments involving approximately 1,584 houses.

Corporal Punishment—Sir Alfred Knox was told by Mr GEOFFREY LLOYD on June 10 that it would be the duty of the Committee on Corporal Punishment to take account of the regret expressed by the judge at Leicester Assizes that he had no power to order whipping in a recent case of brutal assault on a young girl.

Mr THURTELL: Will the Home Office consider taking powers to permit magistrates to order compulsory surgical operation in cases of this kind?

Sir FRANK SANDERSON: Does not the hon gentleman consider that this is a type of case in which sterilization might be of considerable advantage?

No answer was returned to these questions.

Dental Treatment of Unemployed—Sir KINGSLEY WOOD told Mr Whiteley on June 10 that he had received a communication from one local authority about the increased cost to public assistance committees of dental treatment and the provision of artificial dentures to persons in receipt of allowances from the Unemployment Assistance Board. Under the Unemployment Assistance Act the Board had no power to defray the cost of dental treatment.

Surgical Appliances for Poor Persons—Sir KINGSLEY WOOD told Mr Edward Strauss that he would not be justified in inquiring the probable cost to the State of the provision free of cost of surgical appliances to all poor persons whose need thereof was certified by a qualified medical practitioner. Local authorities had powers to render assistance in appropriate cases.

Ventilation of House of Commons—Sir PHILIP SASSOON told Mr A. C. BOSSOM on June 14 that investigations were proceeding into the best methods of improving the ventilation of the House of Commons chamber. It had not been possible to prepare a detailed scheme and he was not in a position at this stage to furnish an estimate of cost.

Noise and Health—Sir RALPH GLYN asked the Minister of Health whether he would appoint a committee to inquire into the detrimental effect of unnecessary noise on the health of people living in large cities and how far medical opinion supported the view that many instances of nervous breakdowns etc., were due to causes which could be to a great extent eliminated. Sir KINGSLEY WOOD said on June 14 that research into the effects of noise on workers carried out by the Industrial Health Research Board of the Medical Research

Council on which reports have been published, showed that it was very difficult to detect and measure any specific effects of noise on health and it was hardly possible to assess within the limits of a Parliamentary answer the influence which medical opinion would assign to the part played by noise in the increased strain of modern life. He did not think the subject lent itself to investigation by a committee as suggested.

Housing in Scotland—On June 15 Sir THOMAS MOORE asked the Secretary of State for Scotland whether, in view of the fact that over 250,000 houses were still required to replace unfit dwellings in Scotland, and that owing to the present condition of the building trade it would not be possible to erect more than some 25,000 houses per annum, he could state what special steps he proposed to take to encourage temporary reconstruction and reconditioning to improve the present position. Mr WEDDERBURN said that in view of the present pressure on the supply of building trade labour in Scotland the Secretary of State was not satisfied that a policy of temporary reconstruction and reconditioning would make any material contribution to housing needs. Following representations made to him by the Convention of Royal Burghs however he was making further inquiries on the subject.

School Medical Examinations in Glasgow—On June 15 Mr DAVIDSON asked the Secretary of State for Scotland the total number of school children medically examined in Glasgow up to the last available date, the number of medical examiners employed and the total number of children termed defective. Mr WEDDERBURN replied that the number of school children medically examined in Glasgow during the year 1935-6 at systematic routine inspection was 54,882. The medical staff comprised sixteen whole time and one part time medical officers. The number of children found to have irremediable defects was 2,359 while 44,231 had defects which were more or less readily remediable. A further 15,899 children were specially examined at the request of the parents or teachers. Most of these were found to have some defect requiring attention. There was also a re-examination of 27,005 children who had been found to have defect at previous examinations.

Hospital Staffing at Gibraltar—On June 15 Lieutenant Commander FLETCHER asked the Secretary of State for War whether the normal hospital staff at Gibraltar was too small to be able to cope with thirty-five unexpected patients or whether there were other reasons and, if so of what nature for the dispatch of four nurses to Gibraltar to nurse the wounded from the *Deutschland*. Mr HORE BELISHA replied that the staff of the Military Hospital Gibraltar was adequate to deal with a normal number of patients. The casualties from the *Deutschland* were abnormal.

Appropriation of Poor Law Institutions—Sir KINGSLEY WOOD announced on June 17 that eleven county councils and thirty-nine county borough councils in England and Wales had since the Local Government Act, 1929 appropriated Poor Law hospitals or infirmaries or parts thereof for use as general hospitals under the Public Health Acts. In addition six other county councils had appropriated such institutions for other public health purposes such as tuberculosis hospitals, maternity hospitals, convalescent homes or epileptic homes.

Notes in Brief

The number of cases of anthrax reported to the Ministry of Agriculture in March, April and May 1937 was 239 compared with 152 and 110 in the same three months of 1936 and 1935.

In Huddersfield in the years 1933-6 inclusive 1,252 children under 5 years of age were immunized against diphtheria. Of 263 cases of diphtheria recorded in the same period in children of that age group seven were in children who had been immunized.

Sir Kingsley Wood has asked the Welsh Board of Health to treat specially a request from a number of district councils in Glamorgan to discuss the administration of the Midwives Act by the county council.

Investigations into the ventilation of the House of Commons are proceeding but it is not expected that they will conclude in time to enable improvements to be made during the summer recess.

In 1936 there were three applications to the Medical Board for certificates of disablement from asbestosis, all of which were refused.

The Minister of Health does not intend to secure larger powers for local authorities to deal with nuisances caused by the emission of smoke from industrial undertakings. He has no reason to think that the powers already available are insufficient.

During 1936 5,932 persons under 16 were injured and disabled for more than three days by accidents at mines under the Coal Mines Act, 1911.

Medico-Legal

A FATALITY AFTER DIPHTHERIA IMMUNIZATION

Verdict of Coroner's Jury

The coroner's inquest¹ at Ring Co. Waterford, Irish Free State, on Siobhain Kenneally, a girl of 12 who died after an injection of T.A.F. (Burroughs Wellcome) for immunization against diphtheria was concluded on June 12. At the hearing on June 11 Dr M. O'FARRELL, the county medical officer of health, said that a specimen of the suspected fluid had been cultured and examined for acid-fast organisms and phenol. The test for phenol was positive, no acid fast organisms were found, and no organisms would grow. Several guinea pigs were inoculated with large doses, one animal died ten days afterwards, and the appearances suggested that diphtheria intoxication was at fault, but there was no evidence of tuberculosis or infection. The remaining animals lost weight, but suffered no other ill effects. No other accidents had been reported in a total of nearly 4,000 injections. He had received the bottles by parcel post.

Dr J. McGRATH was asked by counsel whether it would be possible for a suspension of living tubercle bacilli to be mistaken for T.A.F. He said that such a suspension would have to be very strong and would probably produce a relatively uniform tuberculous disease. He and other expert witnesses agreed that it was quite impossible that the bottle could have contained anything but T.A.F. or that the fluid could have been contaminated in any way. Dr P. KIELY said that the other children who had developed sores on their arms were now all well.

Dr O'Farrell's assistants gave evidence to show that the injections had been performed according to the approved technique and with every precaution. Dr MICHAEL CASEY, dispensary medical officer of Dungarvan, who had assisted Dr W. O'Donovan at the post mortem examination said that the naked-eye appearances of the lesions on the anterior surface of the liver and on the pleura were not typical of military tuberculosis of the human type but might be more typical of the bovine type.

Mr D. FAWCETT, counsel for Ring College, remarked in his address to the jury that Messrs. Burroughs Wellcome had taken the case so seriously that they had left no stone unturned to try to free themselves from blame. They had brought a professor from Dublin to their laboratories and he had given evidence that it was utterly impossible that any error could have occurred there. Mr T. C. WILLIAMS who appeared for Dr McCarthy, suggested that if the tuberculous lesions were not caused by a dirty syringe then they must have been caused by the contents of the bottle. It might be improbable that the bottle

¹ *British Medical Journal* June 5 1937 p 1182

was tampered with, but it was possible and more than possible Mr J J HORGAN for Messrs Burroughs Wellcome said that the mystery had definitely not been cleared up. No part of the batch of T.A.F. could have been contaminated during its manufacture whatever happened afterwards, because if it had hundreds of bottles would have been contaminated. The manufacturers did not sell any preparation of live tubercle bacilli and there was no question of any preparation of the bacillus getting by mistake into the bottles of T.A.F. The evidence showed that no one could have maliciously substituted a suspension of living tubercle bacilli for the T.A.F. in this bottle. Cork had formerly had one of the highest diphtheria death rates in Ireland, but owing to the campaign carried on with Burroughs Wellcome products the rate had been reduced to normal. It would be a cruel tragedy if future lives were sacrificed through any public panic.

The coroner put the following questions to the jury

(1) When and from what cause did the deceased die? (2) Was the ulcer on her arm a tuberculous ulcer? (3) If it was a tuberculous ulcer did the general tuberculous condition from which she died spread from this? (4) If it was tuberculous ulcer, did the microbes causing it enter the body at the time the child was inoculated against diphtheria? (5) If they did enter it at the time what was their source and how did they come to be injected?

Dealing with the last question he said

"The lines that would require to be investigated with any hope of reaching a solution seem to me to be almost endless. The investigation should be a long searching, and highly scientific one—an investigation that in my opinion would be more properly carried out by a body of scientists than by a coroner's jury. If you believe gentlemen that you are not in a position to give an opinion as to the origin of the tubercle bacilli you will say so and I cannot see how you are in such a position."

The jury returned the following verdict

That we the members of the coroner's jury unanimously agree with the medical testimony that Siobhain Kennelly died on April 20 1937 from toxæmia and purpuric hæmorrhage consequent to general military tuberculosis infection and that we are of opinion according to the evidence placed before us that the tuberculous condition was originated by the inoculation of prophylactic into the right arm of Siobhain Kennelly in November 1936 and that we are of the opinion that the contents of the 25 ccm bottle of prophylactic labelled T.A.F. Burroughs and Wellcome from which a portion of the material was extracted by Dr Daniel McCarthy for the purpose of the aforesaid inoculation contained tubercle bacilli and that the inoculation was carried out by Dr McCarthy according to the most approved surgical technique. Every precaution was taken by him and those associated with him to guard against infection arising from contaminated surgical appliances and we exonerate them from all blame in this matter."

FALSE PRETENCES

Phillips Abse of Cardiff was sent to penal servitude for three years at the Cardiganshire Assizes, held at Lampeter on June 14 for obtaining money on false pretences. Thomas Rees Edwards of Llanelli was sent to prison for twelve months on a joint charge. Abse's plan of campaign, apparently¹ was to call at farmhouses and send Edwards in to explain that he was going round under the national health insurance scheme, or the Lloyd George 'scheme' to test everybody's eyes and had to call at every house, he said he had a doctor outside who was an eye specialist and would examine their eyes free of charge. Abse would then be called in pretend to examine the eyes of the inhabitants and tell them that they had cataract and would be blind in a short time unless they had expensive special glasses. One witness gave evidence that he had paid ten guineas for two pairs of spectacles and another that he and his sisters had paid £20 12s for six pairs. Abse admitted twenty-five other similar offences by which he had made over £220. Edwards only got his wages as chauffeur. Mr Justice

¹ *Manchester Guardian* June 15

Greaves-Lord said that a more mean or cruel offence it was impossible to imagine. All medical men will heartily agree, and will also appreciate the effect which frauds of this kind are likely to have on the public confidence in doctors in general and health insurance practitioners in particular.

MENTAL HOSPITAL OFFICER'S APPEAL DISMISSED

In May of last year Dr H C McManus, who was formerly a medical officer at Park Prewett Mental Hospital Hampshire, brought an action against Dr R F B Bowes formerly medical superintendent, and against the visiting committee of the Hampshire Joint Mental Hospitals and their clerk. One of his grounds of action was that he had been wrongfully dismissed in being discharged summarily with three months salary in lieu of notice. When he was engaged by the visiting committee in 1923 no mention was made of the notice which ought to be given the minutes merely recorded that he had been engaged at a certain salary. Mr Justice Macnaghten, who tried the action in the King's Bench Division held that the visiting committee were protected by the Lunacy Act, 1890, s 276, which empowered them to remove any person appointed under it, meaning that they could in their discretion, at their pleasure, and without assigning any reason, revoke the appointment and remove the person from the office to which he was appointed. Dr McManus therefore lost his action and now appealed. He contended that the court would require clearer words than those of the statute to drive it to the conclusion that the committee had the right to turn out at a moment's notice a man in his position when he might be on the eve of taking his pension. Mr R P Croom-Johnson, K.C., counsel for the visiting committee, said that the Lunacy Act gave them no power to make contracts with members of the staff, but that even if the committee had made a contract with Dr McManus it was in the terms of section 276 of the Lunacy Act, and there must be read into it the power of removal. Lord Justice MacKinnon inquired under what power the committee had awarded Dr McManus even three months' salary, and whether the district auditor could have disallowed the sum and surcharged it. Mr Croom-Johnson answered that he was inclined to think so.

Giving judgement, Lord Justice Greer said that the claim was clearly barred by the operation of the Public Authorities Protection Act, 1893, s 1, which provides that a claim against a public authority must be made within six months of the cause of action arising. A claim by Dr McManus for return of contributions under the Asylum Officers Superannuation Act, 1909 s 10, also failed for the same reason. The learned Lord Justice found no evidence to justify the court in finding that Dr Bowes had knowingly and wilfully procured the dismissal of Dr McManus. Lord Justice Slesser agreed that the appeal should be dismissed, and added that the case had great importance because it went to the root of the tenure of every person employed under the Lunacy Act. He expressed the opinion that the committee had power under that Act to remove any of its servants at will.

The result of this unfortunate action is to confirm the fairly obvious interpretation of the employment section of the Lunacy Act, but it may remind present and prospective mental hospital officers of the precarious tenure under which they hold their appointments. It is even probable, as Mr Croom-Johnson pointed out, that if a visiting committee employed a medical man on a definite written contract by which they undertook to give him six months' notice of termination the words of the section would make that undertaking completely valueless. Fortunately, like many similar provisions this section of the Act is not as onerous in practice as in theory.

Obituary

SIR SQUIRE SPRIGGE, M.A., M.D.,

FRCP FRCS F.A.C.S

Editor of the *Lancet* 1909-1937

We have to record with deep regret the death on June 17, after a short illness of Sir Squire Sprigge, the Editor of the *Lancet*. He had upheld the traditions of our contemporary for forty five years, and was recognized at home and abroad as a great medical journalist, whose service to the profession and to the public cannot be measured in words. His personal influence on the world of medicine quietly wielded in the background, owed much to the wide range of his interests and the many social contacts he made in other walks of life.

Samuel Squire Sprigge, eldest son of a country doctor in Norfolk, was born at Watton on June 22, 1860. He went to Uppingham School under Edward Thring and was one of the many boys whom that indomitable head master took to temporary quarters at Borth on the Cardigan coast during the typhoid outbreak at Uppingham which threatened to ruin the school in 1875. On his father's death he left school for Gonville and Caius College Cambridge, spending three active and happy years there and passing on to St George's Hospital where he made more friends. He took the M.R.C.S. diploma in 1886 the Cambridge M.B. and B.Ch. degrees in 1887 and proceeded M.A. and M.D. in 1904.

With a natural gift of clear expression a taste for the company of writers and artists and no liking for humdrum medical practice Sprigge occupied as much time as he could spare in literary pursuits making ends meet by work as private secretary to Sir John Russell Reynolds a leading London physician and as secretary to the newly founded Society of Authors of which he was afterwards chairman. In those early years he formed many interesting and valuable friendships at the United University and Savile Clubs and went with Sir Walter Besant on a

lecturing tour in America. Then, at the end of 1892 came an offer to join the *Lancet* and acceptance of this invitation proved to be the turning point of his career. He had not been with them long when the Editors, T. H. Wakley, F.R.C.S., and Thomas Wakley, L.R.C.P., son and grandson of the founder, gave Sprigge the congenial office task of tracing the origin and early fortunes of the paper and the tempestuous story of its founder. This excellent piece of literary and historical work came out in serial form in the *Lancet* and afterwards as a book *The Life and Times of Thomas Wakley*. It is a mine of information about the medical world of London its quarrels and

abuses, during the first half of the nineteenth century.

When Sprigge entered the *Lancet* office he made the acquaintance of four stalwart friends of the paper who acted as part time editorial advisers: Sir John Tweedy, Dr Sidney Coupland, Dr James Grey Glover and Surgeon-General Jeffery Marston and at the centenary dinner in 1923 he paid tribute to them and to his indoor colleagues Dr H. P. Cholmeley, and Mr S. Archibald Vasey who directed the chemical laboratory for many years. He spoke of himself on that occasion as a friend-made man. In 1905 a series of anonymous articles from his pen were accepted as a Cambridge M.D. thesis by the Regius Professor of Physics, and reappeared in book form under the title *Medicine and the Public*.

In 1907 the year of a costly libel action T. H. Wakley died, and his son, now nominally sole Editor came to rely more and more on Sprigge for the conduct of the journal. Thomas Wakley the third died in March, 1909 and with the end of the dynasty Squire Sprigge became Editor in name as well as in fact. The ownership of the *Lancet* passed into the hands of a private company and after a few years Messrs Hodder and Stoughton acquired the controlling interest. For a time during the early part of the war Sprigge ran the journal almost single handed, but nevertheless found time to organize and administer, with Dr H. A. Des Voeux, the Belgian Doctors and Pharmacists Relief Fund and for this charitable work, which brought in more than £25,000 he was awarded the *Medaille du Roi Albert* by the King of the Belgians. In January 1921 he received the honour of knighthood in



company with his friend Dawson Williams, Editor of the *British Medical Journal* and was elected F.R.C.S.Eng., followed six years later by election to the Fellowship of the Royal College of Physicians of London. In the latter part of 1928 he revisited the United States and Canada, and gave the annual Hunterian Lecture to the American College of Surgeons and was elected a Fellow of that body. A signed report of his tour and on medical education in North America was published as a special supplement to the *Lancet*. His book *Some Considerations of Medical Education* had appeared in 1910 and in 1920 he served as vice president of the Section of Medical Education at the Annual Meeting of the British Medical Association in Cambridge. In 1921 he published a volume of essays entitled *Physic and Fiction*. His unsigned contributions to the paper for which he lived, if they were collected from the files of forty-five years would occupy a row of volumes on the office shelf.

Squire Sprigge married in 1895 Beatrice, daughter of the late Sir Charles Moss, Chief Justice of Ontario. She died in 1903, leaving two children, a son, Cecil Sprigge now financial editor of the *Manchester Guardian* and a daughter Elizabeth (Mrs Mark Napier) the novelist. In 1905 he married his first wife's cousin, Ethel Coursolles, daughter of the late Major Charles Jones, the gunnery expert. Lady Sprigge survives him with a daughter, Annabel, who lately held an exhibition in London of her drawings and sculpture.

A Personal Appreciation

Squire Sprigge was a man of exceptional ability and force of character. His mind had been trained in the discipline of the classics under a great head master; its edge was sharpened by the study of science at Cambridge, and made sharper by the study of mankind at St. George's. The practice of medicine had no appeal for him, what he liked was the battle of life, the contest of mind with mind. He was widely read without bookishness, witty of speech, incisive of pen when the mood took him, and dexterous to a high degree in the handling of men and situations, the more difficult the tangle or the tougher the problem, the more he enjoyed finding a way through or round it. When on his mettle—and until the last few years he was always ready for anything or anybody—Sprigge could hold his own against a keen academic brain or in combat with hard business wits.

Two early experiences were of much value to him in the rough and tumble of weekly medical journalism. One was the post of confidential secretary to the Victorian physician Sir John Russell Reynolds; the other was the secretaryship of the Society of Authors under his club friend Sir Walter Besant. It was not long after joining the staff of the *Lancet* in 1892 that Sprigge began to be recognized, by those who knew the personalities at 423, Strand as the master spirit in the editorial office. But the Wakleys, who owned the paper in succession as a family affair, were grudging of titles and Sprigge remained a subeditor for sixteen years until his inevitable promotion to the editorship on the death of the third Thomas Wakley in 1909. Meanwhile he had written an admirable biography of the founder of the *Lancet* had expanded his own M.D. thesis into a book *Medicine and the Public* had produced some short stories and miscellaneous papers and a small prickly work on methods of publishing. His novel *An Industrious Chevalier* anticipated the first of the "Raffles" stories by E. W. Hornung but made no popular hit, largely by reason of a lack of sentimentality—or, as some would say, a cool objectiveness—in style

and approach. These imaginary episodes, reprinted in 1909 and 1930, make an entertaining book, and the careful reader can find in them some clues to the author's own personality.

His first ten years as Editor were uphill all the way. Old members of the staff dropped out, new colleagues came and went, the proprietorship of the paper changed hands twice, the National Insurance Bill crisis was followed by the anxious and difficult period of the war. Through this and through the time of reconstruction Sprigge kept the *Lancet* on its course. Only those who have been behind the scenes in a small newspaper office can have any idea of the burden borne day in and day out by the man in charge under such conditions. From 1919 onwards the Editor's task lightened, and of late years he took life more easily.

By nature clear-cut and by habit undemonstrative, Squire Sprigge had no use for sloppiness or gush. But he felt and inspired real affection, and thought much about his friends and helped them with both hands when need arose. Wit and humour do not always go together. "S S S" had both, and a keen appreciation of them in other people. He was a most stimulating and delightful companion, at work or at play, a wise counsellor, a loyal son of his school, his college, and his hospital, and above all things faithful to the great journal which he served for forty-five years.

One more thing should perhaps be said here. The thirty years' war between Ernest Hart and the Wakley family, which poisoned the relations between *British Medical Journal* and *Lancet* was abhorrent to urbane and magnanimous men like Dawson Williams and Squire Sprigge. Hart's death gave them the opportunity to make open peace and establish private good will at each corner of the old block of houses in the Strand. Forty years have passed and the two journals now live further away in new homes. The healthy rivalry goes on, but there has been no break in the cordial relationship begun by Williams and Sprigge and continued by their fellow workers.

Tribute by Lord Dawson

A memorial service was held in the Church of St Martin-in-the-Fields on June 22, and was attended by a large congregation representative of the many sides of Sir Squire Sprigge's public and private life. Viscount Dawson of Penn, President of the Royal College of Physicians, gave the following brief address from the pulpit.

At this service of remembrance I will try and give expression to our admiration and thankfulness for the life of Squire Sprigge.

The son of a doctor, he belonged to the Norfolk countryside and there his spirit lived during life and his body now rests. His life was long, rich and varied in achievement, clear and staunch in its purpose. Coming from Uppingham, Carus College, and St George's Hospital his career was from the first that of author and journalist in varied fields to which he brought scholarship, competence, and a lively sense of the problems of his day and generation. The *Lancet*—this was the chief sphere of his work and influence. His association with that great journal began when he was aged thirty-four and he was editor, by succession from the distinguished Wakley family, for the last thirty years of his life and picture those thirty years—the rising tide of new knowledge, the growing concern of Medicine for the health and weal of the people, the uprise of medical insurance and com-

munal services—these and other changes surged round us in the hurry of the times. From Sprigge in his weekly chronicle came the still small voice of reason, which went far to save our profession from the mere clamour of the passing show. Let me bear witness to the service rendered not only to medical science but to national well-being by those friendly rivals, the *Lancet* and the *British Medical Journal* who both regard power as a trust for the public good. Together they embody the expression of the compass, the expanding sphere and the dignity of English medicine of which the last two generations have been the witness.

With the passing of the years Sprigge's influence radiated far and wide. His culture and urbanity, his liberal outlook and quick appreciation, his enterprise of thought and youthfulness of spirit and his apt choice of word and phrase made welcome his counsel and companionship. That his life was many-sided is shown by his devotion to sport in his youth and in later life his enthusiasm as a painter in water colour and his love of gardens. For him beauty was truth and truth beauty. He was a leader by the force of example, the power to persuade and encourage others and make his workers feel themselves to be friends engaged in a common enterprise and his kindness had a sureness of touch which brought all men to him. And yet he was a shy man who sought the shadows, forgetful of self though never forgetful of others. Without sense of mission his message was part of himself for a man's soul is sometime wont to bring him tidings, more than seven watchmen that sit on high on a watch tower. All through he made truth and the counsel of his heart to stand. His work done, we say farewell and hold fast to a memory—proud, grateful and long abiding.

F W COLLINSON MD FRCSEd

Dr Frederick William Collinson as recorded in last week's *Journal* died in his eighty-fourth year at his home in Preston on June 9. His whole life, from the time he first commenced private practice in 1889 until his death was passed in the same house. He was the second of three sons of Thomas Collinson, the headmaster of Duke's School, Alnwick, an institution built by a Duke of Northumberland in celebration of George III's Jubilee. A brother likewise came to Preston, and was for thirty-seven years the well-known and popular Vicar of Broughton, only two miles from Preston. A half brother was organist at St Mary's Cathedral, Edinburgh for fifty years.

In 1887 he came to Preston as resident house surgeon at the Preston Royal Infirmary. His association with that institution was continued throughout his professional life and proved an influence of tremendous value on the work and prestige of the hospital. He remained as senior resident house surgeon from 1887 to 1889 and then commenced private practice at the house—32, Winckley Square—which he occupied up to his death. At first he began in general practice, but could not bring himself to the usual dispensing practice, and from the first determined that he would prescribe only for his patients. Much pressure was brought to bear on him by some of his older colleagues who told him that he could never hope to succeed on those lines. When he found at the end of his first year's work that his total earnings were £78 he had serious misgivings, nevertheless he stuck to his guns. From the first he set out to do his work as thoroughly as he knew how. He was most

meticulous not only in the examination of his patients but in painstaking and accurate recording and preservation of notes, so that though in general practice, he was able at once to look out from his files the records of any patient for many years back. His reputation rapidly spread, and soon he attained a prestige for thorough careful work throughout a radius of many miles, and this gradually extended throughout the county during the years. In the first year of his practice he was elected as an honorary medical officer to the Preston Infirmary. Later, when the staff was divided into physicians and surgeons, as his main interest was in surgery he became an honorary surgeon. He was



absorbed in his work and took every opportunity of visiting the operating theatres in the hospitals of the great cities and watching the well-known surgeons of his time. At the dawn of the aseptic period he was laughed at by his older colleagues for the introduction of his rubber gloves, his white sterilized gown, his white shoes, and complete change of clothes. His reply to one was:

'Surely it is as important to change one's clothes for a serious operation as for a game of tennis. With the late Sir Charles Brown he visited many hospitals and threw himself with enthusiasm into the planning and erecting of the new operating theatre which Sir Charles Brown presented to the Preston Infirmary about 1900. He gave up any private practice about 1909 and then devoted himself to consulting work. By this time Collinson's reputation had spread far and wide and many were the operations he performed in private houses at long distances before the day of the private nursing home in the provincial town or the private wards in a hospital. He designed a portable operating table with its own portable electric lighting supply, and the people of Preston were familiar with his car carrying the case for the operating table. He contributed several articles to the journals, one of which described the successful excision of a tremendous gall-bladder of three gallon capacity (*BMJ* 1909). During the war he did much valuable work at the Preston V.A.D. Hospital as well as at the Royal Infirmary.

He retired from the staff of the Preston Royal Infirmary in 1923. Shortly afterwards he was presented by his colleagues of the Preston Medical Society with his portrait in oils by Mr W W Russell A.R.A. This portrait he gave to the Preston Royal Infirmary, and it now hangs in the library there. Ever of active mind and habits, he was elected to the local Town Council and served from 1924 to 1934 as a councillor, and was made an alderman in 1934 but retired from public life in 1935. He was president of the Lancashire and Cheshire Branch of the British Medical Association in 1929 and had been local secretary for the Epsom College Foundation for over thirty-six years. He married late in life at the age of 49 but the union only lasted eight years for his wife died in 1910.

His interests were always serious. He was interested in history and archaeology and later in paintings and the Art Gallery and was instrumental in improvements

in the noble Harris Library and Museum in Preston. He had little or no concern with sport. By nature he was of quiet, retiring, and apparently somewhat austere disposition, but those who knew him well soon found that there was no austerity. Many junior colleagues have gone to his house with their professional and private troubles and sat in his consulting-room at night asking his advice on multifarious subjects. They always found him kind and gentle, and helpful. He was rigid in the standard of conduct which he practised himself and demanded from others, whether from his House men or from his friends. He was a deeply religious man, though never flaunted it before others. It is said that he always prayed, quietly to himself, for a few moments before going into his operating theatre. He was a man of quite exceptional dignity of speech, behaviour, and appearance, and yet kindly, gentle, and even affectionate. He was held in the highest regard by all his medical colleagues, and by all classes of the general public in and around the town of his adoption. It is safe to say that his passing leaves a gap which no one man is likely to fill in the future.

A. E. R.

ROBERT CARSWELL, M.A., M.B., CH B

Wandsworth

-With the passing of Dr Robert Carswell, which took place on June 16 after an operation for acute appendicitis, the Wandsworth Division of the British Medical Association loses one of its stalwarts, a man of strong views, and intense enthusiasm for any object that he felt compelled his support.

Robert Carswell was born in Glasgow in 1871, and graduated M.A., M.B., Ch B in the university of that city. After holding various hospital appointments at Colchester, Huddersfield and Liverpool, and serving as a civil surgeon in the South African War, he settled in practice in Wandsworth. In the great war he served as medical officer to the R.F.A. His was a forceful personality and his tall, well built figure was sure to be found, vigorously expressing his opinions on medical politics at most meetings of the Division. He threw himself with great vigour into the controversy which preceded the passing of the National Health Insurance Act, of which he was a strong opponent to the end. He was genuinely honest in his opinions, which he held and defended with great tenacity. This characterized his efforts to secure what in his opinion was the method of use of tuberculin. He was a true disciple of Koch, and always felt that the treatment of tuberculous disease, as laid down by Koch, was not properly carried out in this country, and this neglect was in his opinion responsible for the poor results obtained. He collected a large quantity of evidence in support of his opinion, and kept careful details of all cases that he himself treated with tuberculin. He devoted a large part of his life in the pursuit of this study, and it seems tragic that the mass of material collected by him should be wasted. He described a number of his cases in the *British Medical Journal* and whenever the question of tuberculin treatment appeared in print throwing any doubt on the method a vigorous letter would almost surely follow from his pen.

Dr Carswell had been president of the South West London Medical Society and his colleagues in this society and the British Medical Association will miss the presence of one who was not only a great gentleman but also both a stimulus and an inspiration.

T H G

The death of Professor AUGUST WIMMER on May 20 from malignant disease of the lungs robs Denmark of her most distinguished psychiatrist and neurologist. He was born on February 26, 1872, at Odense, and quite early in his career he began his psychiatric studies in a Danish mental hospital. In 1912 he was put in charge of the large mental hospital, St. Hans, and in 1919 he was appointed professor of psychiatry and neurology, in succession to Professor Friedenreich. Many of his post-graduate studies were conducted in France, and he was a welcome visitor in England and the U.S.A. He published 125 scientific books and articles, several of which were translated from the Danish into other languages. His book on psychiatric neurological methods of examination was published in 1918 in English, and his two large works on epidemic encephalitis appeared in the same language. He was a familiar figure at international congresses, and he enjoyed a well-founded reputation for an encyclopaedic knowledge of his specialties. His attitude towards psycho-analysis remained reserved till the end, and he was a personality one might like or dislike, but not ignore. The best of him came out in his contact with children, to the rest of the world he was apt to be an enigma even when in a sociable mood.

The Services

OSBORNE CONVALESCENT HOME

The King has approved the appointments of Sir Cuthbert Wallace Bt., KCMG CB., Mr W Rowley Bristow Mr Claude H. S. Frankau CBE, DSO, Professor J Paterson Ross, Mr G T Mullally, Professor F R. Fraser Dr Gordon M. Holmes CMG., CBE. FRS, and Dr Geoffrey Marshall, OBE., to the civil consulting staff of King Edward VII's Convalescent Home for Officers at Osborne Isle of Wight.

I M S ANNUAL DINNER

The thirty sixth annual dinner of the Indian Medical Service took place in London at the Trocadero Restaurant on June 16 with Brevet Colonel Sir Rickard Christophers FRS in the chair. The official guests at the high table were Sir Frank Brown of the *Times* Dr N G Horner Editor of the *British Medical Journal* Major-General W P MacArthur AMS Sir Frederick Menzies Dr E. C. Morland of the *Lancet* Dr H Letheby Tidy, and Professor G Grey Turner. After the health of the King Emperor had been honoured the chairman proposed the toast of "The Service" and welcomed all the guests including the newly joined officers. The history of the I.M.S. Colonel Christophers said was a long and in a medical sense glorious one and they were glad to have present with them again that night their historian Colonel Crawford. The activities of the Service were no less important and varied now than in former times. Many past officers were holding high positions while the serving officers of to-day upheld the tradition in India. Lieut.-Colonel Sinton VC., proposing the chairman's health said that the name of Rickard Christophers had been bound up with work in malaria for forty years. In the great epidemic of 1908 the teaching of the officers fell upon him and the I.M.S. had never had due credit for the pioneer work then done. Sir Rickard's researches from first to last were always directed to the basic principles of malariology and vital statistics his models of mosquitos revealed him as the man of science who was also an artist.

The public proceedings ended with some stories told by Colonel Anderson at the chairman's request, and an acknowledgement to the honorary secretaries of the dinner Sir Thomas Carey-Evans and Sir Richard Needham. The officers present at the dinner were

Major-Generals W V Coppinger A W M Harvey Sir Courtenay Mansfield Sir John Megaw C W F Melville Sir Leonard Rogers Sir Cuthbert Spradon G Tate
Colonels H. Ainsworth J Anderson Sir Charles Brerley H M Cruddas H R Dutton A B Fry C A Gill T A Granger C R M Green W H Leonard H M Mackenzie F P Mackie.

Sir Richard Needham, J J Pratt A. H Proctor C H Reinhold, A Spitteler Ashton Street R G Turner W S Willmore

Lieut Colonels J E Ainsley W P G Alpin A C Anderson C H N Baker C H Barber A C L Bilderbeck R H Candy H P Cook D Clyde, D G Crawford J M Crawford J B Dalzell Hunter S C Evans J K S Fleming P F Gow V B Greeco Armytage A E Grisewood, J B Hanapin, J B Hance W L Harnett H Hingston E H Vere Hodge J M Holmes E V Hugo S P James M L C Irvine I Davenport Jones H C Keat H H King, M M Khan J B Lapsley, J C H Leicester C Melver E C G Maddock W A Mearns F O N Mell S H Middleton West F O Kinealy, J Rodger H Ross H K Rowntree J D Sambel, J A Sinton R B Seymour Sewell, H B Steen R Steen W D H Stevenson H Stott W A Sykes H J H Symons, C Thomson G S Thomson, E Owen Thurston A G Tresidder E L Ward E E Waters

Majors H C Brown J A W Ebdon, Sir T Carey Evans A J Innes Cox M J Quirke J Scott Riddle

Captains T D Ahmad H L Barker B M Rao

Lieutenants B J Doran J R Kerr C F Mayo-Smith J D Munroe G W Palmer S Shone W C Templeton G F J Thomas

DEATHS IN THE SERVICES

Major FRANCIS ALBERT SAW R.A.M.C. (retired) died at Oxford on March 24 aged 75. He was born at Greenwich on January 7 1862 educated at Newcastle, and graduated as M.B.Dunelm in 1885 subsequently taking the D.P.H. of the London Colleges in 1902. Entering the Army as surgeon on January 30 1886 he became major after twelve years service, and retired on June 20 1906. He served in the operations in South Africa in 1896 receiving the medal and in the South African War from 1899 to 1901 taking part in the operations in Cape Colony and gaining the Queen's medal with two clasps

Universities and Colleges

UNIVERSITY OF CAMBRIDGE

During the month of May the following titles of medical degrees were conferred by diploma on members of Newnham College

M.B.B.Chir.—J C Drury

M.B.—M E Barnard D M Norman Jones Mrs O K Wilson

The following medical degrees were conferred at a congregation held on June 19

M.D.—J G C Spencer

M.Chir.—J W S H Lindahl

M.B.B.Chir.—W E Joseph J R Dickinson, J R Harris

M.B.—J W S H Lindahl *D Divine, A T Howell T D F Money H P R Smith

* By proxy

UNIVERSITY OF LONDON

The following have been recognized as teachers of the University in the subjects indicated in parentheses

St Bartholomew's Hospital Medical College Dr A. H T Robb Smith (Pathology)

London Hospital Medical College Mr E C B Butler and Mr A. Tudor Edwards (Surgery)

Guy's Hospital Medical School Mr R J Cann (Oto-rhinology) Mr F W Law (Ophthalmology)

St Mary's Hospital Medical School Mr H C Gage (Radiology) Mr G Roche Lynch (Forensic Medicine)

Westminster Hospital Medical School Dr H T Barron (Dermatology)

University College Hospital Medical School Dr J C Hawksley (Medicine) Dr R S Picher (Surgery)

King's College Hospital Medical School Mr E B Clayton (Physical Medicine)

London School of Hygiene and Tropical Medicine Dr T Bedford (Hygiene and Public Health)

Royal Dental Hospital of London and School of Dental Surgery Mr S Blackman (Radiology)

British Post Graduate Medical School Dr Janet M Vaughan (Pathology)

Dr A M H Gray has been elected chairman of the Graham Legacy Committee for the year 1936-7 and Professor C R Harington F.R.S., has been appointed Director of Research under the Charles Graham Medical Research Scheme for a period of one year from October 1

The following appointments have been made Dr A M H. Gray and Mr W Girling Ball as governors of the British Post Graduate Medical School Professor W W Jameson as representative of the University at the eighth Imperial Social Hygiene Congress London July 5 to 9 and Dr R A Young as representative of the University at the twenty third Annual Conference of the National Association for the Prevention of Tuberculosis, Bristol, July 1 to 3

MIDDLESEX HOSPITAL MEDICAL SCHOOL

The annual prize giving ceremony of the Middlesex Hospital Medical School will be held at the Scala Theatre Charlotte Street W on Wednesday July 21 at 3 p.m. when the Prizes and Medals for 1936-7 will be presented by Viscount Dawson of Penn and the Introductory Address will be delivered by Dr G E. Beaumont

The refresher course for old students of the Medical School will begin on Friday October 1 at 2.15 p.m. and will terminate on Sunday afternoon October 3. A detailed programme will be circulated about four weeks before the course starts

The annual dinner of the Medical School will be held at the Savoy Hotel on Friday October 1, with Dr Douglas McAlpine in the chair

UNIVERSITY OF BRISTOL

The following candidates have been approved at the examination indicated

FINAL M.B. CH.B.—Section II P B Ryan (with second-class honours) Daphne V Dennis J P M Forde C R G Howard H James, A D Jones N R Matheson A N H Peach (with distinction in surgery) J W E Snaadon A M Spencer R Tallack P Zimmering

UNIVERSITY OF MANCHESTER

At the meeting of the Court of Governors on June 2 a proposal to confer the honorary degree of Master of Arts on Dr E Bosdin Leech was accepted. The proposer and seconder mentioned Dr Leech's long connexion with the Medical School his great services as honorary librarian of the medical library and his work in archaeology

The Wild Prize in Pharmacology has been awarded to J M Rowson, and the Anaesthetic Prize in Dentistry to R. H Darden

The following candidates have satisfied the examiners at the examination indicated

M.D.—*B. Thesis* A. Bigham *A. J E Cave *L Fay H A. Palmer *H J Wade

* With commendation

UNIVERSITY OF GLASGOW

The following degrees were conferred at a ceremony of graduation held on June 16

Hon LL.D.—John M Cowan M.D. Physician to the King in Scotland, the Right Hon. Walter Elliot P.C. M.B. Secretary of State for Scotland Thos Kirkpatrick Monro M.D., Emeritus Professor of Medicine in the University of Glasgow Sir Robert Muir M.D. F.R.C.P. Ed. F.R.S., Emeritus Professor of Pathology in the University of Glasgow Ralph Stockman M.D. F.R.C.P. Ed. Emeritus Professor of Materia Medica in the University of Glasgow

M.D.—D P Cuthbertson (with honours) I K. Buchanan (with commendation) Agnes T Kennie G Pollock T M Sharp

Ch.M.—W J L Fraocis

UNIVERSITY OF WALES

WELSH NATIONAL SCHOOL OF MEDICINE

The following candidates for the degrees of M.B. B.Ch. have satisfied the examiners in the subject indicated

MEDICINE—R Bloom, *Marjorie G Bryan C D Chilton Sonia D Dymond T J Evans J G Jones C K B Lennox Lynda B Powell H Rees H J A. Richards H E Seingry *J P Spillane J A. B Thomas

SURGERY—R Bloom, Marjorie G Bryan C D Chilton Sonia D Dymond T J Evans J Farr Gweneth Howell W R L James J G Jones C K B Lennox H Rees H J A. Richards J P Spillane

PHARMACOLOGY—Marjorie E Bright Mary E Budding R G Griffiths, W H Harris J C Herapath D D Howell H R Hudd Elizabeth G Jenkins C W D Lewis *G O Lewis M Llewellyn, L I Williams W Williams

* With distinction

ROYAL COLLEGE OF SURGEONS OF ENGLAND

The following have been successful at the First Professional Examination for the Diploma of Fellow

P Berbrayer MD J A W Bingham MB, BCh, Ruth E. M. Bowden A C. Brewer, MB, ChB MRCS A J Broomhall MRCS, D M F Carter, G H D Channing L P Clark MB, ChB S Eisenhammer MB ChB, R D Ewing MB BCh MRCS Frances V Gardner, A Gourevitch, MRCS I H Griffiths MB, BS, MRCS E O Harris MB, BS, MRCS, E C Herten-Greaven MB, BCh MRCS J Heselson MB, ChB W B Highet, MB, ChB, W G Holdsworth MB, BS, A H Hunt B.M., BCh MRCS A J Innes MB ChB R Ismail, MB ChB E. S James MD A B King MB, BS, MRCS G H Kitchen MD R A V Lewys Lloyd MB, BS, MRCS J F Lipscomb MB BS L Lloyd Evans T G Lowden BM BCh, S D Loxton MB ChB H M McGladdery MB, BS MRCS T J B A MacGowan MB ChM Rosamund I Mackay MB BS MRCS, H E. M Martin MB BCh K. Mazhar MB ChB A M Minaisy MB ChB, B P Moore, B L Morgan G N Norris MB MS A L Newson MB BS, H R C Norman MD M D M O Callaghan J G O Donoghue MB BS M K Parikh MB BS W D Park MB BS MRCS W Parke MB ChB, D G Phillips MB ChB, J G Pyper MB BCh S C Raw MB BS, M J Riddell A F Rushforth M L A Samie MB BCh, A H Sangster MD, C M A H M Siddons MB BCh MRCS A J Slessor MB, ChB H A Small MB ChB R Spencer MB, ChB K R Thomas MB, ChB D M Thomson, M.D, G M Thomson, MB, BS A J Walker A Wardale MB BS, MRCS D Wynn Williams J F Ziegler MB BS A Zinovieff

Medical News

The Right Hon Christopher Addison M.D., who was raised to the peerage in the Coronation Honours List has taken the title Lord Addison of Stallingborough, in the County of Lincoln

Sir Farquhar Buzzard, President of the British Medical Association, will open the new Central Clinic at Bristol on Friday July 9. This clinic, erected at a cost of £47,000, will provide maternity and child welfare services, school medical services, dental and tuberculosis treatment facilities, and a dispensary

The annual dinner of the Cambridge Graduates Medical Club will be held at Corpus Christi College, Cambridge, on Friday, July 2, at 7 for 7.30 p.m., with the president elect Sir Walter Langdon-Brown, in the chair. The honorary secretaries are Mr W D Doherty 10 Upper Wimpole Street, W.1, and Dr L E H Whitty

Sir Kingsley Wood, Minister of Health, will distribute the prizes at the London Hospital Medical College on Tuesday July 6 at 3 p.m.

A discussion on the training of nurses over seas and for over seas service will be held under the auspices of the Imperial Social Hygiene Congress at Caxton Hall, Westminster, on Wednesday July 7, at 10.30 a.m. Those who are interested should apply for tickets of admission to the secretary Imperial Social Hygiene Congress, Carteret House Carteret Street, S.W.1

A meeting of ophthalmic surgeons and ophthalmic medical practitioners will be held at 17 Russell Square London W.C.1 on Saturday July 3 at 3 p.m. with the object of constituting a group to protect their status and interests especially in relation to unqualified prescribing and non prescribing opticians, and to be organized within or with the approval of the British Medical Association

The forty first Congress of French-Speaking Alienists and Neurologists will be held at Nancy from June 30 to July 5 when the following subjects will be discussed biological study of acute alcoholic delirium cerebellar atrophy and neuro psychiatric regulations in the engagement of recruits. Further information can be obtained from Professor Combemale, Routé d'Ypres, Baillieu

The second International Congress of Mental Hygiene will be held in Paris from July 19 to 24, under the presidency of Dr E. Toulouse

The International Congress for the Protection of Childhood will be held in Paris from July 19 to 21, with M. Albert Lebrun President of the Republic, as president of honour. Further information can be obtained from 67, Avenue de la Toison d'Or, Brussels

The third International Medical Congress to be held in Switzerland will take place at Interlaken from August 29 to September 4. One day will also be spent at Berne under the auspices of the medical faculty of the University. The subscription is ten Swiss francs. Further information can be obtained from the *Schweizerische medizinische Wochenschrift* Klostenberg 27, Basel

On the occasion of the celebration of the foundation of the University of Athens the following among others, were elected honorary doctors. Sir Charles Sherrington, Professors O Naegeli of Zurich, von Koranyi of Budapest, L. Aschoff of Freiburg, Augustus Bier of Berlin, R. Krehl of Heidelberg, Hymans van den Bergh of Utrecht, and J. Wagner von Jauregg of Vienna

An interesting collection of varied goods, gifts from thirty six countries, is now passing through the British Customs in preparation for the British Red Cross Society's international bazaar which is to be held at the Central Hall Westminster S.W.1, on July 7 and 8. The bazaar is in aid of the Florence Nightingale International Foundation, which has its headquarters in London, and which constitutes a permanent memorial to Florence Nightingale in the form of an endowed trust for post-graduate scholarships providing advanced courses of nursing at Bedford College. The special training given by the foundation includes courses dealing with public health administration and teaching in schools of nursing, and social work, for women who have had the best nursing training available in their own countries

The 250th anniversary of the German Academy of Medicine, of which Professor H. Abderhalden is president, was celebrated at Halle on May 28

Letters, Notes, and Answers

All communications in regard to editorial business should be addressed to THE EDITOR BRITISH MEDICAL JOURNAL B.M.A. HOUSE TAVISTOCK SQUARE W.C.1

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QUERIES AND ANSWERS

Alcoholic Poisoning

"PERPLEXED No. 2" writes I have a friend who is given to severe attacks of intemperance during which he suffers from acute alcoholic poisoning. The attacks usually last for about a week and there are often quite long periods of abstinence. I wonder if any of your readers could tell

me of a cure which could be given without the patient's knowledge and which would not necessitate institutional treatment?

Colourless Iodine

Colonel R J BLACKHAM (London EC4) in reply to Dr J Jackson (*Journal* May 29 p 1144) writes. The tincture of iodine decolorata of the BPC is prepared by dissolving iodine in 90 per cent alcohol and then adding a strong solution of ammonia. The mixture is kept in a warm place until it becomes colourless. The German method of making the preparation consists in dissolving ten parts of iodine and fifteen parts of a 10 per cent solution of water and then the mixture is well shaken and seventy five parts of 90 per cent alcohol is added. The preparation is kept for three days in a cool place and then filtered. It is therefore clear that these compounds are not preparations of the halogen but are ammoniacal alcoholic solutions containing ammonium iodide and ammonium iodate and consequently possess very little therapeutic value. In order to avoid staining in the treatment of rheumatic and pulmonary affections only preparations such as unguentum iodi intinctum (Martindale) or iodox should be used.

Rheumatism and Tuberculosis in General Practice

Dr H V MITCHELL (Bournemouth) writes. I have read with much interest Dr Bunting's letter in the *Journal* of May 15 (p 1056). Having used Warren Crowe's vaccines in the treatment of rheumatic infections for several years I should like to confirm what Dr Bunting says as to their general usefulness and the satisfactory results obtained by means of the small doses. One thing that has interested me particularly has been that by far the greatest number of patients that were having or had had this treatment did not contract influenza during the recent epidemic although many were exposed to the infection in their own homes. This point is one of interest when so much work is being done to find a successful vaccine for influenza although it may only be a coincidence. Dr Warren Crowe to whom I wrote asking for his opinion replied. It is a very common finding that patients under vaccine treatment do not get either severe colds or influenza to anything like the normal extent. The probable answer is that many cases are complicated by streptococcal infection and this is prevented by the vaccine. It would be interesting to hear if others who use the vaccine have noticed in their cases results similar to the above.

Income Tax

Earned Income Relief—Secrecy of Returns

Advice explains that he is a partner in a firm and out of his share of the profits pays interest some under deduction of tax (£50) and some to a bank in full—£60. Why should this fact reduce the relief on his earned income? The inspector of taxes has given the firm's agents particulars of his allowances, in spite of the fact that he had asked for such matters to be referred to himself only.

.. That portion of the earnings which is paid away in the form of interest is regarded for purposes of relief as the (unearned) income of the lender and not as part of the borrower's own income. So far as ordinary interest is concerned the point was raised in the case of Adams v. Musker in which it was decided that Section 17 of the Income Tax Act 1918 applies to earned income. That section provides that a claimant shall not be entitled to relief in respect of any income the tax on which he is entitled to charge against any other person or which he is out of any payment which he is liable to make to any other person. While this provision does not directly cover bank interest it is thought that the courts would probably apply it by analogy. Tax is paid at standard rate on £90 but as tax on £50 is recoverable by deduction from the lender it is only on £40 that tax can be repaid at the full rate. The difficulty with regard to the secrecy of the allowances arises from the fact that partnership profits are assessed on the firm and not on the individual partners and consequently the formal notice of assessment must show the aggregate of the allowances claimed by all the partners. The reference of that notice to the accountants by the senior partner of the firm was doubtless necessary to enable the net duty to be correctly apportioned between the partners.

Removal Expenses

W R removed voluntarily to new premises, but continued to use the old premises for professional purposes only until a surgery was built at the new address. The inspector of taxes has disallowed £4 the cost of removing surgery fittings etc., and one third of the Schedule A assessment on the old premises up to the date they were completely vacated.

.. The disallowance of the cost of removal is justified by a legal decision (Kitton v. The Aberdeen Granite Company) but seems a little harsh as presumably wear and tear allowance is not claimed on the fittings. If it is so claimed the £4 can be added to the capital value for future allowances. As regards the Schedule A assessment we know of no justification for adding the one third for any period after residential use of the premises had ceased and we should have thought that would have been admitted immediately the facts were made clear to the inspector.

LETTERS, NOTES, ETC

Posture

Dr JOSIAH OLDFIELD writes from Kingston Jamaica. The evil effects of spinal malformation need not nowadays be stressed. The progressive kyphosis—so commonly looked upon as a necessary senile stoop—is not only aesthetically repellent but is physiologically injurious. We are to-day talking a great deal about replacing the C3 by the A1 in our race but while gymnastic exercises and physical drills are excellent there is at present no definite aim at securing a graceful and erect posture as a permanent human carriage up to extreme old age. Yet the Greeks attained it two thousand years ago and to-day in Jamaica I find such training in graceful carriage and erectness of spinal position that it is a pleasure to look at children and adults, at old men and aged women striding along mile after mile with easy step and swinging limbs and head erect. In Greeks and Jamaicans the secret of this physiological balance is to be found in the amphora and the basket always carried on the head. If in every school the pupils had a daily half hour's drill in walking freely and easily with a tumbler of water on the head we should develop a permanent habit of posture which would oust the present shambling gait and round-shouldered stoop.

Short-wave Therapy

Dr H J TAYLOR of the St John Clinic writes. My attention has recently been drawn to a letter by Dr P P Dalton (May 29 p 1144) in reply to one which I sent to you. My letter was not intended to be a counterblast to any work which Dr P P Dalton has done but as a simple statement which should be of interest to all who have any concern in short wave therapy. With regard to the new evidence which Dr Dalton is supposed to have produced Sir Leonard Hill and myself will have something to say later, but I would draw Dr Dalton's attention to previous literature on the subject (noted) very similar claims to those put forward as new evidence by Dr Dalton. J Audial in 1932 and N Delherm and H Fischgold in 1934 made exactly similar claims as Dr Dalton's (1937). I fail to see therefore that any new evidence has arisen.

Corrigenda

Our note on Dr Donald Hunter's lectures on Occupational Diseases (June 5 p 1161) said that these had appeared as clinical supplements to the *Guy's Hospital Gazette*. We should have printed *London Hospital Gazette*.

In Dr Gardiner Hill's paper published in last week's *Journal* there is an error in the eighth line of the second paragraph under the heading "Differential Growth" on page 1241. Counts of fourteen to twelve cells are common should read Counts of fourteen to twenty cells are common.

In Dr Ralph Worrall's letter on a new treatment for chronic leucorrhoea which appeared on April 10 at page 781 we gave his prescription incorrectly. The amount of nitrate of silver should have been 16 grains not 1/16. The prescription should read

R Argent nit
Aqua dest
Spirit aetheris nitrosi
Fiat applic

Sg Shake the bottle

gr xv
q.s
ad 3 j

EPITOME OF CURRENT MEDICAL LITERATURE

Medicine

503 Acute Diffuse Glomerulonephritis

ST LITZER and P HEILMANN (*Med Klinik* May 7, 1937, p 630) point out that acute diffuse glomerulonephritis is not an uncommon cause of sudden death. They report nine fatal cases which have been under their care in the past year, the patients' ages varied between 6 months and 35 years. In no case was an accurate diagnosis made before admission. In four cases meningitis was suggested, in one neurosyphilis, in one encephalitis, in one gastro-enteritis, in one gas poisoning, and in one accident. In eight cases the predominant picture was that of sudden coma with clonic spasm occurring during apparent health. In four cases in which the urine was examined no albumin was found in one and only a trace of it in the others. In five cases in which the blood pressure was taken it was normal in one and raised in four. The blood urea varied between 21 and 110 mg per 100 ccm of blood. Neither indican nor xanthoprotein were retained. Blood-letting and lumbar puncture, although done early, did not prevent death. Oedema of the brain was found at post-mortem in four cases, in five it was absent. In two of the latter cases perivascular and capillary haemorrhages were present. In two cases no anatomical changes were found in the brain. In five cases macroscopic examination of the kidneys was negative. Microscopical examination revealed acute diffuse glomerulonephritis in all cases.

504 Vitamin C Diuresis

M A ABBASY (*Biochem J* February 1937, p 339) reports a specific diuretic effect of vitamin C on human beings. The urinary volume and urinary output of ascorbic acid in children on a constant diet and fluid intake, of whom ten were active rheumatics, ten convalescent rheumatics, and ten controls, were measured before and during the administration of 5 mg of ascorbic acid a day for each pound of body weight. In all these cases increased output of ascorbic acid and of urine occurred at once in the controls and after two days in the rheumatic cases. In five other controls, maintained under similar conditions but not given ascorbic acid, there was no change in the urinary volume and urinary output of ascorbic acid. The diuretic effect is therefore ascribed to the ascorbic acid dosage. The delayed response in the rheumatic cases was due to the fact that the children were not in a state of vitamin C saturation as was indicated by their low pre-test ascorbic acid output. The therapeutic implications of these findings are discussed and the author suggests that ascorbic acid may safely be used in those cases in which slow progressive dehydration of the body is desired.

505 Blunt Force Heart Lesions

W MUNCK (*Hospitalstidende* May 11 1937 p 525) draws attention to the possibility of clinically demonstrable heart disease being a late sequel to a blunt force acting on the thorax or some distant part of the body. Hitherto the examinations of the heart after motor-car and other fatal accidents have been mainly macroscopic and the author wondered if systematic microscopical examinations of the heart in such cases might not throw new light on the problem. At the University Medico Legal Institute in Copenhagen he examined microscopically the hearts of thirty two persons twenty-eight of whom had been killed in motor-car accidents in the course of some nine months. In every case death had occurred within sixteen days of the accident, and it had been more or less instantaneous in thirteen cases. This material was classified according to the sex and age of the persons killed and the length

of the interval between the accident and death. In twenty-two cases changes in the heart were evidently due to the accident, although in only ten of these cases was there a fracture of the bones of the thorax. In several cases the changes found were microscopic, and they consisted for the most part of small haemorrhages into the muscles of the heart and under the pericardium or endocardium. The author believes that the mechanism of cardiac haemorrhages from blunt force exerted somewhere on the body is very varied. Direct pressure or traction on the heart may injure its muscles or blood vessels, or the cause may be stasis or nervous impulses acting on the vessels and coming from the central nervous system (vagus action) or from the periphery. Cramp-like contractions of the muscles may also be causal, and when there is a considerable interval between accident and death a toxic process may be at work. The author concludes that even when there has been no direct injury to the thorax blunt force may act indirectly on the heart and be responsible for the subsequent development of clinically demonstrable heart disease.

506 Artificial Pneumothorax

S PUDEK (*Z Tuberk* 1937, 77, 5-6, 321) analyses the answers to a questionnaire which had been sent out to 274 institutions in connexion with their experiences with artificial pneumothorax. From this statistical material the author computes that the number of patients in the whole of Hungary suitable for treatment by this method is about 18 000 while actually it was applied to only 2,183 cases. In the course of the treatment 65 per cent of those who formerly were unable to work were able to resume their occupations. The average duration of treatment was two and a half years, the average number of refills was thirty, the maximum number 160. The therapeutic results differed from one institution to another. The proportion of patients under treatment whose condition proved satisfactory varied from 10 to 70 per cent. The proportion of patients who improved varied from 30 to 70 per cent. From 2 to 20 per cent of patients became worse, from 5 to 30 per cent remained unaffected, and from 1 to 31 per cent died. The author advises that a national organization under State control for the carrying out of artificial pneumothorax treatment should be set up, and makes a number of practical suggestions for the achievement of this plan.

Surgery

507 Mortality of Burns

P LÜTKEN (*Ugeskr Laeg* April 15, 1937, p 409) has undertaken a study of the mortality among the 1,574 patients admitted for burns to the Rudolph Berghs Hospital in Denmark between July 1, 1916 and July 1, 1935. There were 110 deaths in the hospital which is an uncorrected mortality of 7.1 per cent. After eliminating the patients suffering from various diseases before they were burned as well as the patients admitted to hospital some time after the burn, there remained 1,125, of whom ninety-six died, a mortality of 8.5 per cent. A classification according to age showed a mortality of 16.5 per cent in children under the age of 2. Between the ages of 2 and 5 the mortality was 11.4 per cent, between 5 and 15 it was 4 per cent, and between 15 and 65 it was 3 per cent for men and 4 per cent for women. Of the fifteen persons over the age of 65 as many as ten died. By classifying burns into the four categories of scalding burns from clothing flames, and solid or semi-solid bodies the author finds great differences in the mortalities, which were 8.2 per cent and 31.2 per cent.

for the first two categories respectively, and there was not a single death in either of the two remaining categories. In another system of classification the patients were grouped according to the surface extension of their burns, the Berkow scale being adopted for this purpose. The main lesson the author extracts from these calculations is that no true opinion can be formed of the comparative merits of different treatments, unless the patients forming the basis for such a comparison are classified according to the age, the nature of the burn, and the extent of the area involved. The author does not therefore attempt any comparison when he states that of the 1,077 patients treated locally with silver nitrate and an ointment ninety-three died, and of the forty-eight treated with tannic acid three died.

508 Surgical Repair of the Facial Nerve

S. BUNNELL (*Arch Otolaryng* Chicago March, 1937, p. 235) divides the operations into two main groups: (1) the repair of the facial nerve trunk, either in the temporal bone or outside it, and (2) muscle and fascia grafting if the nerve is irreparable or if the facial muscles have undergone degeneration. As a first step the fact that the facial nerve lesion is of the lower neurone type, which involves all the facial muscles from the occipito-frontalis to the platysma must be established. If taste is absent from the anterior two-thirds of that side of the tongue the lesion is localized between the geniculate ganglion and the point at which the chorda tympani arises just above the stylomastoid foramen. In most of the cases suitable for operation the facial nerve paralysis is due to trauma during a mastoid operation or to exposure to cold, as in Bell's palsy. The site is usually in the vertical portion just below the bend where the nerve bows outwards, and may be surrounded by mastoid cells. In Bell's palsy the nerve swells in response to the trauma from cold or from infection. The bony canal is unyielding, the vessels supplying the nerve become compressed, and necrosis over a length of the nerve may result, as in Volkmann's ischaemia. Decompression should be a certain cure, but considering that 80 per cent of the patients recover spontaneously this routine procedure would result in many unnecessary operations. In the author's opinion repair by anastomosis with other nerves is now obsolete, as it does not restore emotional facial expression thereby causing dissociated movements. In intratemporal repair the facial nerve is exposed in the Fallopian canal. If the nerve ends on either side of the lesion are not too far apart direct apposition must be attempted, as this gives better results than the interposition of a nerve graft. By chiselling away part of the tympanic plate and by freeing the nerve from the parotid gland, from 1 to 2 cm. can usually be gained in length. When the facial muscles no longer respond to galvanic stimulation and have undergone fibrous degeneration portions of the temporal and masseter muscles are used (Gillies's technique). The fascial strips from the temporal muscle are distributed about the eye, and those from the masseter muscle are attached about the mouth.

509 Thoracoplasty

G. URQUHART (*Amer. rev. Tuberc.* April, 1937, p. 443) reviews 200 consecutive thoracoplasties performed in the Connecticut State Sanatoria where each patient's case is discussed at a combined surgical and medical conference, after which he is transferred to a surgical ward for observation and a complete overhauled of all vital organs is made. In this series the best results were obtained in patients between the ages of 20 and 40 and operations on the left side were more satisfactory than those on the right. The amount of sputum, the presence of fluid, haemoptysis or an existing pregnancy did not appear to influence the prognosis. Dyspnoea on slight exertion, or following collapse therapy, or after coughing was a contra-indication. 115 of the patients were classified as favour-

able cases before operation, and in 92 per cent. the results were good. Fifty-four were considered doubtfully favourable, and in 81 per cent. the results were good. Thirty-one were definitely unfavourable, and in 55 per cent. the results were good. Avertin, in doses which never exceeded 80 mg. for each kilogramme of weight, was used with complete satisfaction as a basal anaesthetic. It was sometimes supplemented with 1/2 per cent. novocain or a small amount of nitrous oxide. In order to obtain a satisfactory position for operation the patient was strapped to a specially constructed cork mould covered with canvas. The author advises that rib resection should never be performed in less than three stages. After operation the patients were fitted with sponge-rubber jackets, two inches thick, held in place with a well-fitting binder and shoulder straps. Sand bags up to 15 lb. in weight were used for the first three months, after which the patients were allowed to get up although the jacket was worn for another three months in order to prevent re-expansion of the lung. Following the operation eighty-seven patients were able to do their ordinary work, eighteen were only able to do light work, and fourteen little or none. Four patients became worse and twenty-five died within a period of from forty-eight hours to three years afterwards.

510 Solitary Cysts of the Kidney

A. RAVICH and S. M. TURKELTAUB (*Urol. cutan. Rev.* April, 1937, p. 260) report seven cases in patients aged from 41 to 69, of whom four were men and three women. In five instances there were definite associated pathological lesions which may have contributed to the formation of the renal cysts. In three cases nephrolithiasis with moderate infection was present, and in one case an infiltrating papillary carcinoma of the ureter with secondary hydronephrosis was found. The fifth patient had chronic nephritis with hypertension, arteriosclerosis, and diabetes, and another case had a renal calculus on the opposite side. The present series therefore supports Hepler's view that any lesion, local or constitutional capable of causing tubular occlusion and interference with blood supply may be responsible for the formation of these cysts. The lesion in the present cases varied in size from that of a small tangerine orange to that of a large sac containing over 1,500 c.c. of fluid. In all the cases the lower pole of the kidney was involved. In six cases the anterior and in two the posterior surface were the sites of origin. All the cases were histologically benign. Five of the cysts contained straw-coloured fluid and two haemorrhagic fluid. No special symptoms were encountered, and most of the patients sought advice for an associated lesion. Diagnosis was made by x-ray examination, which showed a globular mass causing a disfigured and irregular appearance of the kidney. Treatment consisted in complete enucleation of the cyst. Nephrectomy was never necessary.

Therapeutics

511

The Anaemias

H. SCHULTEN (*Fortschr. Therap.* April, 1937, p. 200) points out that in the anaemias therapy depends largely upon correct diagnosis. He classifies them as follows: (1) secondary anaemia, including hypochromic anaemia, anaemia following infection, chronic bleeding or pregnancy; (2) pernicious anaemia; (3) familial haemolytic icterus; (4) aplastic anaemia; (5) anaemia due to hepatic disease, gastric cancer and leukaemia. Iron is of the greatest value in hypochromic anaemia, but the ferrous salts, ferrum redactum, and combinations of ammonium and ferric citrate alone are worth consideration. They have to be given in large doses and the oral route is the only practical one as intramuscular and intravenous injections of iron are too painful. Rectal administration is theoretically possible but has not been made use of to any extent. Good results have been reported from the

administration of from 30 to 60 drops daily of a 1 per cent copper sulphate solution in aplastic anaemia and in hypochromic anaemia in children. Arsenic has fallen into disrepute, but should be used in cases which are resistant to other forms of therapy. The value of liver in the treatment of pernicious anaemia is indisputable. The criterion of effectiveness in this treatment is the patient's condition, as it is impossible to evaluate the activity of liver preparations by weighing or by titration. A substance which would prevent pernicious anaemia has not yet been chemically identified. The best liver extracts are those which are purest and most concentrated. At the beginning of treatment high dosage is essential, but when normal blood counts are obtained it may be lowered. Intramuscular injection is the method of choice, but oral administration of undercooked fresh liver or of liver extract is also of value. In refractory cases of pernicious anaemia the diagnosis may be at fault, or the dosage may be too small, or the preparation in use may be inactive. Splenectomy is curative in the treatment of familial haemolytic jaundice, and it is sometimes of value in aplastic anaemia. Transfusion of blood or of normal saline is not as much used as it was before the introduction of liver therapy, but is still of value in cases of acute haemorrhages.

512 Local Treatment of Diphtheria

C RAUSCH (*Thèse Paris* 1937, No 263), who reports thirteen cases of diphtheria in persons aged from 2 months to 43 years, states that the neutral sulphate of oxyquinoline presents the qualities of an ideal antiseptic, as it is not caustic, does not produce coagulation, is practically harmless, and has been shown to have an excellent antiseptic action on the diphtheria bacillus. *In vitro* in a dilution of 1 in 25,000 after prolonged action of one hour it can sterilize a broth culture of diphtheria bacilli of forty-eight hours' growth. Clinically the neutral sulphate of oxyquinoline produces sterilization of the nasopharynx in 81 per cent of carriers in six days, while the ordinary methods are successful in only 46 to 60 per cent. The length of time taken to sterilize the nasopharynx can be still further reduced by beginning treatment on the first day of the disease, repeating it four times daily, and continuing it for about ten days.

513 Graves's Disease

O RAAGAARD (*Ugeskr Laeg* April 29, 1937, p 453) draws attention to the lack of unanimity as to the respective merits of radiological and other treatment for Graves's disease. Of late in Denmark the value of radiological treatment has been much underestimated, as the impression that it is more or less an unessential supplement to medicinal treatment is widespread. The author has conducted a follow-up study of sixty-eight definite cases which were given radiological treatment, ambulatory in most cases, between 1922 and 1933 in a Danish hospital. The disease was severe in six cases, moderately severe in twenty-six and mild or slight in thirty-six. An observation period of three to eleven and a half years was counted from the conclusion of treatment. In fifty-seven cases the follow-up study included a medical examination. Recovery could be claimed in 70.6 per cent, and almost complete recovery in 7.4 per cent. The improved represented 10.3 per cent, while 7.4 per cent were unchanged. There was one death from Graves's disease in addition to two deaths from other causes. In 85.3 per cent complete fitness for work was found on re-examination and 5.9 per cent were partially fit. No patient was refused radiological treatment or found to be refractory to it. In 64 per cent the goitre disappeared completely. The average duration of treatment was 11.9 months and the average number of exposures was 7.3. The author's comparison of his experiences with those of radiologists in other countries reveals a certain uniformity in the results achieved. He concludes that radiological treatment produces as good results as does operative therapy.

Radiology

514 Cardiovascular Syphilis

J E KEMP and K D COCHEMS (*Amer Heart J* March, 1937, p 297), in an attempt to evaluate teleradiographic measurements in uncomplicated early syphilitic aortitis, have compared the teleradiographs of the heart and aorta in 1,000 cases of unselected syphilitics with those of 600 unselected non-syphilitic individuals of the same occupational, sex, and age groups. The Vaguez-Bordet measurements of the supracardiac shadow were used in comparing the width of the aortic arch. Only 5.9 per cent of patients with clinically recognizable syphilitic aortitis showed teleradiographic evidence of aortic dilatation, but there was no evidence that the diagnosis of uncomplicated syphilitic aortitis can be made by teleradiography alone.

515 Diaphragmatic Hernia

M F DWYER (*Radiology* March 1937, p 315) finds that the incidence of herniation of a portion of the cardiac and of the stomach through the oesophageal hiatus is on the increase. Herniation of a part or all of the cardiac end of the stomach is a definite clinical entity. However, unless the hernia is comparatively large it may exist for years without causing symptoms and when demonstrated other upper abdominal and mediastinal conditions capable of producing similar symptoms must be excluded before the hernia can be considered as the cause of the patient's complaints. Unless the radiologist has some reason to suspect the presence of a diaphragmatic hernia and examines the patient in a supine position the diagnosis will be missed in the majority of cases.

516 X-ray Therapy in Obliterating Endarteritis

DESPLATS and LANGERON (*J Radiol Électrol* April, 1937, p 152) have treated the adrenals with x rays in 200 cases of obliterating endarteritis and claim good results in 62.5 per cent and improvement in 22.5 per cent. Only 5 per cent failed to respond to the treatment. Diabetic endarteritis seemed to respond to the treatment in almost every case. They used 130 kilovolts filtered through 5 to 7 mm of aluminium, 150 to 250 units to each adrenal region alternatively every second day until improvement set in. They find that it may be necessary to continue the treatment for one, two, or even three months with short breaks between each series of six treatments. In a few cases of intermittent claudication treated in this way the cure has been maintained for seven to eight years.

517 Arteriography

R DEMEL and M SGALITZER (*Wien klin Wschr* May 7, 1937, p 595) stress the therapeutic value of arteriography in cases of endarteritis obliterans, Raynaud's disease, arteriosclerosis thrombosis, etc. apart from the important diagnostic value of the method. In a number of cases they were able to observe a remarkable improvement in the condition of the limb following an intra-arterial injection of 20 ccm of a 20 per cent solution of perabrodil. They explain the favourable therapeutic result by a persistent dilatation of the arterioles following the injection. The injection can be repeated after some time if necessary.

518 Cholecystography

F J HODGES and T LAMPE (*Amer J Roentgen* February 1937, p 145) review the results of over 2,700 cholecystographic examinations by the oral method. They conclude that the radiographic recognition of gall stones is reliable in 97 per cent of those cases in which the

gall bladder has preserved sufficient concentrating power to permit visualization in any degree. Cholelithiasis is always attended by some deviation from the normal cholecystographic findings, and impaired concentrating power of the gall bladder was found in 87.6 per cent of patients suffering from gall stones. Normal response to the cholecystographic test was found to exclude a major inflammatory disease of the gall bladder in 84 per cent of cases, while complete non visualization was associated with major inflammatory involvement in 80 per cent of cases.

Obstetrics and Gynaecology

519 Follicular Hormones and the Pregnant Uterus

H. DRUCKREY and H. BACHMANN (*Zbl Gynäk.*, May 8 1937 p 1091) have investigated the action of follicular hormones on the pregnant uterus in cats and rabbits. The observations were made on uteri exposed by a laparotomy. An application of 1/2 to 2 Voegtlin oxytocic units caused a short contraction of the uterus, but a subsequent intravenous injection of follicular hormone gave rise to powerful and persistent uterine contractions. In several animals this was followed by premature labour and delivery. The authors discuss the possible theories of the action of the hormone, and propose to try the follicular hormone on pregnant women at term.

520 Folliculin Inunction in Pruritus Vulvae

E. KLAFTEN (*Zbl Gynäk.*, April 24, 1937, p 972) describes the successful treatment of pruritus vulvae by rubbing into the shaved vulvar and perivulvar skin large doses of follicular hormone. So-called essential cases, in which there are local causes or constitutional causes such as metabolic or renal disease were not treated. Six of ten trial cases responded satisfactorily to inunction alone, but in the others it had to be combined with injection therapy. Of thirty eight cases the results of this combined folliculin treatment were satisfactory in over two thirds. When patients were beyond the menopause or if their menstrual history showed signs of ovarian hypofunction, results were even better. The treatment often made pruritus worse in those with normal or three week cycles. Deep x ray or radium treatment in comparison gave nearly three fourths of failures. Concomitant results of the treatment were swelling of the breasts, increased vaginal discharge, and very frequently in women beyond the menopause transitory vaginal bleedings. Too large dosage sometimes caused headache, nausea and palpitation, and nurses who did the anointing with ungloved hands had similar symptoms. Occasionally hypersensitive subjects reacted to combined inunction injection treatment by acute oedema followed by irritation and dermatitis in face, hands, vulva and thighs. In general Klasten now restricts the treatment to cases in which ovarian insufficiency is probably present and divides it into three phases. In the first 4 000 to 8 000 units daily are rubbed in locally for six days. During the next five weeks parenteral injections are given diminishing from 30 000 units every other day to 10 000 units twice weekly combined with inunctions of 4 000 units at first daily and towards the end once or twice weekly. The third phase consists in a series of two to six weeks weekly inunctions. The ointment now used contains 50 000 units which correspond to 5 mg of crystallized follicular hormone in 50 grammes. It is combined with a local anaesthetic for the first applications are apt to be followed by local hyperaemia and increased irritation. Similar treatment was found very successful in cases of Quincke's oedema, acne, or symmetrical dermatitis associated with signs of ovarian hypofunction; it also succeeded in kraurosis vulvae when combined with inunction of vitamin A.

1352 p

Pathology

521 Lymphogranuloma Inguinale

K. YAMAMOTO (*Jap J Derm Urol*, March 20, 1937, p 91) reports the results of his investigations on Frei's reaction in lymphogranuloma inguinale. It was negative in 99 per cent of patients who were not suffering from the disease. On the other hand, it was positive in 50 per cent of patients suffering from lymphogranuloma inguinale within the first few weeks of the disease, and it became positive in a large majority of cases as soon as the skin adhered to the affected glands. The reaction remained positive in some instances for as long as ten and twenty years after the cure of the disease. The author considers the Frei reaction a reliable specific test for lymphogranuloma inguinale.

522 Haemolytic Streptococci in Normal Throats

T. KODAMA (*Kitasato Arch exper Med*, January, 1937, p 29) has classified the haemolytic streptococci obtained by culture from throat and tonsillar swabs taken weekly in the winter from fifty normal people, aged from 5 to 30. In forty four of these haemolytic streptococci were demonstrated at some time or another during the five weeks they were under observation. In all ninety-two strains were isolated, thirty eight falling serologically into group A, twenty into G, eighteen into C, eleven into F, two into B, and three strains were not identified with group sera. Thus thirty-eight individuals had in their throats group A strains mixed with strains of group C, G or F. In thirty cases of simple or follicular tonsillitis twenty-seven had group A strains only in their throat; in the other three cases this was accompanied by group C or G strains. All the strains of groups A, C, and G were definitely fibrinolytic for human fibrin and fifty three of the sixty eight group A strains were specifically toxigenic for human beings while those of B, C, F and G were not. All the group A strains produced redox reversible soluble haemolysin. The author concludes that this group of haemolytic streptococci, 76 per cent of all the strains isolated, is more common in the normal human throat than is usually supposed.

523 Prontosil in Streptococcal Infection

BÜRGERS (*Deutsche med Wochschr*, April 23, 1937, p 672) reports observations on prontosil from the Hygiene Institute in Königsberg. In certain respects he confirms the findings of Leonard Colebrook and his associates in connexion with this drug. Professor Bürgers has tested it on 112 rabbits, 85 guinea-pigs and some 500 mice. In the test tube the drug appears to have no bactericidal action on streptococci or pneumococci, nor does it promote phagocytosis either in the test tube or under any other conditions. There is also no question of *sterilisatio magna*. Having made these and other reservations Professor Bürgers proceeds to claim that at the present time prontosil is the most effective remedy available for streptococcal infections of every description. The drug must be given as early as possible and in large doses. The first intramuscular injection is best followed by oral administration and should the acidity of the gastric juice be low dilute hydrochloric acid should be prescribed. Nervous patients who are likely to be frightened by the discoloration of the urine should be given prontosil album. Coliform infections of the urinary tract react satisfactorily to this drug particularly in children and infants. It is not yet clear whether the action of prontosil can be increased by specific serotherapy and there is still some uncertainty as to the reasons for occasional disappointments in connexion with the reaction of certain strains of streptococci. Professor Bürgers would be grateful for the receipt of such apparently prontosil resistant strains in order to pursue further research. He adds that prontosil seems to be effective as a prophylactic as well as a curative remedy.

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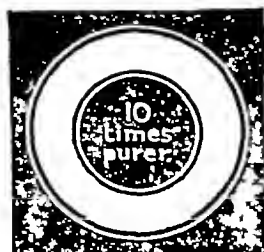
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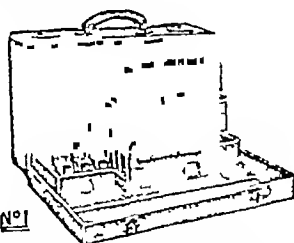
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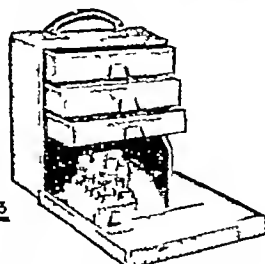
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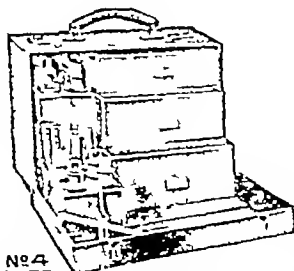
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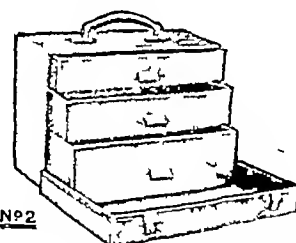
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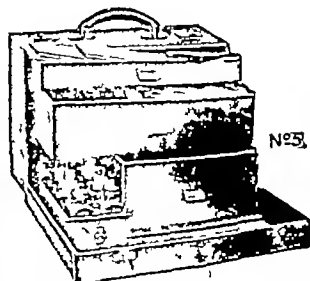
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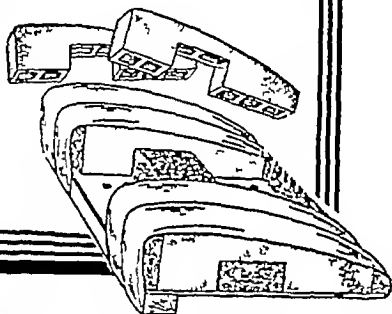
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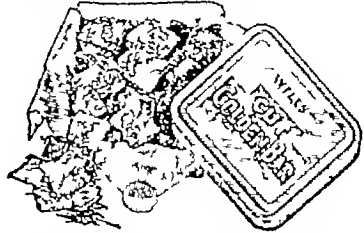
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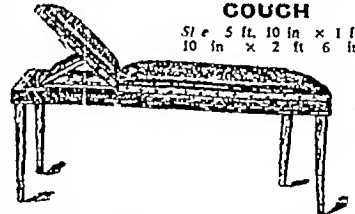
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This is a Reception Hospital in detached grounds with a separate entrance to which patients can be admitted. It is equipped with all the apparatus for the most modern treatment of Mental and Nervous Disorders. It contains special departments for hydrotherapy by various methods including Turkish and Russian baths, the prolonged immersion bath, Vichy Douche, Scotch Douche, Electrical bath, Plombieres treatment, etc. There is an Operating Theatre, a Dental Surgery, an X-ray room, an Ultra Violet Apparatus, and a Department for Diathermy and High Frequency treatment. It also contains Laboratories for biochemical, bacteriological and pathological research.

MOULTON PARK.

Two miles from the Main Hospital there are several branch establishments and villas situated in a park and farm of 650 acres. Milk, meat, fruit and vegetables are supplied to the Hospital from the farm, gardens and orchards of Moulton Park. Occupation Therapy is a feature of this branch and patients are given every facility for occupying themselves in farming, gardening and fruit growing.

BRYN-Y-NEUADD HALL

The seaside house of St. Andrew's Hospital is beautifully situated in a Park of 330 acres. Llanfairfechan amidst the finest scenery in North Wales. On the North West side of the Estate a mile of sea coast forms the boundary. Patients may visit this Branch for a short seaside change or for longer periods. The Hospital has its own private bathing house on the seashore. There is trout-fishing in the park.

At all the branches of the Hospital there are cricket grounds, football and hockey grounds, lawn tennis courts (grass and hard courts), croquet grounds, golf courses and bowling greens. Ladies and Gentlemen have their own gardens and facilities are provided for handicrafts such as carpentry, etc. For terms and further particulars apply to the Medical Superintendent (Telephone No. 2356 and 2357 Northampton) who can be seen in London by appointment.

THE COPPICE, NOTTINGHAM.

HOSPITAL FOR MENTAL DISEASES

This Institution is exclusively for the reception of a limited number of Private Patients of both sexes of the Upper and Middle Classes at moderate rates of payment. It is beautifully situated in its own grounds on an eminence a short distance from Nottingham and from its singularly healthy position and comfortable arrangements affords every facility for the relief and cure of those mentally afflicted. Occupational Therapy. Voluntary and Temporary Patients received.

Tel. 64117. For terms etc. apply to the Medical Superintendent.

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Phone Ashton-in-Makerfield 7311

For the reception and treatment of PRIVATE PATIENTS of both sexes of the UPPER AND MIDDLE CLASSES suffering from mental and nervous diseases either voluntarily temporarily or under Certificate. Patients are classified in separate buildings according to their mental condition.

Situated in park and grounds of 400 acres. Self-supported by its own farm and gardens in which patients are encouraged to occupy themselves. Every facility for indoor and outdoor recreation. For terms prospectus etc. apply MEDICAL SUPERINTENDENT.

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CLIFFDEN TEIGNMOUTH for early and convalescent cases. A well appointed house with spacious balconies and extensive views of the South Devon coast. Sub-tropical gardens own dairy in 25 acres. Private road to beach.

Resident Physicians **BERTHA M. MILES M.D. B.S.**
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Telephones
Starcross 59
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A PRIVATE HOSPITAL for the treatment of mental and nervous illnesses. Conveniently situated and easy of access from all parts. Six acres of ground highly situated facing Finsbury Park. Voluntary and Temporary Patients received without certification. Occupational Therapy, Psychotherapy and other modern forms of treatment. Telephone STAMFORD HILL 2688. Telegrams "SUBSIDIARY LONDON". Convalescent Home KEARSNEY COURT DOVER. For further particulars apply to the Medical Sup.

BARNWOOD HOUSE GLOUCESTER

A REGISTERED HOSPITAL for the CARE and TREATMENT OF LADIES and GENTLEMEN suffering from NERVOUS and MENTAL DISORDERS. Within two miles of the G.W. Railway and L.M. & S. Railway Stations at Gloucester the Hospital is easily accessible by rail from London and all parts of the United Kingdom. It is beautifully situated on the foot of the Corswall Hill and stands in its own grounds of over 300 acres. Voluntary Patients of both sexes are also received for treatment.

Special accommodation for Lady Voluntary Patients is also provided at the MANOR HOUSE, which has its own private grounds and is entirely separate from the Main Hospital.

For particulars as to terms, etc. apply to—
ARTHUR TOWNSEND M.D. Medical Super.
Telephone No. 6207 Barnwood.

HILL END HOSPITAL

FOR MENTAL AND NERVOUS DISORDERS

(20 miles from London)

Ladies suffering from all forms of MENTAL ILLNESS are received for treatment on modern lines, as Voluntary Temporary or Certified Private Patients or the Hill End Hospital. Convalescent or mild cases can be treated in a delightful country mansion with extensive grounds known as

HIGHFIELD HALL,

situate about a mile away from the Hospital. FEES TWO TO THREE GUINEAS PER WEEK.

For further particulars apply to the Medical Sup. **W. J. T. KIMBER L.R.C.P. D.P.M.**

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C. EDGAR GRISEWOOD Secretary
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A PRIVATE HOME for the treatment of Gentlemen suffering from Mental and Nervous Illness including the allied disorders of Alcoholism and the Drug Habit. All types of early Mental and Nervous cases are received without certificates as Voluntary Patients under the provisions of the Mental Treatment Act, 1930. Braing Hill country. See Medical Directory p. 2378. Apply to the Medical Superintendent. Phone 10 P.O. Church Stretton.

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Streatham Hill, S.W.2

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The house is gloriously situated in wooded grounds of 20 acres with magnificent views of the City and the Avon Valley (See Medical Directory page 2322).

For terms apply A. GURDHAM M.A. D.M., B.Ch. D.P.M., Resident Physician. Telephone Bathaston 8189.

HEIGHAM HALL, NORWICH

A PRIVATE MENTAL HOME, situated in 11 acres of well-wooded grounds. For Ladies and Gentlemen suffering from Nervous or Mental Illness. Voluntary Patients. Temporary Patients and Patients under Certificate are admitted for treatment. Fees from 4 guineas a week upwards according to requirements. A few vacancies exist for Ladies and Gentlemen at reduced fees on the recommendation of the Patient's own Physician. Apply to Dr. J. A. SMALL, Telephone 80 Norwich. Telegrams Small 80 Norwich.

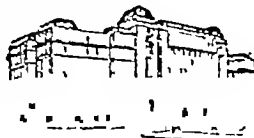
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**A NURSING HOME FOR SURGICAL, MEDICAL
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Fees 10 gns to 18 gns per week (Average—14 gns.)
8 Operating Theatres
Patients only received under the supervision of their own Medical Practitioner
Drugs and Dressings free (other than Proprietary Articles)
Illustrated Brochure on application to Secretary



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This Clinic was founded in 1921 in order to provide for the scientific investigation and treatment of disease by a team of physicians and specialists
All forms of non infectious medical cases are admitted special attention being paid to disorders of digestion and metabolism, arthritis, anaemias asthma heart and kidney disease and functional and organic nervous disorders
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Telephone 181 and 182 Winkfield Row

CAMBERWELL HOUSE, 33, Peckham Road, London, S.E.5

Telegrams
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Also completely detached villas for mild cases with private suites if desired. Voluntary patients received. Twenty acres of grounds. Hard and Grass Tennis Courts. Putting Greens. Bowls. Croquet. Squash. Rackets. Recreation Hall with Badminton Court and all indoor amusements including Wireless and other Concerts. Occupational Therapy. Calisthenics and Dancing Classes. A ray and Actino therapy. Prolonged Immersion Baths. Operating Theatre. Pathological Laboratory. Dental Surgery and Ophthalmic Dept. Chapel. Senior Physician Dr. HUBERT JAMES NORMAN assisted by three Medical Officers also resident and visiting Consultants. An illustrated prospectus giving fees which are strictly moderate may be obtained upon application to the Secretary.
The Convalescent Branch is HOVE VILLA, BRIGHTON and is 200 feet above sea level

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FUNCTIONAL NERVOUS DISORDERS**

Including Alcoholism and other Addictions
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This beautiful mansion situated in the heart of the country (less than two hours from London by LMSR) and surrounded by charming pleasure grounds in which games and outdoor occupational therapy are available is devoted to the treatment of Functional Nervous Disorders by psychotherapeutic and ancillary methods

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PECKHAM HOUSE, 112, Peckham Road, London, S.E. 15

Telegrams "Alleviated London"

Telephone Rodney 2641 2642

The above House which was established in 1826 is an Institution for the care and treatment of persons suffering from mental diseases and nervous disorders. Certified voluntary and temporary patients are received. Separate houses for treatment and accommodation of special cases adjoin the Institution. There is a seaside branch, Kearsney Court near Dover to which patients may be sent for treatment or on holiday. Motor and carriage exercise is provided as required. Patients can avail themselves of a course of physical drill. Tennis courts. Entertainments, dances and indoor amusements held throughout the year. Terms from £3 7s per week. Illustrated prospectus and further particulars can be obtained from the Medical Superintendent.

CHEADLE ROYAL HOSPITAL

CHEADLE CHESHIRE

This REGISTERED HOSPITAL with a SEASIDE BRANCH at Colwyn Bay, N. Wales is for the treatment and care of those of the Upper and Middle Classes suffering from MENTAL and NERVOUS DISEASES.
The Hospital is governed by a Committee appointed by the TRUSTEES of the Manchester Royal Infirmary.
In addition to the Main Building there are separate villas. Extensive grounds. Hard and grass tennis courts, cricket and croquet grounds and a court for badminton. There are also wireless installations. Golf may be had within easy distance. Occupational therapy.
VOLUNTARY, TEMPORARY AND CERTIFIED PATIENTS received.
The Hospital is nine miles from Manchester, 50 minutes by rail from Liverpool and 31 hours from London.
For terms and further particulars apply to the Medical Superintendent who may be seen in MANCHESTER by APPOINTMENT.
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PAYING PATIENTS RECEIVED
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LONDON, CORA HOTH

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Managing Director DAVID LAWSON, M.D., F.R.S.E.

Southern aspect Low rainfall Pure bracing air Sheltered grounds Beautiful surroundings All modern equipment for diagnosis and treatment including operating theatre No extra charge for X Rays; Artificial Pneumothorax, Ultra Violet Light, or other special treatment

Day and Night Nursing Staff All bedrooms have central heating, electric light hot and cold running water and wireless (headphones) Comfortable and airy public rooms

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Medical Superintendent DENNISON PICKERING M.D. Assistant Physician J N P MOORE M.D.

For particulars apply to the Secretary Pendyffryn Hall Penmaenmawr North Wales

(Phone 20)

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Full day and night Nursing Staff Terms 5 gns. to 7½ gns. a week inclusive.
Jest Supr. GEOFFREY A. HOFFMAN B.A. M.B. T.C. Dub. Assist. Phys. MARGARET A. HARRISON M.B. B.S. Lond. Pathologist EDUAR N.
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F.R.C.S. Lond. Appt. Secretary The Cotswold Sanatorium Cranham Gloucester Tel. 81 and 82 Witcombe. Grams "HOFFMAN BIRDUP"

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*A residential Clinic is maintained
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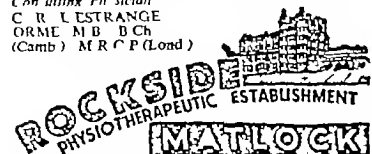
● For further information apply to French Railway.—National Tourist Office, 179 Piccadilly, W.1, the S.P. Continental Enquiry Office, Victoria Station, S.W.1, or the Federation of the Health Resorts of France, Tavistock House, Tavistock Square, London, W.C.1.

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In Rockside are combined all the amenities of a modern spa including treatment rest and entertainment.

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MEDICAL AND CONVALESCENT CASES

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Only bright and intelligent boys and girls are eligible for admission.

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Medical Students and Qualified Practitioners admitted to the Practice of this Hospital. Unusual opportunities are afforded of seeing Obstetrical Complications and Operative Midwifery (about one half of the total admission being primiparous cases). Over 2,700 patients are admitted to the Wards annually and in the Ante-natal Department there are over 20,000 attendances per annum. Clinical demonstrations are given by the Staff daily.

For rules fees etc. apply H. B. STOKES, Secretary Superintendent

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The Diploma of the Mastery indicates competence to undertake the responsible control of Maternity and Child Welfare work.

The tests imposed are stringent, the examination written oral and clinical demands thorough and detailed knowledge gained by practical experience and constitutes a definite endeavour to COMBAT MATERNAL AND INFANT MORTALITY.

Examinations are held twice yearly in the months of May and November.

Regulations and forms of application for admission to the examination may be obtained from—

THE REGISTRAR,
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THE MOYNIHAN FELLOWSHIP

THE ASSOCIATION OF SURGEONS OF GREAT BRITAIN AND IRELAND invite applications for the MOYNIHAN FELLOWSHIP to the value of £350 to be held for one year and to be awarded in November, 1937.

The object of the Fellowship is to enable the holder to pursue a definite line of research or to study surgery in specified clinics either at home or abroad.

Candidates in their applications are required to state the lines of research or study that they intend to pursue and also to give short accounts of their past careers. No testimonials should be sent but each candidate is required to provide letters of recommendation to be forwarded under separate cover from two sponsors.

Applications must be received by the Secretary of the Association on or before September 30, 1937 as must letters from the sponsors of candidates.

PHILIP H. MITCHNER
50 Wimpole Street, London W.1 Hon Secretary

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BEANEY SCHOLARSHIP IN MATERIA MEDICA.

The Beanev Scholarship in Materia Medica (including under that term Pharmacy Pharmacology and Therapeutics) is now vacant. The Scholarship which is open to candidates who have received part, or at least of their medical education at Guy's Hospital is of the annual value of £60 and is tenable for three years.

Further particulars may be obtained from the Dean to whom applications must be addressed at Guy's Hospital Medical School, London Bridge S.E.1 not later than Saturday July 17th.

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in association with

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DIPLOMA IN PSYCHOLOGICAL MEDICINE

(Of the Universities of London, Leeds, Manchester, Durham, and the Conjoint Board)

WILL BE GIVEN at the Medical School of St. Bartholomew's Hospital, Charterhouse Square, London E.C.1, with specially and suitably arranged visits for clinical instruction at Bethlem Royal Hospital commencing 21st SEPTEMBER 1937

For Syllabus and further particulars apply to the—

PHYSICIAN SUPERINTENDENT, BETHLEM ROYAL HOSPITAL OFFICES, 14, NEW BRIDGE STREET, E.C.4

GLASGOW POST-GRADUATE MEDICAL ASSOCIATION

The following arrangements have been made for POST-GRADUATE TEACHING in Glasgow during the Summer of 1937

A A General Medical and Surgical Course from August 16th to September 10th
Fee £10 10s or £6 6s for first or second fortnight

B Clinical Assistantships in General and Special Hospitals

Syllabuses and any other information may be had on application to the Secretary, Post Graduate Medical Association, The University, Glasgow

UNIVERSITY OF LONDON

ROYAL NAVAL MEDICAL SERVICE.

Vacancies exist for Medical Officers in the Royal Navy, and applications are invited for entry in October, 1937

Candidates below the age of 28 years are preferred, and they must be registered under the Medical Acts. No examination in professional subjects will be held, but candidates will be required to attend for interview by a Selection Board

Selected candidates will be entered for Service for a period of three years in the first instance, which may be extended to five years at the discretion of the Admiralty

At the end of three years' service officers may retire with a gratuity of £400, but those who serve for five years will receive £1,000

At the end of five years' Short Service permanent commissions will be given to selected officers who wish to make the Naval Medical Service their permanent career. Officers transferred to the permanent list will receive a gratuity of £1,000 (less Income Tax)

Opportunities are available for officers on the permanent list to specialise, and ample provision is made for Post Graduate study

Copies of the regulations for entry and conditions of service, including rates of pay and allowances, may be obtained from the Medical Director General of the Navy, Admiralty, S W 1, and from the Deans of all Medical Schools

Applications for entry from intending candidates must be received not later than August 31st, 1937

WEST SUFFOLK COUNTY COUNCIL APPOINTMENT OF COUNTY MEDICAL OFFICER OF HEALTH AND SCHOOL MEDICAL OFFICER

Applications are invited from duly registered Medical Practitioners (Male) holding a degree or Diploma in Public Health for the above whole time appointment. Salary £1,000 per annum plus travelling allowance.

The appointment will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1922 and to the other statutory enactments relating to the office and the successful candidate will be required to pass a medical examination.

Particulars of appointment and forms of application may be obtained from the undersigned by whom applications, accompanied by copies of not more than three recent testimonials, must be received not later than July 5th 1937.

Canvassing in any form direct or indirect will disqualify.

L G H MUNSEY

Clerk of the County Council
Shire Hall Bury St Edmunds.
June 12, 1937

BARRY URBAN DISTRICT COUNCIL ACCIDENT AND SURGICAL HOSPITAL.

Applications are invited for the post of RESIDENT SURGICAL OFFICER to commence duties on September 1st 1937.

Salary at the rate of £350 per annum rising by two increments of £50 per annum to £450 together with board and lodging the appointment to be terminated by three months notice on either side.

Candidates who must be capable of performing major surgical operations will be required to assist in carrying out the X-ray work of the Hospital and to act under the direction of the Medical Superintendent and Surgeon. There is a Resident House Surgeon on the staff.

Preference will be given to applicants holding higher surgical qualifications.

Applications stating age and full particulars with regard to experience with copies of three recent testimonials to be forwarded to Dr. E. I. Davies, Medical Officer of Health Public Health Office, Barry Glam. so as to reach him not later than July 15th 1937.

T D HOWELLS

Clerk to the Council.
Council Office, Barry
June 15th 1937

COUNTY COUNCIL OF MIDDLESEX VISITING DENTAL SURGEON

Applications are invited from fully qualified and registered dental surgeons for the appointment of Visiting Dental Surgeon at West Middlesex County Hospital Isleworth.

The dentist appointed will be required to attend several sessions per week each approximately 2½ hours. Remuneration will be at the rate of £2 2s. per session. The appointment which does not carry any superannuation rights will be held during the pleasure of the Council and terminable by one month's notice on either side.

Applications stating age, qualifications, and experience, together with copies of not more than three recent testimonials must be received by the undersigned not later than July 10th. Relationship to any member or officer of the Council must be disclosed in the application.

Application forms are not provided. Envelopes must be endorsed Dental Surgeon West Middlesex County Hospital.

Canvassing, directly or indirectly will be a disqualification.

C W RADCLIFFE, Z

Clerk of the County Council
Middlesex Guildhall Westminster S W 1
June 11th 1937

CITY OF LEEDS KILLINOBECK SANATORIUM

ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from registered medical practitioners (male) for the post of ASSISTANT RESIDENT MEDICAL OFFICER at the Tuberculosis Sanatorium Killinbeck (242 Beds).

Applicants must be unmarried and preference will be given to those who have held a General Hospital appointment. The appointment is for one year and the present Salaries Scale of the Corporation provides for a salary of £250 together with board residence and laundry.

Form of application may be obtained from the undersigned. Applications, endorsed Assistant Medical Officer Killinbeck, together with copies of three recent testimonials must be received at the Health Department, 12, Market Buildings, Vicar Lane Leeds, 1 not later than 10 a.m. on Saturday July 3rd, 1937.

Canvassing in any form either directly or indirectly will be a disqualification.

J JOHNSTONE JERVIS
Medical Officer of Health.

HULL CORPORATION HEALTH DEPARTMENT

BEVERLEY ROAD INSTITUTION (HOSPITAL)

ASSISTANT MEDICAL OFFICERS

The Corporation of Hull invite applications from registered Medical Practitioners of either sex under the age of 40 years, for appointment as Assistant Medical Officers at the above named Hospital for a period of one year.

Salary is at the rate of £350 per annum together with board residence and laundry.

The Hospital Section contains 400 beds and is equipped with X Ray and Ultra Violet Light Departments.

In the case of one appointment preference will be given to candidates with experience in medicine and in the treatment of mental diseases in another experience in surgery will be considered an additional qualification.

A form of application together with conditions of appointment and a list of duties, may be obtained from the undersigned to whom completed applications should be returned not later than 10 a.m. on Monday July 5th.

NICOLAS OEBBIE, M D
Medical Officer of Health

Health Department
Guildhall Hull
June 14th 1937

SOMERSET COUNTY COUNCIL ASSISTANT MEDICAL OFFICER

The Committee invite applications from qualified medical men for the post of ASSISTANT MEDICAL OFFICER. In addition to school medical work the duties will include some maternity and child welfare and venereal treatment work. Experience in the modern methods of diagnosis and treatment of venereal diseases is necessary. Experience in child guidance work a recommendation. Salary £500 rising by annual increments of £25 to £700. The appointment will be made subject to the provisions of the Local Government and Other Officers' Superannuation Act 1922.

Canvassing will disqualify. Applications by July 2nd 1937 to the undersigned from whom all particulars and an application form can be obtained.

W G SAVAGE
County Medical Officer of Health
County Health Department,
County Hall Taunton

INDIAN MEDICAL SERVICE

RECRUITMENT OF EUROPEAN OFFICERS

Applications are invited from Medical Men for Permanent Commissions in His Majesty's Indian Medical Service. The terms offered include a gratuity of £1 000 on retirement after six years' service, or of £2 500 after 12 years' service, together with free return passages, for those who no longer desire to remain in the Service. In other respects the terms will be as detailed below.

British subjects of pure European descent who are under 32 years of age and who are registered under the Medical Acts in force in Great Britain and Northern Ireland are eligible to apply.

CAREERS

The Indian Medical Service offers a permanent career with wide opportunities of medical experience including clinical preventive specialist and research work. At the beginning of his career an officer is employed on the military side which has medical charge of the Indian Army. Promotion is on a time scale up to the rank of Lieutenant Colonel and by selection to the ranks of Colonel and Major General. An officer may apply after one year's Indian Service to have his name registered for transfer to the civil side, from which appointments are made to Civil Surgeoncies which are established at the principal civil centres to provide for the medical needs of Civil Officers and for general medical administrative purposes to specialist (for example public health and bacteriological) services to research posts and to professorships at the Medical Schools.

RATES OF PAY

Years of Service	Rank	Basic Pay Rs. per mensem	Overseas Pay £ per month	Total £ per annum.
1	Lieutenant.	450	15	585
2	Captain.	500	25	750
3	"	550	25	795
4	"	550	25	795
5	"	600	25	840
6	"	600	30	900
7	"	700	30	990
8	"	700	30	990
9	"	700	35	1050
10	"	700	35	1050
11	Major	800	35	1140
12	"	800	40	1200
13	"	800	40	1200
14	"	800	40	1200
15	"	800	40	1200
16	"	950	40	1335
17	"	950	40	1335
18	"	950	40	1335
19	"	1100	40	1470
20	"	1100	40	1470
21	Lieut. Col.	1350	40	1695
22	"	1350	40	1695
23	"	1350	40	1695
24	"	1500	40	1830
25	"	1500	40	1830

Note—(1) The rupee is at present stabilised at a rate equivalent to 1s. 6d.
(2) An officer promoted to the rank of Lieut.-Colonel before completing 20 years' service will receive pay at the rate of Rs. 1200 per mensem (basic) plus 140 per month overseas pay.

Extras—In addition to the above number of pay may be held by officers who are also attached to the numerous administrative appointments open to officers in both branches of the Service.

ANTEDATES IN COMMISSION

Candidates possessing certain higher medical qualifications or holding the Diploma in Public Health may be granted an antedate in their commissions. Past service in certain hospital appointments may also render candidates eligible for an antedate. Persons holding or about to hold resident posts at recognised hospitals

may be seconded in those posts for a period. The maximum period of antedate, secondment or antedate and secondment combined admissible under this paragraph is limited to 18 months.

OUTFIT ALLOWANCE

Officers on appointment will receive an allowance of £75 towards the cost of outfit.

PRIVATE PRACTICE

With the exception of Administrative Officers military or civil and officers holding certain special appointments officers are not debarred from taking private practice so long as it does not interfere with their proper duties.

LEAVE

Leave can be taken at reasonable intervals, and adequate rates of leave pay are provided. Extra leave (known as study leave) which may not exceed 12 months in all during an officers' service may be granted to officers desirous of pursuing special courses of study of a post graduate nature. During such leave, study allowance, at present fixed at the rate of 12s. a day in the United Kingdom, £1 a day on the Continent of Europe, and £1 10s. a day in the United States of America and Canada is granted to an officer in addition to ordinary rates of leave pay.

PENSIONS

The rates of pensions are as follows —	Per annum
After 17 years' service for pension	£372 0s.
" 18 " " "	£400 0s.
" 19 " " "	£428 0s.
" 20 " " "	£465 0s.
" 21 " " "	£502 0s.
" 22 " " "	£539 10s.
" 23 " " "	£576 10s.
" 24 " " "	£614 0s.
" 25 " " "	£651 0s.
" 26 " " "	£697 10s.
" 27 " " "	£744 0s.

There are additional pensions ranging from £65 to £350 per annum for officers who have held administrative appointments.

PASSAGES

An officer on appointment is provided with free passage to India. The families of officers who are married prior to the date of the officers' embarkation on first appointment will also be provided with free passage to India subject to the payment of messing charges. Officers and their families are also eligible for passage concessions under which they are granted a certain number of return passages home at Government expense during their service.

INSTRUCTION PRIOR TO EMBARKATION

Officers are required to undergo courses of instruction at the Royal Army Medical College and at Aldershot lasting approximately three months prior to their embarkation for India on first appointment. Information as to the rates of pay admissible during this period and subsequently up to arrival in India is contained in the memorandum referred to below.

A memorandum giving full details regarding these appointments and forms of application may be obtained from the UNDER SECRETARY OF STATE FOR INDIA, MILITARY DEPARTMENT, INDIA OFFICE, LONDON, S.W.1. The Selection Committee will meet at the India Office in July next and the selected candidates will be required to join a course of instruction commencing on September 1st prior to sailing for India about December 1937. Applications should be submitted as soon as possible.

COUNTY COUNCIL OF MIDDLESEX

SURGEON—GRADE I

WEST MIDDLESEX COUNTY HOSPITAL

ISLEWORTH

Applications are invited from registered Medical Practitioners for the above appointment on the pensionable staff. The appointment is a senior one in the Council's general hospital service and applicants are expected to be medical men or women of high qualification and professional attainments who are devoting their time wholly or chiefly to the practice of general surgery. The officer appointed will work under the direction of the Medical Superintendent of the Hospital and will give his whole time to the duties of the post. He must be prepared to undertake the teaching of students if required and to carry out such other duties as the County Council may from time to time direct.

The Hospital has some 1,350 beds about 600 of which are devoted to the treatment of acute conditions. There is a separate maternity wing, a pathological laboratory and animal house and departments of orthopaedics, radiology, electrotherapy and ophthalmology.

Salary £1,000 per annum rising by annual increments of £50 to £1,500 per annum. The salary is inclusive and any fees received by the officer appointed must be paid over to the County Council. The appointment is non-resident but the successful candidate will be required to reside within a short distance of the Hospital. The appointment which will be subject to medical examination, will be held during the pleasure of the Council and is terminable by three months' notice on either side.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than July 10th. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed "Surgeon West Middlesex County Hospital." Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z,

Clerk of the County Council
Middlesex Guildhall Westminster SW 1
June 14th, 1937

SOUTH WEST CHESHIRE JOINT COMMITTEE

Appointment of a MEDICAL OFFICER OF HEALTH

APPLICATIONS are invited from duly qualified and registered Medical Practitioners (not more than 45 years of age) for the post of Medical Officer of Health for the Rural Districts of Chester and Tarvin.

The population is 28,906.

The appointment in the first instance, will be made for one year as it is expected that the Committee's District will be extended.

The gentleman appointed will be required to perform all the duties imposed on a Medical Officer of Health under relevant Acts and Orders and to devote the whole of his time to the duties of the office.

The salary will be at the rate of £800 per annum. The appointment will be subject to the approval of the Minister of Health.

Canvassing is prohibited. Applications in letter form (no forms supplied) accompanied by not more than three recent testimonials and by a bond in the undersigned on or before July 31st.

H GRANT BAILEY

Westminster Buildings
Newgate Street Chester
June 18th 1937

COUNTY BOROUGH OF HUDDERSFIELD

ST LUKE'S HOSPITAL

RESIDENT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for above appointment, which is for one year. Salary £1,300 per annum with board, rent and laundry.

Applications, stating age, training, qualifications and experience should be forwarded to the Medical Officer of Health Huddersfield as soon as possible. **SAMUEL PROCTER** Town Clerk.

June, 1937

YORK CITY COUNCIL

PUBLIC ASSISTANCE COMMITTEE.

Applications are invited for the appointment of TWO DISTRICT MEDICAL OFFICERS one for the Central Medical Relief District and one for the West Medical Relief District of the city at an inclusive salary of £170 per annum each. The successful applicants must reside within the District as provided by the Public Assistance Order of 1910. Further particulars as to the extent of the district etc. may be obtained at my office and applications must be received by me not later than July 3rd 1937.

JAS W DAVIES

Public Assistance Officer

1 Museum Street York.

COUNTY COUNCIL OF MIDDLESEX

SENIOR DENTAL OFFICER

Applications are invited for the above appointment on the pensionable staff. Applicants must be fully qualified and registered dental surgeons of wide experience.

The duties of the post include the dental inspection and treatment of school children and of women and young children under the Council's maternity and child welfare scheme the supervision of the work of the Council's staff of assistant dental officers and such other clinical or administrative duties as the County Council may from time to time direct.

The officer appointed will be required to commence duty on October 11th 1937 to devote his whole time to the duties of the post will not be allowed to engage in private practice and will work under the supervision of the County Medical Officer.

Salary £700 per annum rising by annual increments of £25 to £900 together with out-of-pocket travelling expenses while on duty.

The appointment which will be subject to medical examination, will be held during the pleasure of the Council and is terminable by three months' notice on either side.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than July 10th. Relationship to any member or officer of the Council must be disclosed in the application. Application forms are not provided. Envelopes must be endorsed "Senior Dental Officer." Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE, Z,

Clerk to the County Council
Middlesex Guildhall Westminster SW 1
June 17th 1937

COUNTY COUNCIL OF MIDDLESEX

ASSISTANT PATHOLOGIST

Applications are invited for the pensionable appointment of ASSISTANT PATHOLOGIST to WEST MIDDLESEX COUNTY HOSPITAL, ISLEWORTH. Candidates must be registered Medical Practitioners, with special knowledge and experience in pathology who are engaged wholly or chiefly in the practice of this branch of medicine.

The officer appointed must devote his whole time to the duties of his office. He will not be allowed to engage in private practice, and any fees received by him must be paid over to the Council. The appointment which will be subject to medical examination will be held during the pleasure of the Council and is terminable by three months' notice on either side.

Salary £650 per annum rising by annual increments of £25 to £800 per annum.

Applications stating age, qualifications and experience together with copies of not more than three recent testimonials must be received by the undersigned not later than July 10th. Application forms are not provided. Envelopes must be endorsed "Assistant Pathologist West Middlesex County Hospital." Canvassing directly or indirectly will be a disqualification.

C W RADCLIFFE "Z,"

Clerk of the County Council
Middlesex Guildhall Westminster SW 1
June 17th, 1937

CITY OF PORT OF - SPAIN

APPOINTMENT OF A MEDICAL OFFICER OF HEALTH

The Port-of-Spain City Council invite applications for the post of Medical Officer of Health for the City of Port-of-Spain.

The duties of the office are as set forth in the bye-laws made by the Central Board of Health and published in the Trinidad Royal Gazette of October 25th 1917 page 1975-7.

Every applicant must be or entitled to be a member of the Medical Board of Trinidad and shall be the possessor of a Diploma of Public Health Sanitary Science or State Medicine registered or entitled to be registered in Great Britain and Ireland.

The office is a whole time one and pensionable under the provisions of the Municipal Corporations (Pensions) Ordinance No. 9 of 1936. The salary attached to the post is £800 per annum rising by equal annual increments of £25 to £1,000 with a travelling allowance of £74 a year.

The person appointed will be required to furnish a bond in the sum of £100 for the due performance of his duties.

Applications, stating age, qualifications and experience should reach the undersigned at the Town Hall Port-of-Spain Trinidad B.W.I. not later than July 31st 1937.

The Town Hall
Port-of-Spain
Trinidad B.W.I.
April 29th 1937

E. PRADA
Town Clerk.

URBAN DISTRICT AND PORT OF BARRY

Appointment of DEPUTY MEDICAL OFFICER OF HEALTH DEPUTY PORT MEDICAL OFFICER and ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from registered Medical Practitioners (male) for the post of Deputy Medical Officer of Health to the Council (Urban Authority and Port Sanitary Authority) and Assistant School Medical Officer.

Salary £600 per annum rising by annual increments of £25 to a maximum of £700 per annum.

Applicants whose age must not exceed 40 years must hold the Diploma of Public Health and have had experience in Maternity and Child Welfare work. School Medical work and refraction work.

The person appointed will be required to devote the whole of his time to the duties of the office and to act under the direction of the Medical Officer of Health.

The appointment will be subject to the approval of the Board of Education and the Minister of Health and will be determinable by three months' notice on either side. The appointment will also be subject to the provisions of the Local Government and Other Officers Superannuation Act, 1922 and the successful applicant will be required to pass satisfactorily a medical examination.

Forms of application may be obtained from Dr. E. J. Davies Medical Officer of Health Public Health Department Barry Glam. to whom applications, together with copies of three recent testimonials, should be sent not later than July 17th 1937.

T D HOWELLS
Clerk to the Council.

Council Offices Barry
June 15th 1937

COUNTY BOROUGH OF WEST HAM

PUBLIC ASSISTANCE COMMITTEE.

Applications are invited by the Council for the post of ASSISTANT RESIDENT MEDICAL OFFICER (Male) at Whipps Cross Hospital Leytonstone E11. Salary £350 per annum rising by annual increments of £25 to a maximum of £450 per annum together with apartments board and laundry valued for superannuation purposes at £140 per annum. The salary is inclusive and all fees received from whatever source, must be paid to the Council.

Candidates must be fully qualified registered Medical Practitioners, and should have held a previous Resident Hospital appointment. Preference will be given to candidates with practical experience of surgical operations and the person appointed must give his whole time to the service of the Council and will be required should the occasion arise to act in any of the Council's other institutions.

The successful candidate will be required to pass a medical examination and the appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 or to the Poor Law Officers Superannuation Act, 1896 and the statutory contributions will be deducted from the salary.

Forms of application can be obtained from the Deputy Medical Officer of Health Municipal Health Offices Romford Road E15 and will be forwarded upon receipt of a stamped addressed envelope and must be returned to the undersigned not later than July 3rd 1937.

Canvassing members of the Council is prohibited and will disqualify.

CHARLES E CRANFIELD
Towa Clerk.

Public Assistance Offices
Union Road Leytonstone E11
June 14th 1937

SURREY COUNTY COUNCIL

DENTAL SURGEON

Applications are invited from qualified registered Dental Surgeons preferably under 35 years of age for whole-time dental work in the County.

The officer appointed will be required to act under the supervision and control of the County Medical Officer and to live at some centre to be approved by the Council.

The appointment will be subject to the staffing regulations of the Council and to the provisions of the Council's Superannuation Scheme. The commencing salary will be at the rate of £500 per annum rising subject to approved service by annual increments of £20 to a maximum of £600 per annum.

A form of application together with further particulars may be obtained from the County Medical Officer County Hall Kingston-upon-Thames, and must be returned duly completed not later than July 12th 1937 endorsed "Dental Surgeon."

Canvassing either directly or indirectly will disqualify. **DUDLEY AUKLAND**
Clerk of the Council
County Hall Kingston-upon-Thames
June 21st 1937

COUNTY BOROUGH OF SMETHWICK SENIOR ASSISTANT MEDICAL OFFICER OF HEALTH

The Council invite applications from qualified medical men for the post of SENIOR ASSISTANT MEDICAL OFFICER OF HEALTH CLINICAL TUBERCULOSIS OFFICER and DEPUTY MEDICAL SUPERINTENDENT at ST CHAD'S HOSPITAL.

The salary will be at the rate of £750 per annum rising subject to satisfactory service by annual increments of £.5 and one of £12.10s to a maximum of £937.10s per annum. If married the successful candidate will in addition be provided with a small modern flat close to the municipal hospital for which a nominal inclusive charge of £50 per annum will be made. If unmarried he will be provided with board and lodging at the hospital in respect of which his salary will be reduced by £150 per annum.

Applicants must be registered medical practitioners, not possessing the Diploma of Public Health or similar qualification.

The Officer appointed will have clinical charge of the Council's Tuberculosis scheme. He will be in clinical control of the municipal hospital under the supervision of the visiting consultants and will assist the Medical Officer of Health in its administration. He will also be expected to undertake work in connection with the School Medical Service and the Smethwick and Oldbury Joint Isolation Hospital. He will work under the direction of the Medical Officer of Health and will be expected to assist him in other duties from time to time as directed.

The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1937 and the selected candidate will be required to pass a medical examination. Forms of application may be obtained from the undersigned in whom applications endorsed Senior Assistant Medical Officer of Health and accompanied by copies of three recent testimonials must be delivered not later than first post on July 3rd 1937.

Canvassing directly or indirectly will disqualify. Council House, FRANK CHAPMAN, Town Clerk, Smethwick, June 15th 1937.

COUNTY BOROUGH OF SMETHWICK ASSISTANT MEDICAL OFFICER OF HEALTH AND ASSISTANT SCHOOL MEDICAL OFFICER

Applications are invited from qualified medical men (single) for the combined post of Assistant Medical Officer of Health and Assistant School Medical Officer.

The salary will be at the rate of £350 per annum rising subject to satisfactory service by annual increments of £25 to a maximum of £550 per annum together with board laundry and residence at the Isolation Hospital which are valued for superannuation purposes at £150 per annum.

The officer appointed will be required to work under the general supervision and control of the Medical Officer of Health and School Medical Officer and will be required to render assistance in the general work of the department. The appointment will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1937 and the selected candidate will be required to pass a medical examination.

Forms of application may be obtained from the Medical Officer of Health Public Health Department Hales Lane Smethwick to whom applications, endorsed Assistant MOH and SMO and accompanied by copies of three recent testimonials must be delivered not later than first post on Saturday July 3rd.

Canvassing directly or indirectly will disqualify. Council House, FRANK CHAPMAN, Town Clerk, Smethwick, June 16th 1937.

SOUTH MIDDLESEX AND RICHMOND JOINT HOSPITAL BOARD

MOGDEN FEVER HOSPITAL ISLEWORTH

ASSISTANT RESIDENT MEDICAL OFFICER

Applications are invited from fully-qualified Medical Practitioners for the above appointment. Duties to commence on October 1st 1937. The appointment is for a period of one year at a salary of £250 per annum with board residence and laundry. Preference will be given to candidates who have held a resident appointment in a General Hospital. Experience in anaesthetics desirable.

Forms of application with full particulars of duties may be obtained from the Medical Superintendent Mogden Fever Hospital Isleworth Middlesex and applications on the prescribed forms should be returned to him on or before Monday July 12th 1937.

S C T LITTLEWOOD
Clerk to the Board
Kington-on-Thames

14 Church Street
June 21st 1937

METROPOLITAN BOROUGH OF CAMBERWELL

APPOINTMENT OF TUBERCULOSIS OFFICER AND DEPUTY MEDICAL OFFICER OF HEALTH

The Council invite applications for the above positions from male registered Medical Practitioners. Salary £400 per annum rising by three biennial increments of £40 and one of £37.10s to a maximum of £517.10s per annum.

Applicants must possess the Diploma of Public Health and the qualifications laid down by the Minister of Health in para three of the Local Government (Qualifications of Medical Officers and Health Visitors) Regulations 1930 relating to Tuberculosis Officers.

The person appointed will take charge of the Tuberculosis Dispensary under the administrative direction of the Medical Officer of Health and will be responsible for the diagnosis and treatment of all patients at the Dispensary as well as being available for consultation duties with general Medical Practitioners. He will also be required to deputise for the Medical Officer of Health during his absence.

The person appointed must devote the whole of his time to the duties of his office and will be required to undertake such other duties as the Council may from time to time determine.

The appointment will require the approval of the Minister of Health and the London County Council and will be subject to the provision of the Camberwell and Other Metropolitan Borough Councils (Superannuation) Act 1908 as amended by the London County Council (General Powers) Act 1911 and to the successful candidate passing satisfactorily a medical examination by the Council's Medical Officer of Health.

Applications must be made on forms to be obtained from the undersigned (if by post by forwarding a stamped addressed foolscap envelope) and must be received not later than 12 noon on Tuesday July 6th 1937.

Personal canvassing of members of the Council will be deemed a disqualification.

C E NEWTON
Town Clerk and Solicitor
Town Hall Camberwell S.E.5
June 5th 1937

CITY OF MANCHESTER

PUBLIC HEALTH DEPARTMENT

APPOINTMENT OF ASSISTANT PATHOLOGIST

The Public Health Committee invites applications from qualified Medical Practitioners for the appointment of Assistant Pathologist (non-resident) at the Crumppall Pathological Laboratory, Delaunays Road, Crumppall, Manchester 8.

Salary £500 per annum rising by annual increments of £25 to £700 per annum subject to the Manchester Corporation Conditions of Service.

Applicants must have had good practical experience in all branches of clinical pathology.

Full information and forms of application may be obtained from the Medical Officer of Health, Sunlight House, Quay Street, Manchester 3 and applications for the post must be received by him not later than July 9th 1937.

F E WARBRECK HOWELL, Town Clerk
Town Hall Manchester 2,
June 16th 1937

CITY OF MANCHESTER

WITHINGTON HOSPITAL 1293 Beds

(Recognised under the regulations for the F.R.C.S.)

The Public Health Committee invites applications from registered Medical Practitioners for the post of RESIDENT ASSISTANT MEDICAL OFFICER at the above-named Hospital.

The salary for the appointment is £200 per annum with board residence and laundry in addition subject to the Manchester Corporation conditions of service.

The appointment will be made in the first instance for a period of six months renewable for a further six months but not renewable thereafter. Full information and forms of application may be obtained from the Medical Officer of Health, Sunlight House, Quay Street, Manchester 3 and applications for the post must be received by him not later than July 5th 1937.

F E WARBRECK HOWELL, Town Clerk
Town Hall Manchester
June 18th 1937

THE SHEFFIELD ROYAL HOSPITAL (340 Beds.)

Applications are invited for the post of WHOLE TIME CLINICAL ASSISTANT in the OPHTHALMIC DEPARTMENT. The duties are of registrar type and candidates should have good outpatient experience. Salary £300 per annum non-resident. The appointment in the first instance is for one year.

W H BOOTH
Superintendent and Secretary

LONDON COUNTY COUNCIL

Applications are invited from Medical Practitioners of at least one year's standing for appointment to undermentioned positions. Married quarters are not available.

SENIOR ASSISTANT MEDICAL OFFICERS (Grade 11)—Salary £500—£25—£600 with board lodging and washing. Duties assigned by medical superintendent and include if necessary assistance at other establishments under Council's control.

(a) **COLINDALE HOSPITAL**, The Hyde, Hendon NW9—For male adult cases of pulmonary tuberculosis (349 beds). Preference given to candidates with experience in a chest hospital or sanatorium. Knowledge of artificial pneumothorax treatment (radiology) and laboratory methods and experience in administration.

(b) **HIGH WOOD HOSPITAL FOR CHILDREN**, Brentwood Essex—For treatment of tuberculosis and rheumatism (482 beds). Experience in the treatment of non-surgical tuberculosis is essential and administrative experience desirable.

ASSISTANT MEDICAL OFFICER (Grade 1)—Salary £350—£5—£45 with board lodging and washing.

(c) **KING GEORGE V SANATORIUM**, Godalming Surrey—Experience in non-surgical tuberculosis essential and as a resident officer in a general hospital desirable.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Staff Division 2A County Hall S.E.1 returnable by July 12th.

Canvassing disqualifies.

LONDON COUNTY COUNCIL

CONSULTANT AND SPECIALIST SERVICES

Applications invited for appointment as PART TIME CONSULTING DERMATOLOGIST for duty for one session a week (total) at Lewisham Hospital, Lewisham S.E.13, St. Alfred's Hospital, Greenwich S.E.10 and St. Nicholas Hospital, Plumstead S.E.18.

Salary £125 with additional remuneration at rate of £.1 s. 6d a visit for emergency visits made in excess of routine session.

Applications forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health (Staff Division) County Hall Westminster Bridge S.E.1 returnable by July 14th. Women eligible. Canvassing disqualifies.

LONDON COUNTY COUNCIL

TEMPORARY DISTRICT MEDICAL OFFICER REQUIRED FOR AREA IV DISTRICT A (HAMPSTEAD) Provisional salary £1.0

Will be required to carry out duties prescribed by Public Assistance Order 1930 and to reside in or near district. Engagement until March 31st, 1938 in first instance. Remuneration and conditions subject to review.

Application forms obtainable (stamped addressed foolscap envelope necessary) from Medical Officer of Health, Staff Division 2 (A) County Hall S.E.1 returnable by July 12th.

Canvassing disqualifies.

COUNTY BOROUGH OF OLDHAM

Municipal Hospital

RESIDENT ASSISTANT MEDICAL OFFICER

Applications are invited from registered Medical Practitioners for the post of Resident Assistant Medical Officer.

Salary £200 per annum with board residence and laundry.

Candidates should be unmarried. The appointment will in the first instance be for a period of six months. The successful applicant however will be eligible for reappointment for a further period of six months.

The Hospital comprises 375 beds with facilities for training experience in medicine surgery midwifery and diseases of children.

Application forms may be obtained from the Medical Officer of Health, Town Hall Oldham and should be returned endorsed "Resident Assistant Medical Officer" as soon as possible but not later than Monday July 12th 1937.

JOSEPH J. WILLIAMS LL.D.
Town Hall Oldham, Town Clerk
June 21st, 1937

CITY OF SALFORD

ASSISTANT RESIDENT MEDICAL OFFICER HOPE HOSPITAL, (1,100 Beds)

Applications are invited for the post of Assistant Resident Medical Officer (Male) at Hope Hospital, Salford. The appointment will be for a period of six months. Salary £200 per annum plus board residence and laundry. Further particulars and form of application may be obtained from the Medical Officer of Health 143 Regent Road, Salford S. Lancs. to whom it should be returned not later than July 10th 1937.

H. H. T.

NORTH RIOINO INFIRMARY
MIDDLEBROUGH
(General Hospital 143 Beds Three Residents)

Wanted SENIOR HOUSE SURGEON to take up duty July 1st. Candidates must be male unmarried and of British nationality. Preference will be given to applicants who have held a similar post in a similar position. The Officer is a candidate for the post of Casualty Officer and is requested to state in his application whether he is applying for the Casualty Officer's post or for the post of Senior House Surgeon. Salary is £175 per annum with board and laundry. Applications with copies of three recent testimonials should be sent to the undersigned forthwith.

GERALD A. KENYON
Secretary Superintendent

NORTH RIOINO INFIRMARY
MIDDLEBROUGH
(General Hospital 143 Beds Three Residents)

Wanted THIRD HOUSE SURGEON male (Medical work forms part of duties). Candidates must be unmarried and of British nationality. Appointment will be for not less than 12 months and renewable. Salary is £140 per annum with board residence and laundry. Applications stating age, qualifications and experience, together with copies of three recent testimonials should be sent to the undersigned forthwith.

GERALD A. KENYON
Secretary Superintendent

DARLINGTON MEMORIAL HOSPITAL
(60 Beds)

Applications are invited for the post of HOUSE SURGEON for the Out Patient Casualty and Orthopaedic Dept. Male British fully qualified. Salary £150 per annum with board residence and laundry. Applications stating age, full particulars of qualifications and experience, together with copies of three recent testimonials to be addressed to the undersigned.

ARTHUR RIDDLE, A.C.S.
Secretary Superintendent

NORTH LONSDALE HOSPITAL
BARROW IN FURNESS (157 Beds)

Appointment now vacant. Required immediately. RESIDENT CASUALTY OFFICER (Male) from fully qualified Practitioner, experienced in the administration of anaesthetics. Salary £150 per annum with board residence and laundry. Applications stating age, qualifications and experience, accompanied by copies of three recent testimonials should be sent to the Secretary immediately.

VICTORIA HOSPITAL
(180 Beds) BLACKPOOL

HOUSE PHYSICIAN (Male) required immediately. Duties will include charge of ophthalmic cases. Appointment for six months salary at the rate of £700 per annum with board residence and laundry. Applications with copies of three recent testimonials should be sent immediately to the GENERAL SUPERINTENDENT.

MIDLAND HOSPITAL
EASY ROW BIRMINGHAM (50 Beds)

Applications are invited for the post of HOUSE SURGEON. Duties to commence July 7th. Salary £200 per annum with board residence and laundry. Applications stating when at liberty age and qualifications, together with copies of recent testimonials to be addressed to the undersigned.

OLIVE FURNEAUX
Secretary

MONTAGU HOSPITAL
(111 Beds) MEXBOROUGH

RESIDENT HOUSE SURGEON (Lady) required. Commencing salary £100 per annum with board residence, laundry and excellent experience. Applications stating age, qualifications when at liberty and accompanied by copy testimonials to be sent to the undersigned.

JOHN N. DRAKE
Secretary Superintendent

MANCHESTER EAR HOSPITAL
GROSVENOR SQUARE ALL SAINTS

The Board invite applications for the post of RESIDENT HOUSE SURGEON. (31 Beds). Salary £170 per annum. Candidates must be duly qualified and registered. Applications with copies of four recent testimonials to be forwarded to Mr. Reginald S. Milford (Hon. Sec. Manchester Ear Hospital) c/o Mr. W. J. Ellum 17 Brackenrose Street, Manchester.

NORFOLK AND NORWICH HOSPITAL
NORWICH (417 Beds)

Applications are invited for the following posts on the Resident Staff —
GENERAL HOUSE SURGEON
HOUSE SURGEON TO ORTHOPAEDIC DEPARTMENT
CASUALTY OFFICER
Salary for each post £120 per annum with board residence and laundry.
Candidates (Male) must be unmarried and must possess registered qualifications.
Applications stating age, nationality etc. together with copies of testimonials should reach the undersigned not later than Tuesday June 29th 1937.

June 19th 1937
FRANK INCH
House Governor and Secretary

ROYAL MANCHESTER CHILDREN'S HOSPITAL
PENDLEBURY NEAR MANCHESTER (230 Beds)

RESIDENT MEDICAL OFFICER

Applications are invited for the post of Resident Medical Officer. Salary £150 per annum. The appointment is for a period of six months commencing August 1st 1937. Candidates must be unmarried and duly registered. Previous Hospital experience essential.
Applications stating age and accompanied by copies of not more than three recent testimonials to be sent to the undersigned not later than Saturday July 3rd. Canvassers directly or indirectly may disqualify.

By Order
H. HEARDMAN
Secretary

ROYAL MANCHESTER CHILDREN'S HOSPITAL
PENDLEBURY NEAR MANCHESTER (230 Beds)

RESIDENT HOUSE SURGEON

Applications are invited for the post of Resident House Surgeon for a period of six months commencing August 1st 1937. Salary £100 per annum. Candidates having previous experience in the administration of anaesthetics will be given preference.
Applications stating qualifications and past experience together with testimonials to be sent to the undersigned not later than Saturday July 3rd. Canvassing directly or indirectly may disqualify.

By Order
H. HEARDMAN
Secretary

BRISTOL ROYAL HOSPITAL FOR SICK CHILDREN AND WOMEN
(Usually known as the Children's Hospital) St. Michael's Hill

APPOINTMENT OF OUT PATIENT PHYSICIAN

The Election Committee of this Institution are prepared to receive APPLICATIONS for the appointment of an HONORARY PHYSICIAN to the OUT PATIENT DEPARTMENT.
Candidates must be Graduates in Medicine of a University in Great Britain or Ireland.
Applications stating age, qualifications and experience accompanied by testimonials must be sent to the undersigned on or before July 2nd 1937.

REGINALD C. THOMAS, F.C.S.
Secretary

COVENTRY AND WARWICKSHIRE HOSPITAL, COVENTRY

Main Hospital 307 Beds
Convalescent Hospital 40 Beds

Applications are invited for the following positions —
RESIDENT HOUSE SURGEON £150 per annum
CASUALTY OFFICER £150 per annum
HOUSE PHYSICIAN £150 per annum
Board Residence and Attendance. Candidates must be duly qualified and registered. Applications stating age and enclosing copies of recent testimonials should be sent to the undersigned immediately.

(Miss) R. HOOPER Secretary

ROYAL SALOP INFIRMARY
SHREWSBURY

Applications are invited from fully qualified unmarried gentlemen for the appointment of RESIDENT HOUSE SURGEON.
The appointment is for six months in the first instance subject to reappointment for a further period of six months if desired.
Salary at the rate of £160 per annum with board residence etc.
Applications stating age, qualifications and experience together with copies of three recent testimonials to be sent to the undersigned immediately.

J. W. NOBLE
Secretary Superintendent

THE CORBETT HOSPITAL STOURBRIDGE
(95 Beds and Special Departments)

APPLICATIONS are invited for the post of HOUSE SURGEON which is now vacant. The appointment will be for a period of six months terminable by six weeks notice carries a salary at the rate of £100 per annum with board laundry etc.
The Hospital has a Specialist Visiting Staff and Resident Surgical Officer and a House Physician. Applications giving full details of qualifications, age and experience accompanied by three copies of testimonials should be addressed to the undersigned forthwith.

W. G. H. WESTON
Secretary

ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL
(280 Beds)

Applications are invited for the following appointments —
One CASUALTY OFFICER
One RESIDENT ANAESTHETIST and HOUSE SURGEON to the Ear, Nose and Throat Department.
For the six months commencing July 1st 1937 at a salary of £150 per annum with board lodging and laundry. Candidates must be male and unmarried.
Applications accompanied by not more than three testimonials should be sent to the undersigned at once.

HY TRUSSON
House Governor and Secretary

ANCOATS HOSPITAL, MANCHESTER.

HOUSE SURGEON required for the Ear, Nose and Throat Department and to act as House Physician to one of the Honorary Physicians. Appointment for six months as from July 1st. Salary at the rate of £100 per annum with board residence laundry etc.
Applications stating age, previous experience and with copies of three recent testimonials to be forwarded to the undersigned on or before Wednesday June 23rd.

By Order of the Board
HERBERT J. DAFFORNE,
General Supt and Secretary

ROYAL UNITED HOSPITAL, BATIL

HOUSE PHYSICIAN required immediately. Resident Staff of two House Physicians and three House Surgeons.
Duties include some Casualty. Salary £150 per annum board residence and laundry.
The appointment is for six months and candidates must be male unmarried and of British nationality.
Applications with copies of three testimonials, to be addressed to the undersigned at once.

May 31st 1937
J. LAWRENCE MEARS
Secretary Superintendent

ADDENBROOKS HOSPITAL CAMBRIDGE.

Applications are invited for the post of RESIDENT ANAESTHETIST and EMERGENCY OFFICER (Male). The appointment will be for three months from July 17th 1937. Salary at the rate of £130 per annum with board residence and laundry. Candidates who must be unmarried and applications stating age, qualifications etc. together with copies of not more than four recent testimonials to be forwarded to the undersigned on or before Wednesday June 30th 1937.

J. A. BEARDSALL
Secretary Superintendent

THE CHILDREN'S HOSPITAL, SHEFFIELD
(140 Beds)

HOUSE SURGEON required IMMEDIATELY. Salary £100 per annum with board residence and laundry. Candidates (male and unmarried) who must possess registered qualifications, forward applications stating age, qualifications, together with copies of three recent testimonials to the undersigned.

I. H. G. OATLAND
Superintendent and Secretary

MANSFIELD AND DISTRICT GENERAL HOSPITAL
(140 Beds)

HOUSE SURGEON (Male) required. Duties to commence as soon as possible. Salary at the rate of £150 p.a. with residence board and laundry. The appointment is for six months and is renewable. The staff consists of a Resident Surgical Officer and two House Surgeons. Applications stating age, qualifications and nationality accompanied by not more than three recent testimonials to be sent to the undersigned.

C. J. ADAMS
Secretary

DEVONSHIRE ROYAL HOSPITAL

Buxton Derbyshire (300 Beds)
A National Hospital for Rheumatism and Allied Diseases

HOUSE PHYSICIAN (Male)

Salary £150 rising to £175 after three months service (and prospects of promotion to Resident Medical Officer) with board residence and laundry. Candidates must be fully qualified and registered. The appointment is for a minimum period of six months from July 1st 1937 and may be extended for a further period of six months. Applications endorsed House Physician—stating age, experience and qualifications, together with copies of three recent testimonials must be forwarded without delay to the undersigned from whom any further particulars may be obtained. Considerable orthopaedic experience is available and the appointment offers special facilities for any gentleman preparing a thesis or wishing to undertake special work as the Hospital contains all the necessary laboratory and other facilities for research.

Canvassing will disqualify.
By Order of the Committee of Management
A PRESTON TURNER
General Superintendent and Secretary

KEIGHLEY AND DISTRICT VICTORIA HOSPITAL

(174 Beds) Yorkshire (West Riding)

APPOINTMENT OF RESIDENT MEDICAL OFFICER

Vacant September 1st, 1937

Applications are invited from registered Medical Practitioners, Male or Female for the above appointment. Proof of registration to be furnished before appointment.

Salary £180 per annum together with full residential emoluments. Terms six months renewable. State experience in giving anaesthetics.

Applications with particulars of age, experience, nationality together with copies of two recent testimonials to be sent to the undersigned as soon as possible.

J. YOUNG
Secretary-Superintendent.

THE WEST NORFOLK AND KING'S LYNN GENERAL HOSPITAL

(112 Beds)

HOUSE PHYSICIAN

Applications are invited for the above post which becomes vacant on July 1st next. Salary £125 per annum. To have charge of Medical and Ophthalmic beds also to act as Casualty Officer and Resident Anaesthetist.

The post is for six months in the first instance—often valuable experience in both in-patient and Out-patient work.

Applications with copies of recent testimonials should be sent to the undersigned as early as possible.

JOSEPH E. SEARJEANT F.C.C.S.
House Governor and Secretary

ROYAL UNITED HOSPITAL, BATH

Applications are invited from gentlemen unmarried of British nationality for the following appointments:

HOUSE SURGEON—General Surgery and Ear, Nose and Throat.

HOUSE SURGEON—Gynaecological and Obstetric Department with Anaesthetic duties. Both appointments to commence July 14th.

Salary for each appointment £150 per annum with board residence and laundry. Applications, with copies of three testimonials, to be addressed to the undersigned by July 6th stating the appointment for which application is made.

J. LAWRENCE MEARS
June 21st 1937 Secretary-Superintendent.

CLAYTON HOSPITAL, WAKEFIELD

There is a vacancy for a FOURTH HOUSE SURGEON (Male, British) for which post applications are invited. The appointment is for six months in the first instance and the salary is at the rate of £150 per annum together with board residence and laundry.

Applications stating age, qualifications and experience, together with copies of three recent testimonials, should be sent to the undersigned as early as possible.

The selected candidate will be expected to take up duties almost immediately.

J. H. GREAVES
President.

CITY OF PORTSMOUTH MENTAL HOSPITAL

LOCUM TENENS ASSISTANT MEDICAL OFFICER (Male) required. There is the possibility of a permanent appointment. Seven guineas a week with board, lodging and laundry. Apply to the Medical Superintendent.

BURY INFIRMARY (LANCS) (17 Beds)

APPOINTMENT OF CASUALTY OFFICER (MALE)

A vacancy above arises on the Resident Medical Officer and applications are invited for the post.

The Staff consists of an R.S.O. a House Surgeon and House Physician and a Casualty Officer.

In addition to his duties in the Casualty Department the Officer is also responsible for the In-patient and Out-patient work in connection with the Eye and Ear, Nose and Throat Department.

The appointment is for six months at a salary at the rate of £150 per annum with board residence and laundry and the successful candidate will be expected to commence duties immediately.

Applications stating age, qualifications and nationality together with copies of three recent testimonials are to be forwarded to the undersigned as soon as possible, endorsed Casualty Officer.

Further particulars may be had on application
H. WILKINSON
Superintendent.

THE ROYAL INFIRMARY SHEFFIELD (500 Beds)

The Board of Management invite applications for the undermentioned posts:

- (1) HOUSE SURGEON
- (2) AURAL HOUSE SURGEON
- (3) OPHTHALMIC HOUSE SURGEON
- (4) CASUALTY OFFICER

The salary attached to posts (1) and (2) is £80 per annum increasing to £100 after six months service to (3) £110 per annum and to (4) £150 per annum with board and residence in each case.

Appointments (1), (2) and (3) will be tenable for the residue of the period of six months terminating on October 31st next. (4) is tenable for six months from July 1st, 1937.

The Ophthalmic Department contains 69 beds and an Out-Patient Department which is open daily. Applications with copies of testimonials to be sent to the undersigned forthwith.

H. KINGSLEY PEARCE
General Superintendent and Secretary
June 21st 1937

THE RADCLIFFE INFIRMARY OXFORD

Applications are invited from qualified men and women for the post of RESIDENT MEDICAL OFFICER to that section of the Infirmary consisting of 52 beds and dealing with the diagnosis and treatment of pulmonary tuberculosis known as THE OSLER PAVILION Headington Oxford as from August 1st 1937.

Previous experience in a tuberculosis institution is not essential but experience as a Resident in a General Hospital is desirable.

Appointment will be for six months in the first instance. Salary at the rate of £120 per annum.

Applications with copies of testimonials must be forwarded to the undersigned at the Radcliffe Infirmary not later than July 5th 1937.

A. O. E. SANCTUARY
Administrator

June 19th, 1937

KNOWLE MENTAL HOSPITAL, FAREHAM HANTS

Applications are invited for the post of JUNIOR ASSISTANT MEDICAL OFFICER.

Applicants should be Male and single, and under 35.

The salary is £350 rising by yearly increments of £25 to £450 with board, lodging, washing and attendance valued at £150.

The possession of a Diploma in Psychological Medicine entitles the holder to an extra £50 per annum.

The salary is subject to deduction under the Asylums Officers Superannuation Act, 1909.

Applications stating age and all particulars accompanied by copies of three recent testimonials should be sent to the Medical Superintendent not later than July 17th.

ROYAL EYE AND EAR HOSPITAL, BRADFORD (94 Beds.)

Wanted TWO HOUSE SURGEONS (Males) for July 1st. Salary £180 with board residence and laundry. Applications stating qualifications, age, etc. with copies of recent testimonials to be forwarded to the undersigned.

F. BRIGGS
Secretary-Superintendent

THE GENERAL HOSPITAL, BIRMINGHAM

Applications are invited for the post of HOUSE SURGEON to the THROAT AND EAR DEPARTMENT.

This is an open appointment. Applications, giving full details of qualifications and accompanied by testimonials (if desired) should be sent to
A. H. LEANEY
House Governor

ROYAL HALIFAX INFIRMARY (250 Beds)

Hospital recognised by the Royal College of Surgeons (England)

Wanted a FIRST HOUSE SURGEON (male, unmarried). Candidates must be duly qualified and registered. The appointment will be for four months ending October 31st 1937. Preference given to candidates holding the qualification of F.R.C.S. Salary including all services required in connection with Paying Patients Ward £200 per annum with residence, board and laundry. The Resident Staff consists of Resident Surgical Officer and three House Surgeons. The Hospital contains 250 beds including Maternity Department and Paying Patients Block. There is also a Pathological Laboratory, a large Eye, Ear, Nose and Throat Department, Radiological Department, and Radium Clinic.

Particulars of the duties may be obtained from the undersigned to whom applications stating age, nationality, etc. together with copies of testimonials should be sent.

A. MIOGLEY
Secretary

June 14th 1937

KENT AND SUSSEX HOSPITAL, TUNBRIDGE WELLS (204 Beds)

Applications are invited for the post of HOUSE SURGEON AND CASUALTY OFFICER. Salary £150 per annum with board residence and laundry in the Hospital.

The Hospital is approved by the University of London for the purpose of the M.O. and M.S. Examinations and includes the following Departments:

Medical, Surgical, Ear, Nose and Throat, Ophthalmic, Orthopaedic, Gynaecological, X-ray and Electro-Therapeutic, Massage, Pathological, Venereal Diseases, etc.

Applications stating qualifications together with Certificate of Registration and copies of not more than three recent testimonials should be sent to the undersigned as soon as possible.

TOM B. HARRISON
Superintendent-Secretary

June 7th 1937

ROYAL VICTORIA INFIRMARY, Newcastle-upon-Tyne.

ASSISTANT RADIOLOGICAL OFFICER (non-resident) (758 Beds)

Applications are invited for the post of whole-time Assistant to the Newcastle-upon-Tyne National Radium Centre to commence on July 19th 1937. Candidates must be registered in Medicine and Surgery and have had some resident surgical hospital experience. Experience in Radio Therapy not essential.

The salary will be at the rate of £350 per annum. Further particulars regarding duties, etc. may be obtained from the undersigned to whom applications accompanied by not more than three testimonials should be sent not later than Monday July 14th 1937.

S. DUNSTAN
Secretary

June 18th 1937

GENERAL INFIRMARY, SALISBURY

(Voluntary Hospital 191 Beds now in course of extension to 225 Beds)

RESIDENT MEDICAL OFFICER (Male) required to commence duty as soon as possible.

The appointment is for one year including a three months probationary period with the option of extension.

Candidates must have held at least one appointment at a recognised Hospital as House Physician and/or House Surgeon and Anaesthetist either separately or in conjunction with the former. He must reside in the Infirmary and devote his whole time to the service of the Infirmary.

Salary £250 per annum with board residence. Applications, with copies of testimonials, to be sent to the House Governor and Secretary.

HERTFORD COUNTY HOSPITAL (169 Beds)

Applications are invited for the post of HOUSE SURGEON (Male) (three Residents). Salary £180 per annum with board residence and laundry. The appointment is for six months in the first instance.

Applications with three recent testimonials should be sent to the undersigned not later than July 6th, 1937.

PERCY O. BROOKS
Secretary

ROTHERHAM HOSPITAL

HOUSE SURGEON required for Ophthalmic and Ear, Nose and Throat Departments. Previous experience not essential. Salary £150 per annum with board and laundry.

Applications with copies of recent testimonials to be sent to the Secretary G. W. Roberts 8 Moorgate Street, Rotherham.

ROYAL WEST SUSSEX HOSPITAL CHICHESTER

(114 Beds—Including 12 in the Private Patients Block Two Residents)

JUNIOR HOUSE SURGEON wanted from July 1st.

Salary at the rate of £145 per annum with board and laundry.

Applicants should be addressed to the undersigned forthwith together with not less than three recent testimonials stating age, nationality, experience and qualification.

By Order of the Board of Management

ALAN RUDDLE A.H.O.

June 3rd 1937 Secretary

BELFLETT HOSPITAL AND DISPENSARY BARNSELY

(153 Beds—Four Residents)

Applications are invited from fully qualified male practitioners for the following posts:

JUNIOR HOUSE SURGEON General Surgeon

Ear, Nose and Throat and Gynaecological Department

HOUSE PHYSICIAN Preferably one with Ophthalmic experience

Salary in each instance £200 per annum with board, residence and laundry.

Applications with copies of testimonials should be sent to the undersigned immediately.

ARTHUR L. BOURNE

Secretary-Superintendent

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL

(720 Surgical and Medical Beds)

HOUSE SURGEON

Applications are invited from fully-qualified men for the above post.

The appointment is for six months. Salary at the rate of £150 per annum with board and laundry.

Applications stating age together with copies of three recent testimonials should be sent to the undersigned as soon as possible.

O. SUNNUCK

June 21st, 1937 Superintendent and Secretary

MANCHESTER NORTHERN HOSPITAL

(General Hospital—113 Beds)

Cheetham Hill Road Manchester 8

Applications are invited for the posts of RESIDENT HOUSE PHYSICIAN and RESIDENT HOUSE SURGEON. Salary £100 per annum with board and residence.

The appointments are for six months from mid-August 1937 (successful candidates are eligible for reappointment for a further six months).

Applications stating age, qualifications and nationality with copies of not less than three recent testimonials, should be sent to Mr James C. Daniels, Secretary 38 Barton Arcade Manchester 3 by July 13th.

MANCHESTER NORTHERN HOSPITAL

(General Hospital—113 Beds)

Cheetham Hill Road Manchester 8

Applications are invited for the post of RESIDENT SURGICAL OFFICER commencing salary £150 per annum with board and residence. The appointment is for twelve months from mid-August 1937.

Applications stating age, qualifications and nationality with copies of not less than three recent testimonials to be sent to the Secretary Mr James C. Daniels 38 Barton Arcade Manchester 3 not later than July 13th.

DISTRICT INFIRMARY ASHTON UNDER LYNE

(200 Beds)

A HOUSE SURGEON is required to commence duties on July 15th next. Six months appointment which may be renewed. The staff comprises a Resident Surgical Officer and three House Surgeons. Salary at the rate of £150 per annum with board, residence and laundry.

Applications, with testimonials to be sent at once to the undersigned.

FRANK OLIVER

General Superintendent and Secretary

June 21st 1937

DISTRICT INFIRMARY ASHTON UNDER LYNE

(General Hospital 200 Beds)

CASUALTY HOUSE SURGEON (Male) required at once.

Applicants must have had previous experience. Salary at the rate of £150 with the usual residential emoluments.

Applications to be sent to the undersigned.

FRANK OLIVER

General Superintendent and Secretary

June 21st 1937

STAFFORDSHIRE MENTAL HOSPITAL STAFFORD

RESIDENT ASSISTANT MEDICAL OFFICER (Male unmarried) required. Salary £530 per annum rising by two annual increments of £25 to £580 per annum (£50 per annum additional if or when in possession of diploma in Psychological Medicine) subject to deduction of £130 per annum from salary for board, lodging, washing and attendance. Appointment subject to provisions of Asylums Officers Superannuation Act 1909.

Every opportunity provided for study and research in well-equipped laboratory. Preference given to candidate who has held post of House Surgeon or House Physician in General Hospital.

Applications stating age, qualifications etc. and enclosing copies of testimonials to be addressed to the Medical Superintendent.

GENERAL HOSPITAL NOTTINGHAM

(386 Beds)

A RESIDENT CASUALTY OFFICER (male) is required at the above Institution. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry. Candidates are invited to send applications, stating age, qualifications and experience together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible. Application for appointment as House Physician or House Surgeon will be favourably considered after six months service in the Casualty Department.

PETER M. MACCOLL

House Governor and Secretary

GENERAL HOSPITAL NOTTINGHAM

(386 Beds)

A HOUSE SURGEON is required at the above Institution for the Ear, Nose and Throat Department containing 40 beds and a large Out Patient Department. The appointment is for six months with salary at the rate of £150 a year with board residence and laundry. Candidates are desired to send applications, stating age, qualifications and experience together with copies of testimonials to the undersigned without delay. Duties to commence as soon as possible.

PETER M. MACCOLL

House Governor and Secretary

CUMBERLAND INFIRMARY CARLISLE

(160 Beds Five Male R.M.O.s)

REQUIRED AT ONCE Male HOUSE SURGEON Special Departments (Eyes, Ear, Nose and Throat) and part casualty. Appointment to September 30th 1937.

Applications are invited. Previous experience desirable. Salary at the rate of £155 per annum board residence etc.

Applications stating age, nationality, qualifications etc. with copies of not more than three testimonials should be sent at once to the undersigned who will supply further particulars if desired.

J. G. HOWITT

Secretary

THE HOSPITAL FOR SICK CHILDREN NEWCASTLE UPON TYNE.

The Board of Management invites applications for the appointment of an ANAESTHETIST to the Hospital for twelve months as from August 1st 1937.

The appointment will entail attendance at the Fleming Memorial Hospital Moor Edge Newcastle for four sessions per week at times to be arranged with the Medical Board. Fee one guinea per session.

Applications to be sent to the Secretary at 18 City Road Newcastle-upon-Tyne 1 on or before July 15th 1937.

THE HOSPITAL FOR SICK CHILDREN NEWCASTLE UPON TYNE.

Applications are invited for the posts of — HOUSE PHYSICIAN and HOUSE SURGEON (Male or Female) for six months from August 1st 1937. Salary at the rate of £100 per annum together with board residence and laundry. Applications stating age and qualifications, together with copies of testimonials, to be sent to the Secretary Mr Neil Brodie 18 City Road Newcastle-upon-Tyne, 1.

NORWICH INFIRMARY

Applications are invited for the post of RESIDENT ASSISTANT MEDICAL OFFICER.

Salary £50 per annum rising by annual increments of £25 to £450 per annum.

Particulars of the appointment may be obtained from the Senior Medical Officer, Norwich Infirmary, Bowthorpe Road to whom applications stating age, qualifications and experience should be forwarded by not later than July 15th 1937.

The envelopes should be endorsed "Resident Assistant Medical Officer".

HULL ROYAL INFIRMARY

Applications are invited for the following posts (male):

(1) SECOND HOUSE PHYSICIAN vacant now. Salary £150 per annum. The post is recognised by the University of London for the M.D. Branch 1 (Medicine) Examination.

(2) HOUSE SURGEON to the Ophthalmic and Ear, Nose and Throat Departments vacant now. Salary £150 per annum. The post is recognised for the clinical work required in the regulations for the D.O.M.S. and D.L.O.

The holders of the above posts receive residence board and laundry.

The appointments will be for a period of six months but will be determinable at any time by one month's notice on either side.

Applications giving age, particulars of experience and nationality together with copies of recent testimonials should be addressed to the undersigned.

May 31st 1937

R. J. CARLESS

House Governor

THE PRINCE OF WALES'S HOSPITAL GREENBANK ROAD PLYMOUTH

(Formerly South Devon and East Cornwall Hospital)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN. Salary £120 per annum with board residence and laundry.

Appointment is tenable for six months and is subject to renewal. Duties to commence immediately.

The Hospital is officially recognised for the surgical practice required before admission to the Final Fellowship Examinations of the Royal Colleges of Surgeons and Physicians of England.

Applicants must be registered under the Medical Act. Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned forthwith.

ARTHUR R. CASH

June 21st 1937 Gen. Supt. and Secretary

THE PRINCE OF WALES'S HOSPITAL DEVONPORT PLYMOUTH

(Formerly Royal Albert Hospital Devonport.)

(64 Beds)

Applications are invited for the post of JUNIOR HOUSE SURGEON. Salary £120 per annum with board residence and laundry.

Duties to commence immediately. Appointment is tenable for six months and is subject to renewal or promotion to the senior position when this post becomes vacant. Applicants must be registered under the Medical Act.

Applications stating age and qualifications with copies of three recent testimonials to reach the undersigned forthwith.

June 21st 1937

FRANK ROWE

Secretary

ROYAL SUSSEX COUNTY HOSPITAL BRIGHTON

(272 Beds Six R.M.O.s)

CASUALTY HOUSE SURGEON (Male) required July 1st 1937. Salary £120 per annum with board residence and laundry.

Candidates must hold Medical and Surgical qualifications of the British Empire and be duly registered under the Medical Act.

They must be unmarried and when elected under thirty years of age.

Applications with copies of recent testimonials to be forwarded to the undersigned.

L. L. W. LANCASTER-GAYE

Secretary-Superintendent

ROYAL SURREY COUNTY HOSPITAL OUILDFORD

(216 Beds)

WANTED JULY 12th 1937 HOUSE SURGEON (Male)

Six months appointment recognised for F.R.C.S. Duties: General Surgery, Orthopaedics and Casualties. Salary £150 per annum with board residence and laundry.

Applications stating age and essential particulars with copies of not more than three testimonials to reach the Secretary-Superintendent not later than July 6th.

QUEEN'S HOSPITAL BIRMINGHAM (A Medical School)

Applications are invited for the post of RESIDENT ANAESTHETIST to commence duties on July 1st.

Salary £70 to £100 p.a. (according to experience and previous Hospital Resident appointments) together with board, apartments and laundry. Applications should be sent to the undersigned accompanied by three recent testimonials not later than June 19th.

P. CROCKER

House Governor

Birmingham, June 10th 1937

APPOINTMENTS—Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square W.C.1 (in the case of Scottish appointments, with the Scottish Medical Secretary, 7, Drumshugh Gardens, 1 Edinburgh)

(a) British Islands

Town or District	Town or District	Town or District
CONTRACT PRACTICE	CONTRACT PRACTICE—(contd.)	CONTRACT PRACTICE—(contd.)
ABERTYSWYD MEDICAL AID SOCIETY (Medical Officer)	LLWYNYPYIA CLYOACH VALE, PENYGRAIG GLAMORGAN (Workmen's Medical Scheme)	OAKDALE MON (Medical Officer for Medical Aid Association)
BLACKPOOL AND FYLDE FRIENDLY SOCIETIES COUNCIL (Medical Officer)	MID RHONODA MEDICAL AID SOCIETY (Assistant Medical Officer)	OGMORE VALLEY GLAMORGAN (Wendham College Medical Aid Society) (Workmen's Medical Scheme)
OILFACH GOCH GLAMORGAN (Workmen's Medical Scheme)	NEATH AND DISTRICT (Medical Aid Association)	PUBLIC HEALTH
		FLINTSHIRE COUNTY COUNCIL (Junior Assistant to the County Council's Medical Officer)

(b) Overseas

Medical practitioners are requested not to apply for any appointment referred to in the following table without having first communicated with the Honorary Secretary of the Division or Branch named in the second column or with the Medical Secretary of the British Medical Association, B.M.A. House, Tavistock Square, W.C.1

Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch	Town or District	Hon. Sec. of Division or Branch
NEW SOUTH WALES (All Friendly Societies Appointments)	The Medical Secretary New South Wales Branch 135 Mac quarie St. Sydney N.S.W.	VICTORIA (All Institute of Medical Dispensaries)	The Honorary Secretary Victorian Branch British Medical Association Medical Society Hall, Albert St. East Melbourne Victoria	WESTERN AUSTRALIA (Contract and Lodge Practices)	Hon. Sec. Western Australian Branch British Medical Association "Shell House" 204 St. George's Ter- race Perth. Western Australia
QUEENSLAND (Brisbane Assoc. of Friends Societies Institute)	The Hon. Sec. Queens- land Branch British Medical Association B.M.A. House, 25 Wickham Terrace Brisbane B 17				

June 16, 1937

By Order of the Council

G. C. ANDERSON, Medical Secretary

WEST HAM MENTAL HOSPITAL GOODMAYES ILFORD ESSEX

Applications are invited for the post of MALE JUNIOR ASSISTANT MEDICAL OFFICER not over 33 years of age unmarried for the above Hospital.

The commencing salary is at the rate of £350 per annum rising by annual increments of £25 to a maximum of £450 together with emoluments consisting of apartments, board laundry and attendance valued for superannuation purposes at £150 per annum. The person appointed will also be paid in addition to his salary the sum of £50 per annum on obtaining the Diploma of Psychological Medicine.

The appointment is subject to six months probation and to the provisions of the Asylums Officers Superannuation Act 1909 Class I and to a satisfactory medical examination.

A knowledge of bacteriological work will be an advantage.

Applications stating age and experience accompanied by copies of three testimonials must reach the Medical Superintendent not later than June 29th 1937.

THE GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION GLOUCESTER

(2.5 Beds. Five Residents)

Applications are invited for the posts of HOUSE SURGEON and HOUSE PHYSICIAN (males). The salary for each post is at the rate of £150 per annum with board residence and laundry.

The appointments are for six months which may be extended for similar periods by re-election from time to time.

Applications stating age qualifications experience and nationality with copies of not less than three recent testimonials should be sent to the undersigned.

The elected candidates will be required to enter upon their duties at once.

F. J. SYMONS
Secretary

June 10th 1937

BURY INFIRMARY (LANCS.) (143 Beds)

RESIDENT SURGICAL OFFICER (MALE)

Applications are invited for the above post from those holding the Fellowship of one of the Royal Colleges of Surgeons.

The appointment is for a term of one year with provision for an extension of a further twelve months, and the successful candidate will be expected to commence duties at the beginning of July.

Salary will be paid during the first twelve months at the rate of £300 per annum and will be increased to £350 per annum during the second twelve months in the event of an extension of the appointment being agreed upon. In addition to this salary the post includes the provision of board residence and laundry.

Applications stating age qualifications and nationality together with copies of three recent testimonials are to be addressed to the undersigned and should be forwarded as soon as possible, endorsed R.S.O.

H. WILKINSON
Superintendent.

EAST SUFFOLK AND IPSWICH HOSPITAL (350 Beds) 8 Residents

Applications are invited for the following posts CASUALTY OFFICER to commence August 1st HOUSE SURGEON TO THE ORTHOPAEDIC AND FRACTURE DEPARTMENT August 1st HOUSE SURGEON TO A GENERAL SURGEON AND GENITO-URINARY SURGEON on or about July 1st.

The Hospital is recognised by the Royal College of Surgeons in respect of the latter post. Salary for each office at the rate of £144 per annum with board apartments and laundry.

Applications from British male candidates together with copies of three recent testimonials to be sent to the undersigned.

The Hospital
Ipswich
ARTHUR GRIFFITHS
May 29th 1937
Secretary

THE ROYAL EYE HOSPITAL Pevensey Road Eastbourne.

Non Resident HOUSE SURGEON required to commence duty July 26th 1937.

Salary £100 per annum and allowance in lieu of board residence £175 per annum.

Applications stating age qualifications and Ophthalmic experience, together with recent testimonials should reach the undersigned as soon as possible.

Before engagement candidates have to be interviewed by the Hon. Surgeon from whom further particulars could be obtained in person.

H. B. GRAVE,
Hon. Secretary

KETTERING AND DISTRICT GENERAL HOSPITAL

Applications are invited for the post of HOUSE SURGEON and HOUSE PHYSICIAN (male).

Salaries £175 and £150 respectively with board residence and laundry. Candidates must be fully qualified.

The appointment is for six months. Applications, stating age, nationality and qualifications together with copies of three testimonials to be sent to the undersigned as soon as possible.

O. W. JACKSON
Secretary Supt.

VICTORIA HOSPITAL (92 Beds)

A JUNIOR RESIDENT required to take up duty on July 1st or as soon after as possible. Salary at the rate of £130 per annum with board residence and laundry.

Applications stating age qualifications nationality with copies of three recent testimonials to be sent to the undersigned. The appointment is for six months renewable.

JAMES BOOTHROYD
Secretary Superintendent.

(Appointments continued on p. 55)

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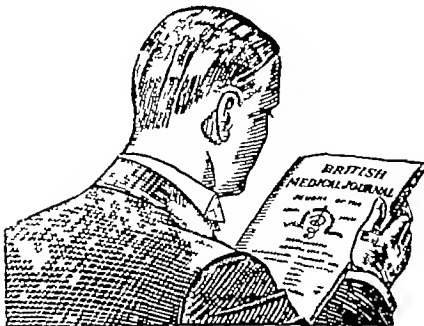
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Throat practice in S. Africa. Commencing salary £-0. Must have D.O.M.S. and D.L.O. or F.R.C.S. Good appearance temperate experienced. View later partnership. Address, with photo references No 3489 B.M.A. House Tavistock Square W.C.1

WANTED—ASSISTANT MALE INDOOR

Aged about 30. Busy mixed Practice growing Midland city. Home and G.P. exp. essential. View to partnership. Salary £300-£350. Car-allowance.—Address No 4833 B.M.A. House Tavistock Square W.C.1

WANTED—ASSISTANT MALE SCOTTISH

(single), outdoor for August 1st. Mixed Practice. Lovely part of Lancashire. Salary £400. Apply stating age religion experience photo.—Address, No 4429 B.M.A. House, Tavistock Square W.C.1

WANTED ASSISTANTSHIP OR LOCUM

experienced INDIAN doctor (34). Can drive car. University town preferred. Will accept part-time work.—Address No 4809 B.M.A. House Tavistock Square, W.C.1

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reliable man for indoor ASSISTANT in Midlands. Comfortable home with tennis court. Work light. Salary £350 p.a. and car provided for professional use. Mixed practice.—Address No 4824 B.M.A. House Tavistock Square W.C.1

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Outdoor ASSISTANTS for town and country practices with and without view to partnership. Good salaries offered.—State full particulars. BRITISH MEDICAL BUREAU 33 Cross Street, Manchester 2

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ASSISTANT male own car for mixed Practice in South Wales. Salary £350 per annum plus £50 car allowance and partly furnished house. British nationality.—Address, No 4394 B.M.A. House Tavistock Square, W.C.1

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male reliable ASSISTANT for large and interesting industrial practice within half an hour of Piccadilly Circus and ten minutes of the open country. Initial salary £312 per annum and all found with an increase as soon as he proves his capabilities. Usual bond Dispenser kept.—Address, No 4441 B.M.A. House, Tavistock Square W.C.1

WANTED IN PLEASANT LANCASHIRE

town outdoor ASSISTANT preferably Scots. Would suit recently qualified graduate. Salary £400. Applicants please state nationality age, and religion.—Address No 3558 B.M.A. House, Tavistock Square, W.C.1

WANTED MALE, MARRIED ASSISTANT

for practice near Birmingham. Good house provided and good salary to suitable applicant. Allowance for own car usual bond references.—Address No 4634 B.M.A. House, Tavistock Square, W.C.1

WANTED — MARRIED ASSISTANT

Pleasant country Practice in West Country—work light. Salary about £400 plus car allowance and small unfurnished house. Would suit recently married man.—Address No 4505 B.M.A. House Tavistock Square W.C.1

WANTED—OUTDOOR ASSISTANT EARLY

July in a pleasant rural district, N. Wales (small town with Hospital) must be able to drive car. Work light.—Address No 4613 B.M.A. House Tavistock Square, W.C.1

ASSISTANT REQUIRED FOR GENERAL

practice, W. London suburb near Wembley male to live in bachelor principal age 36. Practice growing fast. Share for keen man in near future. Previous experience G.P. preferred but not essential. Salary £300 per annum with keep and certain extras.—Address, No 4643 B.M.A. House Tavistock Square, W.C.1

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to partnership by Scotch M.B., married. Experienced hospital and G.P. Preferably with unfurnished house. Town or country.—Address, No 4817 B.M.A. House, Tavistock Square W.C.1

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surgical and paenal Practice in Lancashire. Good salary and prospects offered to good amateurist keen on midwifery.—Address No 4444 B.M.A. House Tavistock Square W.C.1

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plete charge of house—furniture and car necessary—£450 per annum. Share worth £1000 to purchase at 2 years.—Address No 4843 B.M.A. House, Tavistock Square W.C.1

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Practice. Only town. Fine opportunity for acquiring experience in all branches of medicine. Indian preferred. State age, qualifications ref and enclose photo.—Address, No 4825 B.M.A. House, Tavistock Square W.C.1

OUTDOOR ASSISTANT REQUIRED FOR

well-established and expanding country practice in East Midlands. Recently qualified, unmarried man preferred. Salary £400 and £50 car allowance. A share in the practice by mutual agreement after three to six months. For further particulars, apply —J. Cammille A.C.A. 44, Silver Street Lincoln.

OUTDOOR ASSISTANT WANTED FOR

good-class medium-sized practice in residential district in Surrey. Small panel. Work light. Half share would be sold later to suitable man. Salary £400 a year.—Address No 4812, B.M.A. House Tavistock Square, W.C.1

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requires ASSISTANT with view to early Partnership to suitable man. Applicants must hold D.M.R.E. or equivalent qualification.—Address, No 4827 B.M.A. House Tavistock Square W.C.1

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Pleasant Essex suburb. General Practice mainly women and children. No midwifery. Full particulars. Address No 4806 B.M.A. House, Tavistock Square W.C.1

MEDICAL POSTS, DISPENSERS

WANTED ABOUT AUGUST 1st ASSISTANT

MEDICAL OFFICER for Prov. Private Mental Hospital. Previous Mental Hospital experience not necessary. Duties light. Ample time for study.—Address No 4801 B.M.A. House Tavistock Square W.C.1

A Course of Training in Dispensing and

Pharmacy is given at GORDON HALL SCHOOL OF PHARMACY and Secretary Dispensers can be supplied to Doctors. Sessions January April and September.—Apply Principals, School of Pharmacy Drayton House Gordon Street, W.C.1. Phone Euston 3930

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LOCUMS

WANTED LOCUM ST JOHN'S WOOD August 1 Fully worked practice No night work State are experience terms English or Scotch preferred Prospects right man—Address No 4508 B.M.A. House Tavistock Square W.C.1

WANTED LOCUM TENENS FOR 3 WEEKS from July 4th Country Practice South West Drive car British 7 guineas or 8 guineas weekly with own car State are and experience—Address No 482 B.M.A. House, Tavistock Square W.C.1

LADY LOCUM WANTED 6 WEEKS FROM August 1st London Particulars and testimonials to Address No 4816 B.M.A. House Tavistock Square W.C.1

LOCUM REQUIRED (FEMALE) WITH GOOD experience from July 28th to August 28th inclusive Doctor must have own car Good panel and private practice Terms £8 8s weekly Board Residence at Doctor's house Chauffeur in attendance if required Car expenses allowed—Apply Day Johnson and Boot, Solicitors 6 Park Row Nottingham

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PARTNERSHIPS

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PARTNER WANTED FOR OLD-ESTAB- lished non panel Practice in residential town North of England Might suit retired M.S. officer Ready capital not essential—Address, No 4834 B.M.A. House, Tavistock Square, W.C.1

S COAST—PARTNERSHIP IN RAPIDLY increasing practice in good-class resort dental seaside town averaging about £3,000 p.a. Visits 4d to 10d. 6d Panel nearly 2,000 Good Hospital Incoming partner should be well qualified and good surgeon Three-quarters share for sale at two and a-half years purchase—Address No 4234 B.M.A. House, Tavistock Square, W.C.1

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BRITISH MEDICAL JOURNAL,

B.M.A. HOUSE, TAVISTOCK SQUARE, LONDON W.C.1

APPOINTMENTS.—Contd

BOROUGH OF ILFORD

- APPOINTMENT OF
(a) ASSISTANT MEDICAL OFFICER OF HEALTH (male)
(b) ASSISTANT MEDICAL OFFICER OF HEALTH (female)

Applications are invited from legally qualified medical practitioners for the undermentioned whole-time appointments.

(a) ASSISTANT MEDICAL OFFICER OF HEALTH (male) at a commencing salary of £500 per annum rising by annual increments of £25 to a maximum of £700 per annum for duties in connection with the Maternity Child Welfare and School Medical Services and other Public Health work. Candidates must possess the Diploma of Public Health or similar qualification.

(b) ASSISTANT MEDICAL OFFICER OF HEALTH (female) at a commencing salary of £400 per annum rising by annual increments of £25 to a maximum of £550 per annum with free board and residence at the Corporation's Isolation Hospital for duties in connection with Maternity and Child Welfare work School Medical Inspection and general Public Health work. Candidates must possess the Diploma of Public Health or similar qualification.

Both the above appointments will be subject to the provisions of the Local Government and Other Officers Superannuation Act 1922 and to formal agreement and the selected applicant will be required to pass a medical examination by and to the satisfaction of the Medical Officer of Health. The appointment will also be subject to three months' notice on either side.

Applications on the prescribed form obtainable from my office must be received by me at the Town Hall Ilford not later than Tuesday July 6th 1937.

Canvassing directly or indirectly will be a disqualification.
Town Hall Ilford
June 22nd 1937
CHARLES N ROBERTS
Town Clerk

THE KING EDWARD VII WELSH NATIONAL MEMORIAL ASSOCIATION

Applications are invited from duly registered medical practitioners (male single) for the post of RESIDENT MEDICAL OFFICER (twelve months appointment) at the South Wales Sanatorium (86 beds for male pulmonary cases) Talgarth Breck.

Salary £350 per annum plus maintenance. Preference will be given to applicants who have held the post of House Physician or House Surgeon at a general hospital and have had institutional experience in the treatment of pulmonary tuberculosis.

Applications stating age qualifications experience, etc. together with copies of three recent testimonials should reach the undersigned not later than Thursday July 1st 1937.

Memorial Offices D. A. POWELL,
Westgate Street, Principal Medical Officer
Cardiff

BOLINGBROKE HOSPITAL
Wandsworth Common S.W.11
(135 Bed)

HOUSE PHYSICIAN (Male, unmarried) required. The appointment is for six months commencing on August 1st 1937. Salary £150 per annum with board residence and laundry.

Candidates must be fully qualified and registered. Applications stating age qualifications and experience with copies of not more than three testimonials should be sent to the undersigned on or before July 1st 1937.

W. S. RANDOLPH BISS
Secretary Superintendent.

WEST END HOSPITAL FOR NERVOUS DISEASES

IN PATIENT DEPARTMENT GLOUCESTER GATE REGENT'S PARK N.W.1

The Committee of Management invites applications for two RESIDENT HOUSE PHYSICIANS (male) duties to commence September 1st. Salary at the rate of £125 per annum with board residence and laundry.

Preference will be given to candidates who have held a resident appointment in a general hospital OUT PATIENT DEPARTMENT 73 WELBECK STREET W.1

The Committee of Management also invites applications for an HONORARY MEDICAL PSYCHOLOGIST (with experience) and an HONORARY CLINICAL ASSISTANT both for the Child Guidance Department.

Further information about any of these appointments may be obtained from the undersigned by whom applications with copies of not more than three recent testimonials should be received not later than Monday July 12th.

J. P. WETENHALL
Secretary and House Governor
73 Welbeck Street W.1

ROYAL LONDON OPHTHALMIC HOSPITAL
(MOORFIELDS EYE HOSPITAL)
City Road E.C.1

Applications are invited for the post of OUT PATIENT OFFICER to attend on Tuesdays and Fridays (mornings) each week.

Candidates must be registered Medical Practitioners.

Salary at the rate of £100 per annum. The Out Patient Officer will be appointed for a period of one year and will be eligible for reappointment. Copies of regulations can be obtained on application.

Applications with testimonials stating age and qualification together with photograph must be received by the undersigned not later than July 10th 1937.

A. J. M. TARRANT
Secretary

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST
Brompton S.W.3

The Committee of Management invite applications for the following posts:

HOUSE PHYSICIAN for which there are three vacancies. The duties include work in the Out patient Department as well as in the Wards. The appointment is for six months commencing August 1st with an honorarium of £50.

HOUSE PHYSICIAN (male) at the SANATORIUM at FRIMLEY. The appointment is for six months commencing August 1st with an honorarium of £50.

Applications with copies of testimonials must reach the undersigned not later than Saturday July 10th.
Brompton
June, 1937
F. G. ROUVRAY
Secretary

ROYAL MASONIC HOSPITAL
Ravenscourt Park W.6

Appointments (two) as RESIDENT SURGICAL OFFICERS (Male) will be vacant on August 1st and September 1st 1937. Salary at the rate of £250 per annum with board residence and laundry. The appointments are for six months. Candidates must be registered and have held resident appointments at a general Hospital. The Institution (145 beds at present but to be increased) is primarily for paying patients of both sexes of moderate means usually unable to afford ordinary Nursing Home treatment etc.

Applications stating full particulars to be sent on or before Friday July 16th 1937 to the Honorary Secretaries from whom further information may be obtained. The Medical Advisory Committee will meet on July 19th 1937.

SWANSEA GENERAL AND EYE HOSPITAL.
(136 Beds)

HOUSE SURGEON wanted. Gentleman single. Salary £150 per annum with board residence and laundry. Appointment for six months. Duties to commence early July.

Application stating age nationality qualifications and experience together with copies of three recent testimonials to be forwarded to the undersigned.

O. C. HOWELLS
Secretary Superintendent.

LONGTON HOSPITAL STOKES-ON-TRENT
(50 Beds)

HOUSE SURGEON (male or female) required. Commencing salary £160 with board residence and laundry plus certain fees.

Applications with copies of recent testimonials and stating nationality to be sent to the Chairman of Directors' Longton, Stoke-on-Trent.

SEAMEN'S HOSPITAL SOCIETY

The Committee of Management invite applications for the appointment of RESIDENT MEDICAL SUPERINTENDENT at the HOSPITAL for TROPICAL DISEASES Gordon Street W.C.1

The appointment will be tenable for two years renewable for a further year at the discretion of the Board of Management. Salary £400 per annum with board-residence and laundry. Candidates who should be single must be legally qualified and registered and if possible have had experience in tropical medicine. Membership of the Royal College of Physicians is desirable but not essential. Applications stating age with copies of not more than three recent testimonials to be sent in on or before July 1th, 1937 to The Secretary.

June 18th 1937 Seamen's Hospital Society
Greenwich London S.E.10

ROYAL LONDON OPHTHALMIC HOSPITAL
(MOORFIELDS EYE HOSPITAL)
City Road E.C.1

Applications are invited for the office of ASSISTANT SURGEON to the above Hospital. Candidates must be Fellows of the Royal College of Surgeons of England.

Canvassing is not permitted. Candidates are, however requested to send copies of their application and testimonials to the Members of the Committee of Management and the acting Medical and Surgical staff whose names and addresses can be obtained on application to the Secretary.

Applications stating age with copies of testimonials must be received not later than July 19th 1937.

ARTHUR J. M. TARRANT
Secretary

VICTORIA HOSPITAL FOR CHILDREN
The Square Chelsea S.W.3
(138 Beds)

The Committee of Management invite applications for the posts of HOUSE PHYSICIAN and HOUSE SURGEON (both vacant August 1st 1937). The appointments are for six months. Salaries at the rate of £100 p.a. with board lodging washing.

Candidates must hold Medical and Surgical qualifications and be registered under the Medical Acts. Applications with copies of three recent testimonials should be sent to the Secretary not later than first post Thursday July 8th.
D. ST. JOHN BAMFORD
Secretary

NEW SUSSEX HOSPITAL FOR WOMEN
WINDLESHAM ROAD BRIGHTON

Applications are invited from fully qualified Medical Women for the post of HOUSE SURGEON for six months. Duties to commence on July 5th. Salary at the rate of £100 per annum.

Also for the post of HOUSE PHYSICIAN for six months. Duties to commence on July 19th. Salary at the rate of £100 per annum. Applications with copies of three recent testimonials, to be sent not later than June 30th to the Secretary New Sussex Hospital Windlesham Road Brighton.

June 22nd 1937

WORKING AND DISTRICT VICTORIA HOSPITAL (General) (50 Beds)

REQUIRED Male or Female RESIDENT MEDICAL OFFICER (unmarried) for August 1st 1937. British born. Salary £120 per annum with board residence and laundry. Appointment for minimum period six months. Applications to reach Hon. Secretary by July 19th.

NORTH ORMESBY HOSPITAL
MIDDLESEXBOUGH

HOUSE SURGEON (Male) required for holiday relief duty from July 17th to August 14th 1937.

Remuneration five guineas per week with board residence. Applications stating age qualifications and experience to be sent to the undersigned.

GEORGE WATTS
Secretary Superintendent.

RESIDENT MEDICAL OFFICER REQUIRED
Male British nationality for ASHFORD HOSPITAL Kent (90 Beds.) Salary £150 per annum. Please state experience and qualifications. Candidates must be unmarried and under 35 years of age. Duties to commence July 1st 1937. Applications with three recent testimonials to be sent to the Hon. Secretary.

DURHAM COUNTY MENTAL HOSPITAL.

LOCUM TENENS ASSISTANT MEDICAL OFFICER required for the month of August 1937. Salary one guinea per day together with usual residential emoluments.

Applications to be sent without Medical Superintendent Durham County Hospital Warton Sedburgh.

THE LONDON CHEST HOSPITAL

Formerly City of London Hospital for Diseases of the Heart and Lungs.
Victoria Park, E. 2.
(Rail Bus and Tram Cambridge Heath L.N.E.R.)

Applications are invited for the post of ASSISTANT TUBERCULOSIS OFFICER in connection with the Tuberculosis Dispensary for the Metropolitan Boroughs of Bethnal Green and Hackney established at the Hospital. The Dispensary is under the control of a Joint Committee and the Committee of Management of the Hospital. The appointment is subject to the approval of the Ministry of Health and the London County Council. Applicants must have held a resident appointment in a General Hospital and have had special experience in the treatment and diagnosis of Tuberculosis and be not over 35 years of age.

Commencing salary £600 rising by annual increments of £25 to £700 with lunch or dinner provided according to hours of duty. A contributory pension arrangement is in force. The officer will be required to devote his whole time to the duties of the office. The appointment will be terminable by three months' notice on either side.

Applications upon forms to be obtained from the undersigned together with copies of three recent testimonials, must be received not later than Saturday July 3rd 1937.

Canvassing is prohibited except as regards members of the Medical Staff of the Hospital who will advise on the applications.

GEORGE WATTS Secretary

THE HOSPITAL FOR SICK CHILDREN

Great Ormond Street London W.C.1

A RESIDENT MEDICAL OFFICER is required in the Country Branch Hospital, Tadworth Court Tadworth Surrey on October 1st, 1937.

The appointment is tenable for six months but is renewable. Salary at the rate of £250 per annum. Candidates must be unmarried and possess a legal qualification to practise and must have held a responsible resident appointment at a General Hospital.

Applications accompanied by copies of not more than three testimonials, given specially for the purpose must be delivered to the undersigned not later than Monday July 5th 1937.

All Candidates must be in attendance to appear before the Joint Committee at their Meeting on Wednesday July 7th 1937 at 4.45 p.m.

Forms of application and copies of the Rules are obtainable from the undersigned.

HERBERT F. RUTHERFORD
Secretary

HOSPITAL OF ST JOHN & ST ELIZABETH

60 Grove End Road, N.W. 8

Applications are invited for the post of RESIDENT HOUSE PHYSICIAN (male). The post is recognized for the Degrees of M.D. London University. The appointment will be for six months from August 1st, 1937. Salary at the rate of £100 per annum with full board.

Applications together with copies of three testimonials, should reach the undersigned by June 28th, 1937.

F. DUDLEY HOBBS B.A.
Secretary

ROYAL NATIONAL ORTHOPAEDIC HOSPITAL

Applications are invited for the posts of HOUSE SURGEON (two) Male and female at this Hospital's country branch at Brockley Hill Stanmore Middlesex 278 Beds (160 cases of surgical tuberculosis).

Salary £150 per annum with board quarters and laundry. The appointments are for six months. Outlets to commence one on August 1st and one on September 1st. Applications with copies of testimonials should be sent to the Secretary 234 Great Portland Street London, W.1 not later than July 6th.

HOSPITAL FOR TROPICAL DISEASES

The Committee of Management of the Seamen's Hospital Society invite applications for the appointment of OPHTHALMIC SURGEON. Candidates should hold a Diploma in Ophthalmology and have experience of Ophthalmic work in the tropics.

The elected candidate will be appointed for twelve months but will be eligible for re-election.

Applications with copies of not more than three testimonials, to be sent in on or before July 2nd to the Secretary Hospital for Tropical Diseases, 5 Gordon Street, W.C.1.

MARIE CURIE HOSPITAL

(Centre for Treatment of Cancer in Women by Radium and X Rays)

Applications are invited from qualified medical men for the post of ASSISTANT DIRECTOR. Experience in gynaecological surgery, essential. Salary according to experience from £500 p.a.

Applications with copies of three recent testimonials to be sent to the Secretary, Fitzjohns Avenue N.W.3.

THE SOUTH LONDON HOSPITAL FOR WOMEN

Clapham Common S.W.4
(140 Beds.)

A General Hospital for Women and Children. Applications are invited from fully qualified medical women for the under-mentioned appointments.

HOUSE SURGEON for a period of six months from July 12th 1937.

HOUSE SURGEON for a period of six months from September 1st, 1937.

Salary at the rate of £100 per annum with board residence and laundry. Candidates are requested to call on members of the Hon. Medical Staff and send applications and copies of testimonials for the July appointment to the Secretary at the Hospital as soon as possible and for the September appointment by Tuesday July 13th.

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

CASUALTY AND OUTPATIENT OFFICER

Applications are invited from fully-qualified and registered medical men (only) for the above post salary at the rate of £150 per annum.

The Hospital contains 219 Beds including 30 for Maternity patients. Candidates who must be single and who should previously have held Hospital appointments should send applications accompanied by testimonials to the undersigned at once.

The appointment is for six months and will date from July 1st, 1937.

RAPHAEL JACKSON Major
Secretary

QUEEN MARY'S HOSPITAL FOR THE EAST END E.15

Applications are invited for the post of ANAESTHETIST (Surgeon) to the above Hospital.

Applications, accompanied by copies of testimonials from male candidates only should be forwarded to the undersigned on or before Wednesday June 30th.

The Anaesthetist will be required to attend on Thursday mornings at 9 a.m. and the appointment carries with it an honorarium of 50 guineas per annum.

RAPHAEL JACKSON Major
Secretary

THE QUEEN'S HOSPITAL FOR CHILDREN HACKNEY ROAD E.2.

An additional VISITING ANAESTHETIST is required. Candidates must be registered medical practitioners and should have had special experience in the administration of anaesthetics. Attendance required on Tuesday mornings and possibly for one or more additional sessions. A fee of one guinea per attendance will be paid.

Applications should be sent to the undersigned accompanied by copies of not more than three testimonials to arrive by July 1st.

CHARLES H. BESSILL
Secretary

CHARING CROSS HOSPITAL.

Applications are invited for the post of HONORARY CLINICAL ASSISTANT to the X-RAY and ELECTRO-THERAPEUTICS Department.

Candidates should have by preference the qualification of D.M.R.E.

Applications together with copies of three recent testimonials, should be sent to the undersigned not later than first post, Monday June 28th, 1937.

GEORGE J. JONES
Charing Cross Hospital.
London, W.C.2. Secretary

CHARING CROSS HOSPITAL.

The Council invite applications for the post of HONORARY ORTHOPAEDIC SURGEON in the Charing Cross Hospital.

Candidates who must be Fellows of the Royal College of Surgeons of England should send in their applications together with copies of three testimonials, to the undersigned not later than first post, Monday June 28th 1937.

GEORGE J. JONES
Charing Cross Hospital.
London W.C.2. Secretary

KINGS COLLEGE HOSPITAL.

The Committee of Management invite applications for the post of ASSISTANT NEUROLOGIST. Candidates must be Fellows or Members of the Royal College of Physicians (London).

Applications with copies of three testimonials should be sent before July 10th to the House Governor King's College Hospital Denmark Hill S.E.5 from whom particulars of the duties may be obtained.

ROYAL FREE HOSPITAL ORAY'S INN RD LONDON W.C.1

Applications are invited from Medical Women of six months or more experience for the post of INPATIENT OBSTETRIC ASSISTANT (Anaesthetic duties included). The appointment is for six months from August 1st 1937.

Application forms may be obtained from the undersigned and should be duly filled in and returned on or before July 10th.

RICHARD T. BARTLEY
Secretary

LOUTH AND DISTRICT HOSPITAL.

Applications are invited for the posts of HONORARY CONSULTING ORTHOPAEDIC SURGEON and HONORARY CONSULTING PHYSICIAN to the above Hospital.

Applications should be sent to Dr. R. Thomson Bridge Street, Louth from whom further particulars can be obtained.



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SOUTH LONDON SUBURB—Old-established middle and working-class PRACTICE in busy locality. Excellent corner house recently re-decorated on lease at £100 p.a. Receipts average £1 200 p.a. Panel 880. Two Appointments. Premium 2 years purchase or near offer.

SOUTH DEVON—Better-class Country PRACTICE close to sea. Excellent house (6 bedrooms) to be rented at £50 p.a. Receipts for 1936 over £1 000. Panel 270. All-round scope.

Financial Assistance arranged.

Premium to include drugs surgery fittings etc. £2 000 or near offer.

NEAR HARROW MIDDLESEX—Better middle-class PRACTICE established 2 years ago. Excellent corner house for sale freehold. Receipts average over £560 p.a. Panel 430. Rapidly increasing. Premium 14 years purchase.

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WILTS—COUNTRY—D.V. SHARE worth about £1 100 p.a. Panel 700. Appis £150. Fees 3/6 to 10/6. House 5/6 bed garage, tennis court etc. For sale. Good Hospital. Scope Surgery—3.

MIDDY. SUBURB—ABOUT £500 P.A., increasing. Panel 350. Visits 5/- to 7/6. Premium £400. Small house to rent—4.

PROSPEROUS N.E. COAST TOWN—£2 000 p.a. Old-established. Panel 2 200. Appis £250. 1 share for disposal. 2 years purchase—5.

LONDON E.—OLD ESTABLISHED £14/1500. Panel 2 100. Medium house to rent at about £100 p.a. Premium £3 400 or offer—6.

N KENT—OVER £700 P.A. PANEL about 500. Appis about £50 p.a. House (4 bed) rent £70. Premium £850 for quick sale—7.

MIDDLESEX—NUCLEUS ESTD 21 MTHS Receipts last year £350. Panel 70. Detached house 3 bed etc. Rent £90 p.a. Premium £350—8.

LEICS—SHARE WORTH APT £1 500 p.a. Panel and mixed operating surgeon read pref. F.R.C.S. Premium 2 yrs. purchase—9.

SOUTH COAST WITHIN 100 MILES—Average £1 200. Medium panel. Good fees. Good family house (5 bed) and good garden for sale—10.

SURREY TOWN—£500 p.a. Panel 160 and scope. Club £30. Fees 5/-, Small house to rent. Premium £750 or near—11.

S. DEVON—NEAR COAST—Over £1 000 p.a. rapidly increasing. Small panel. Premium 2 years purchase. 8/9 roomed house to rent—12.

HERTS—PROMISING NUCLEUS about £400 p.a. Panel 525. Premium £500. Good house, garden and garage. Freehold £1 500—13.

EAST YORKS—CLEAN TOWN—SHARE worth about £1 200 after preliminary assistance. Middle and working-class and panel of 2 600. Premium 2 years purchase. Choice of houses—14.

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S. WALES—£1 400 P.A. INCREASING 98 per cent. panel and contract. Very little midwifery. Good house. 5 bed 2 recep surgery, etc. Rent only £40 p.a. Premium £2 000 including drugs fittings etc—16.

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SURREY—A SHARE OF £2 100 P.A. in steadily increasing PRACTICE. Visits 2/6 Midy 42/- Large panel. Premium £1 350. Choice of houses to rent or buy—18.

LONDON S.E.—SUBURBAN GOOD-CLASS non-panel non-dispensing. Over £800 p.a. Fees 5/- up. Imposing corner family house to rent at £95 p.a. Premium £1 250—19.

URGENT SALE—KENT COAST—Favourite Resort. Very old-established. Vendor retiring. Average over £600 p.a. Non-panel. Visits 21/- Good house 6 bed. Sell or let. Premium £750 for quick sale—20.

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1 LONDON E DEATH VACANCY—Old established PRACTICE averaging £2,346 p.a. of which about 50 per cent is derived from panel work. Corner house in excellent repair (4-5 bedrooms).

2 LONDON, N W—PARTNERSHIP in increasing Practice in new developing area. Cash receipts year ended 31st March 1937 £2,862. Panel 2,830. Good house with central heating (5 bedrooms etc.) to rent or for sale. Premium for half share £2,750 or possibly the whole would be sold.

3 S OF ENGLAND—PARTNERSHIP in old established Practice averaging £5,465 p.a. in attractive residential country district. Panel 2,548. Suitable house could be obtained. Premium for one-fifth share two years purchase.

4 S MIDLANDS—PARTNERSHIP in steadily increasing Practice averaging £2,500 p.a. in good town. Panel 1,800/1,900. Good house (3 bedrooms) to rent. Incoming partner should be aged about 35 and experienced in gynaecology and preferably hold F.R.C.S. or M.C.O.G. Premium for one third share two years purchase.

5 LONDON E—Middle-class PRACTICE of over £2,400 p.a. in outlying district. Panel 2,870. House in good repair. Garage and garden. Freehold for sale. Premium two and one-quarter years.

6 EAST ANGLIA—Old-established country PRACTICE of nearly £1,100 p.a. Panel 832 returning for 1936 £482 and appointments. Good house (3 bedrooms) garden and garage. Rent £40 p.a. Premium two years purchase.

7 S OF ENGLAND—PARTNERSHIP (after preliminary assistantship) in Practice about £4,500 p.a. in market town within 100 miles of London. Fees 5/ to £1 1s. One fifth share would be sold to suitable man (after six months preliminary assistantship) at two years purchase. Hospital and scope for surgeon.

8 S OF ENGLAND—PRACTICE of about £300 p.a. carried on by a medical woman in a cathedral town. Panel 100. House (2 bedrooms etc.) to rent. Premium £500.

9 AUSTRALIA—Old-established PRACTICE of £1,400 p.a. in agricultural township. Good house (3 bedrooms etc.) for sale. Premium £1,400 and £250 for 1/4 acre plant.

10 S W OF ENGLAND—PARTNERSHIP in old established Practice averaging over £3,750 p.a. in attractive country town. Panel 2,300. Visits 3/6 to £1 10s. Choice of two houses (one for sale the other to rent). Hospital and prospect of appointment. Premium one third or two-fifths share at two years purchase.

11 MIDLANDS—Old-established PRACTICE in beautiful country district. Cash Receipts last year £1,280 including appointments worth about £60 and a paecil between 650 and 700. Visits 2/6 to £1 1s without medicine. Nicely situated house (4 bedrooms dressing room etc.) with nice garden and two garages. Rent about £80 p.a. Premium two years purchase.

12 S OF ENGLAND—PARTNERSHIP in old-established Practice about £3,500 p.a. in small country town under 100 miles from London. Panel over 2,000. Pleasantly situated house (5/6 bedrooms) garage and nice garden. Premium two-sevenths share two years purchase.

13 LONDON N—Well-established PRACTICE averaging £450 p.a. in pleasant district. Panel about 600. Well situated house on main road. Rent about £65 p.a. Good scope—building going on. Premium £600 or offer to include surgery fittings and drugs.

14 N WALES BORDER—PARTNERSHIP (with early succession) in old-established County Practice about £2,500 p.a. in important town. No panel. Surgery premises could be purchased or rented. The private residence is available if required. A share up to one half would be sold at first with early succession. Premium two years purchase.

15 CHANNEL ISLANDS—Old established mixed PRACTICE, averaging £1,235 p.a. including appointments worth £90-£100 p.a. Visits 5/ to 10/- Midwifery refused but scope. Convenient house in best residential quarter for sale or rent. Partnership introduction up to six months. Good schools. Premium £2,000.

16 DEATH VACANCY—ESSEX SUBURB—Receipts average nearly £850 p.a. Panel 423. Semi-detached house (4 bedrooms). Price £800 freehold. Reasonable offer accepted.

17 LONDON, S W 1—SPECIAL PRACTICE for catarrhal conditions nasal catarrh, hay fever asthma etc. etc. about £1,000 p.a. in commanding position in Grosvenor Place. Consultations 13 guineas. Special terms for series of treatments. Excellent accommodation to rent at £100 p.a. on lease. Scope. Premium one and a-half years purchase.

18 SEASIDE TOWN WITHIN AN HOUR OF LONDON—Very old-established PRACTICE. Receipts average £625 p.a. Panel about 300. Nice detached house (5 bedrooms) with garage and garden for sale or rent. Good scope. Premium £1,000.

19 SCOTLAND—Good class family PRACTICE average income £1,300. Panel over 900. Also House for sale. Reasonable premium.

20 MIDDLESEX—NUCLEUS OF PRACTICE in growing district about ten miles from London. Receipts last twelve months £355. Panel 90. Modern detached house (3 bedrooms etc.) to rent. Good scope. Premium £350.

21 SURREY—Very old established PRACTICE doing over £1,550 in populated suburban area. Panel 1,300. Visits 3/6 to 10/6. Rent of private residence (6 bedrooms dressing room etc.) garage and fair-sized garden £80 p.a. Surgery close by for sale or rent. Scope. Premium one and three-quarter years purchase.

22 RESIDENTIAL DISTRICT WITHIN 15 MILES OF LONDON—Old-established PRACTICE. Receipts last year over £2,000. Panel about 1,600. Visits 3/6 to 10/6. Nice residence (4 bedrooms dressing room, etc.) good garage and garden for sale or rent.

23 S.E. COAST—Very old established upper-class non dispensing PRACTICE, averaging £600 p.a. in residential part of popular seaside resort. No panel. Visits 4/ to £1 1s and £2 2s. No Midwifery. Good house (6 bedrooms) for sale or rent. Definite scope for increase. Premium £750.

24 LONDON (Western District)—PARTNERSHIP in Practice averaging about £3,550 p.a. including panel. House containing 4 bedrooms etc. large garage and nice garden for sale. One third share at first. Premium two years purchase.

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Practices and Partnerships for Disposal (continued)

25 MIDLANDS—Old established non dispensing PRACTICE in first rate residential town Cash receipts average £1 640 p.a. Panel 560 House contains 6 bedrooms etc., garage and small garden Price £2 400 freehold Scope. Hospital Premium £2 850

26 LONDON, S.W.—Old-established good-class non-dispensing PRACTICE in neighbourhood of Victoria Receipts last year over £660 including an appointment worth £60 and panel of about 200 Visits range from 3/6 to £1 1s mostly 10/6 to 12/6 No Midwifery Nice flat (3 bedrooms), rent £275 p.a. on lease inclusive. Scope Premium £1,200

27 E MIDLANDS—Old-established country PRACTICE, averaging nearly £650 p.a. in pleasant village Appointments worth over £150 and panel 500 Charming stone built house (6 bedrooms) with central heating main electric light and power and water supply Large garage garden about 1½ acres Price freehold £1 700 Scope Premium, two years purchase

28 SURREY—NUCLEUS OF PRACTICE in one of the best outlying rapidly growing districts Receipts last year £280 Panel 87 Modern detached (specially built) house (4 bedrooms, etc.), with garage and garden Price £1 765 freehold Plenty of scope for energetic man Premium £300

29 LONDON—Well-established RADIOLOGICAL PRACTICE in thickly populated suburban district Receipts last three years averaged £1 060 p.a. Fees range from 10/6 to £8 8s House containing 10 rooms would be sold for £800 or let at £50 p.a. on lease Good introduction Premium £1 800

30 KENT—Old established and steadily increasing PRACTICE (in hands of Medical Woman) in rapidly developing district Receipts last year £680 No panel Visits mostly 5/- medicine extra Suitable residence could be obtained Excellent scope Premium £1 000

31 W HAM—Old established PRACTICE Receipts average £2 125 p.a. including appointments worth about £260 p.a. and a panel of 1 800 Well situated corner house (about 6 bedrooms) and surgery accommodation with separate entrance Garage and fair size garden Rent £120 on lease Premium two years purchase

32 NE COAST—PARTNERSHIP (after preliminary Assistantship) in mixed Practice about £3 300 p.a. in seaport town Panel 2 600 A suitable house could be obtained One third share at first to suitable man at two years purchase (or near offer) with option to increase to two fifths in three years and to four ninths later

33 S OF ENGLAND—Old-established PRACTICE in agricultural district about two miles from the sea Cash receipts 1936 £995 including panel of 450 Fees 2/6 to £1 1s Medicine extra Good house (5 bedrooms 2 box rooms etc.) in half acre of ground with garage Central

heating Electric light Price freehold £1 800 Scope for increase Premium £1 700

34 S DEVON—Increasing PRACTICE of £1 000 in delightful country district Panel 260 Fees 7/6 to £2 2s House with 5 bedrooms garage and garden etc., to rent at £50 p.a. Scope Premium £2,000 or near offer

35 LONDON S.W.—Well established PRACTICE (held by Medical Woman) in outlying suburban district Cash receipts average £960 p.a. No panel but scope if desired Purchaser could have use of surgery premises and living accommodation with services by arrangement. Premium one and three-quarter years purchase

36 S COAST—PARTNERSHIP in very old established good middle-class Practice £4 690 p.a., in rapidly growing watering place Panel 4,000 Visits range from 3/6 to £1 1s Suitable house obtainable Scope One-fourth share would be sold at first at two years purchase

37 NE COAST—Old-established and easily worked middle and better working-class PRACTICE averaging over £1 150 p.a. in seaport town No panel—a few contracting out patients Visits 5/- to 15/- Rent of consulting rooms £26 p.a. A suitable residence could be obtained Good scope much building going on Premium £1,500 (Contents of consulting rooms—including X Ray plant and electrical apparatus—about £130)

38 W WALES—PARTNERSHIP in first-class country Practice near sea coast Good house available to rent Facilities for country sport and for golf tennis and bathing Premium for share of £1 200 to £1 500 one and a half years purchase Knowledge of Welsh desirable

39 MIDDLESEX—PRACTICE doing at rate of about £600 in growing town within 15 miles of London Panel 400 increasing Semi-detached house (2 bed and dressing rooms) with garage and garden to rent Scope for increase Premium £500

40 YORKSHIRE (NR)—Very old established and steadily increasing country PRACTICE between £1 400/£1 500 a year including appointments and panel worth £400 p.a. Extremely attractive house in central position (5 or more bedrooms) garage and small garden for sale Good schools and sport Scope Premium one and a half years purchase

41 WESTERN AUSTRALIA—Old-established PRACTICE averaging £1,235 p.a. in small town in centre of one of the best and most prosperous pastoral areas Brick built house (4 bedrooms) electricity and water Rented on lease Premium £640 sterling Two Hospitals in town

42 CORNWALL—Very old-established PRACTICE in delightfully situated seaside village Cash Receipts last 12 months £1,240 Panel over 500 Small expenses Detached house (5 bedrooms) with electric light main water etc garage and garden for sale Premium £2 100

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- 1 SUSSEX—PARTNERSHIP—A ONE FIFTH SHARE (producing approximately £800 p.a.) is for disposal in a particularly sound good mixed class Practice situated in beautiful country and residential district within easy reach of sea. Fees from 3/6. Suitable house with 2 sitting 6 bedrooms, separate professional rooms. Half an acre of garden, garage for two cars. Sport of all kinds and good schools within reach. Incoming partner should be married a graduate and aged between 30 and 35.
- 2 NORTH WEST COAST—SUBURB OF FAVOURITE SEASIDE RESORT—Well-established middle-class PRACTICE, steadily increasing, with good scope for further development. Gross cash receipts for immediate past 12 months £1 458 including Panel of about 400. Visits 5/ upwards, medicine extra. Very nice house with ample accommodation and garden can be rented at £104 p.a. Good sport and excellent educational facilities. Premium £2,004. Vendor retiring.
- 3 LONDON SOUTH EAST—Middle-class PRACTICE held by vendor nearly 30 years averaging over £700 p.a. Panel of 376 and one appointment worth £25 p.a. Roomy house with good garden and garage. Leasehold for sale.
- 4 OUTLYING NORTHERN DISTRICT—Old-established non Panel good mixed-class PRACTICE held by vendor (who is retiring) many years. Average gross cash receipts approximately £1 400. Fees 3/6 to 15/. Good house with 2 reception 7 bedrooms, etc., garden, garage. On rental. Premium 2 years purchase.
- 5 DEATH VACANCY—CUMBERLAND—Unopposed old-established PRACTICE situated in beautiful country district near sea and held by late incumbent 30 years. Gross cash receipts average about £1 000 p.a.; including Panel worth over £250 p.a. and appointments worth nearly £80 p.a. Suitable 8-roomed house with bathroom, surgery dispensary etc., garden garage. Rent £40 p.a. Shooting, fishing, golf etc. Premium 1 year's purchase.
- 6 OUTLYING EASTERN SUBURB—Sound PRACTICE established over 40 years and averaging approximately £1 700 p.a. including Panel of about 2,200 patients. Suitable accommodation can be rented at 30/ per week. Premium £4,000.
- 7 SUSSEX—VILLAGE PRACTICE NEAR COAST—Well-established Practice producing over £700 p.a. and capable of increase attractively situated within five miles of favourite seaside resort. Very nice house with 1/2 acre of garden, in excellent repair. Price for Practice and house, £3 100.
- 8 LONDON—SOUTH EAST—Mixed-class PRACTICE held by vendor (who is retiring) many years. Gross cash receipts approximately £700 p.a. Suitable house on rental.
- 9 WITHIN 8 MILES NORTH OF LONDON—PARTNERSHIP—Exceptionally sound, mixed-class Practice having good surgical connection. A share representing about £1 450 p.a. is offered with increase later. Total cash receipts average about £9 000 p.a. with substantial Panel and good appointments. Suitable house available. Premium 2 years purchase. Incoming partner must be experienced in and able to undertake major surgery and preferably hold the Fellowship.
- 10 LONDON—WESTERN DISTRICT—Old-established Private PRACTICE for disposal after being held for many years by the Vendor who is retiring. Approximate cash receipts for the last year amount to £1 062. There is stated to be scope for increase particularly if Panel work is undertaken and also midwifery. Fees 3/6 to 10/6. Small compact house available on rental at £90 p.a. containing consulting room 2 reception rooms 3 bedrooms, etc. Premium £1 800.
- 11 SUSSEX—DEATH VACANCY—Old-established PRACTICE for disposal it has been held by the Vendor for the past twelve years. The gross cash receipts for the last year were approximately £756. Panel of 424 patients. Fees 2/6 and 3/6 with a few midwifery cases at 3 guineas. Suitable house for disposal, containing 2 reception rooms 3 bedrooms, etc.
- 12 DEATH VACANCY—FAVOURITE SOUTH COAST TOWN—Old-established PRACTICE producing £800 p.a., of which about £600 is derived from a Panel of 1,200 patients, and an appointment producing about £30 p.a. House with 3 reception 4 bedrooms, etc., to be rented on lease. Premium £1,500 to include household fittings and fixtures.
- 13 SOUTH-COAST SEAPORT—Long-established PRACTICE for disposal owing to Vendor's retirement. He has held it for the past 39 years. Income last year approximately £573 with a Panel of about 460 patients. Vendor previously held a public appointment producing £450 p.a., which he relinquished owing to age limit. It is considered that anyone devoting whole time to the Practice would increase the receipts. Suitable accommodation available on rental.
- 14 HAMPSHIRE—VILLAGE PRACTICE NEAR COAST—Recently established Practice producing at the rate of about £260 p.a., and stated to be capable of considerable extension. Very nice small house to be rented on lease.
- 15 EASTERN COUNTIES—Mixed-class PRACTICE in pleasant agricultural district producing for last 12 months £1,300 p.a. Fees 3/6 to 21/. Nice house in good position with 2 reception, 4 bedrooms, dressing room, etc. Separate professional accommodation. Modern conveniences. Garden, garage. Price for freehold £1,300. Sport of all kinds and schools within reach.
- 16 MONMOUTHSHIRE—Middle-class PRACTICE established 20 years and producing for last 12 months £1 430 p.a. including small Panel of about 300. Fees 3/6 to 21/. Good house with 2 reception, 6 bedrooms, etc. Separate professional rooms. Garden, garage. Rent £125 p.a. Premium 11 years purchase.
- 17 EAST ANGLIA—WITHIN REACH OF TWO GOOD TOWNS—Old-established, unopposed country PRACTICE averaging over £1 000 p.a., including Panel producing over £450 a year. Low expenses. Detached house in own grounds, containing 2 sitting rooms, 5 bedrooms, etc. Rent £70 a year. Premium £1 750.
- 18 NORTH-WEST—Chiefly working-class PRACTICE producing for last 12 months £1 025, including Panel worth £438 p.a., and appointments worth over £400 p.a. Low expenses. Suitable surgery premises for sale. Premium to include surgery, £1,950.
- 19 LONDON—NORTH WEST—Recently established and steadily developing PRACTICE producing for last 12 months approximately £1 000 and increasing at the rate of about £200 p.a. Suitable house can be rented or flat obtainable. Premium 2 years purchase.
- 20 LONDON—SOUTH WEST (CROYDON AREA)—Old-established good middle-class PRACTICE producing for last 12 months £1,576 p.a. including Panel of about 1 300. Suitable house with 2 reception, 5 bedrooms, etc. can be rented at £80 p.a. Premium 2 years purchase or near offer. Illness reason for sale.
- 21 EASTERN COUNTIES—Very sound unopposed middle and working-class PRACTICE in agricultural district averaging £1 150 p.a., including Panel worth about £460 p.a. Fees from 3/. Nice house with 2 reception 6 bedrooms, etc., electric light, garden garage. Premium for Practice and house, £3 350.
- 22 NORTHERN SUBURB WITHIN 10 MILES OF HYDE PARK—Recently established better-class PRACTICE, steadily increasing and producing for last 12 months £760. Panel of about 560 and appointments worth £40 p.a. Good freehold house with 4 bedrooms, etc., garden garage. Price £1,450. Premium £1 450 or near offer. Vendor retiring.
- 23 EASTERN COUNTIES—COUNTRY TOWN—Well-established PRACTICE averaging about £1 100 p.a. including Panel of 1 061 and clubs producing about £350 to £400 p.a. Vendor retiring through ill health and age and states there is excellent scope for increase.
- 24 LONDON, NW—Recently established PRACTICE at present producing £220 p.a., but capable of good increase. Fees from 5/. Small flat available at £90 p.a., or could be worked as a lock-up. Premium 1 year's purchase.
- 25 OUTLYING NORTHERN DISTRICT—Recently established PRACTICE at present producing over £340. Suitable house on rental at £90 p.a. Premium £200.
- 26 SOUTHERN COUNTIES—Well established non Panel PRACTICE producing about £3 000 p.a. Fees from 5/. Suitable house can be rented.
- 27 NORTH EAST COAST—Old-established PRACTICE producing about £900 p.a. but stated to be capable of considerable increase. Choice of houses. Partnership introduction given, as vendor retiring.
- 28 MIDLANDS—FAVOURITE RESIDENTIAL TOWN—Chiefly better class non-dispensing PRACTICE, producing for last 12 months over £1,600. Panel of 560, one appointment worth £150 p.a. Fees 3/6 to 21/. Very nice house with ample accommodation, garden and garage. Freehold for sale. Premium 2 years purchase.
- 29 SOUTH EAST COAST—RESIDENTIAL TOWN—Old-established non dispensing better-class PRACTICE averaging for last 3 years about £1,450. Selected Panel of 500. Fees 3/6 to 21/. Ground floor flat containing large hall consulting room, 2 reception, 3 bedrooms, etc. Inclusive rent £190 p.a. Premium 2 years purchase.
- 30 CENTRAL LONDON—PRACTICE is worked as a Lock-up and averages about £1 000 p.a. Fees from 2/6. Suitable accommodation can be obtained. Premium 2 years purchase.
- 31 CROYDON AREA—Recently established PRACTICE. Receipts for last 12 months over £660 including Panel of 350. House with 3 bedrooms, etc., garden and garage can be rented at £85 p.a. Premium £750.
- 32 OUTLYING NORTHERN DISTRICT—Mixed-class PRACTICE, receipts last 12 months £1,290 including Panel of 1 000. Suitable flat above surgery available on retirement of Vendor. Premium 2 years purchase.
- 33 SUSSEX—ATTRACTIVE DISTRICT NEAR SEA—PARTNERSHIP—A ONE FOURTH SHARE is offered (after preliminary assistance of 6 to 12 months) in old-established Practice having good scope. Gross cash receipts for last 12 months approximately £3,275. Panel of about 1 300. Appointments worth over £300. Choice of houses on rental for incoming partner. Premium 2 years purchase.
- 34 SURELY RAPIDLY DEVELOPING AREA—Recently established PRACTICE producing for last 12 months £720 including Panel of 680. Suitable house can be purchased. Moderate premium. Ill-health reason for sale.
- 35 NORTH LONDON—Old-established PRACTICE producing about £700 p.a., including Panel of nearly 600 patients. Suitable house ample accommodation and good garden, garage to rent at £100 p.a. Premium £1,200.
- 36 SUSSEX COAST TOWN—PRACTICE established 45 years for disposal owing to retirement of Vendor. Present receipts about £608. There is stated to be scope for increase as receipts have fallen since Vendor's illness. Panel about 650. Large house can be rented at £150 or purchaser could probably choose own residence.
- 37 LONDON SOUTH EAST—Old-established PRACTICE producing about £1 830 p.a., including select panel of 500. Fees from 3/6. Suitable house available with 2 reception, 3 bedrooms, etc. Freehold for sale. Premium 2 years purchase.
- 38 MIDLANDS PARTNERSHIP—ONE HALF SHARE in mixed-class Practice in attractive district producing over £2,400 p.a. Panel of 1 369 and appointments worth about £130. Large house available or smaller one can be obtained. Premium 12 years purchase.
- 39 RIVERSIDE TOWN—Well-established middle-class PRACTICE producing for last 12 months approximately £940. Selected panel of 400 to 450 patients. Visits from 5/6. Very nice house in good position with ample accommodation. Garden. Garage. Price for freehold £2,000. Premium £1,250.
- 40 SOUTH CORNWALL—FAVOURITE COAST TOWN—Well-established PRACTICE averaging over £1,100 p.a., including selected panel of about 350. Fees from 5/. Good freehold house for sale or smaller house available. Premium £2,000. Vendor retiring.

WANTED TO PURCHASE—PRACTICE or PARTNERSHIP producing £500 p.a. upwards, and situated in N 6 or N 17 districts only

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LANCS TOWN—Old-established mixed-class PRACTICE. Cash receipts last year £2,750. Panel 2,494. Scope. Excellent House with good living and professional rooms, for sale or may be rented. Premium—1½ years' purchase—No 984

YORKSHIRE (W.R.)—Sound mixed Panel and Private PRACTICE. Cash receipts last year approximately £1,400. Panel 1,450. Good house 2 reception 4 bedrooms, 3 Professional rooms (separate entrance) garage and garden. Premium—Practice and house—£3,500—No 982

NOTTINGHAM—PARTNERSHIP in old-established mixed-class Practice. Cash receipts over £2,500 p.a. Panel over 3,000. Scope. Nice detached residence, 2 reception, 5 bedrooms, garage and garden. Premium—half share—2 years purchase—No 975

YORKSHIRE (W.R.)—PARTNERSHIP SHARE worth £1,700 p.a. with Panel of 1,169 and appointments £80 p.a. in practically unopposed Country PRACTICE. Nice detached house, 2 reception 4 bedrooms, garage, ½ acre garden and tennis lawn. Electricity etc. Premium—2 years purchase. Reason for sale—ill health of Vendor—No 985

MIDLANDS—Old-established mixed Panel and Private (non-dispensing) PRACTICE in large town. Cash receipts approximately £1,900 p.a. Panel 1,950. Good ten-roomed house nice garden with tennis court and garage. For sale or may be rented on lease. Premium—2 years purchase—No 983

MONMOUTHSHIRE—Old-established Panel Contract, and Private PRACTICE in prosperous district. Cash receipts last year £1,400. Panel 1,200 plus Contract work, yields £1,230 p.a. Good house 2 reception, 5 bedrooms, Professional rooms (separate entrance) and garage. Rent £40 p.a. Expenses low. Premium—£2,000—No 970

YORKSHIRE (W.R.)—Sound old-established middle and working-class PRACTICE in important city. If desired a two-fifths share would be sold now and remaining share in 12 months. Cash receipts last year £4,355 and increasing. Panel 2,600. Great scope. Excellent corner house with modern conveniences, 2 reception, 6 bedrooms, 3 Professional rooms, garage for 3 cars. Premium—Practice or Share—1½ years purchase. Vendor retiring owing to ill health—No 971

DEATH VACANCY—CUMBERLAND—Old-established unopposed Country PRACTICE. Cash receipts last year £1,032. Panel 350 and transferable appointments, £65 p.a. Excellent detached house beautifully situated 8 rooms. Professional rooms garage for 2 cars and large garden. Premium—best offer for quick sale—No 972

NEAR MANCHESTER—Sound middle and working-class PRACTICE. Average cash receipts £2,692 p.a. Panel over 2,500. Scope. Detached corner house 2 reception 4 bedrooms, 3 Professional rooms, garage and garden. Premium—1½ years purchase—No 952

NEAR NEWCASTLE-ON-TYNE—Colliery PRACTICE. Cash receipts last year £952. Panel 800. Scope. Good house to rent. Premium—1½ years purchase—No 978

DERBYSHIRE—Old-established PRACTICE in pleasant district near large town, offering great scope for increase owing to building developments. Suitable for two men in partnership. Cash receipts last year £3,436. Panel 3,394. Two good houses, with ample accommodation and modern conveniences, each with garage garden and tennis court. Premium—2 years purchase—No 955

YORKSHIRE (W.R.)—PARTNERSHIP in middle-class Practice with unlimited scope. Income £2,000 p.a. Panel 1,500. Good house to rent. Premium 3 8th share—2 years purchase. Half share in 2 years—No 979

YORKS (N.R.)—Old-established unopposed Country PRACTICE in beautiful district near to large town. Cash receipts approximately £1,200 p.a. (including £455 p.a. from Panel). Good house 2 reception, 5 bedrooms, large garden garage water gas and electric ty. Rent £70 p.a. on lease. Premium—2 years purchase or near offer to include drugs and fittings—No 973

MANCHESTER—Middle and better-class PRACTICE. In present hands 40 years. Cash receipts last year £2,151. Panel over 600. Good house 3 reception 6 7 bedrooms garage and garden. Premium—Practice and house—£3,000. Long introduction if desired. Vendor retiring—No 858

DERBYSHIRE—Country PRACTICE. Cash receipts £800 p.a. (including £480 from panel and appointments). Good house 5 bedrooms, garage and garden. Rent £50 p.a. Premium—£1,350—No 811

SHEFFIELD—Established PRACTICE. Cash receipts £1,112. Panel 600. House to rent at £52 p.a. Premium—1½ years purchase—No 940

LANCS TOWN—Mixed class PRACTICE. Cash receipts £1,084. Panel 1,050. Good house. Premium—1½ years purchase—No 951

NORTH WALES—Old-established PRACTICE near Sea and Country capable of great increase. Cash receipts last year £1,026. Panel 800. Nice surgery premises. Premium, best offer—No 905

LINCOLNSHIRE—PARTNERSHIP in old-established Country Practice in beautiful district. Cash receipts last year £2,801. Panel 2,000. Very good house 3 reception, 5 bedrooms, garage and garden of one ½ with tennis lawn etc. Rent £60 p.a. Premium—half share—£2,200—No 933

MANCHESTER—Well-established middle and better working-class PRACTICE in residential district. Cash receipts last year £1,122. Panel 740. Nice detached corner house 3 reception, 5 bedrooms, billiard room, garage and garden with tennis court. Premium best offer—No 968

SHEFFIELD—LIFE INSURANCE, MEDICAL REFERENCE connection, etc. Income £550 p.a. Suit doctor living in one of the suburbs with or without a Practice. Premium—£600—No 963

DEATH VACANCY—BRADFORD—Cash receipts £500 p.a. Panel 550. Great scope. Good house 3 bedrooms, garage and garden to rent. Premium—best offer—No 981

ANGLESEY—Mixed Panel and Private PRACTICE about £600 p.a. Scope. Large house for sale or may be rented. Premium—1 year's purchase—No 980

NORTH WALES COAST—Middle-class PRACTICE. Receipts £1,417 p.a. Panel 415. Excellent house with ample accommodation garage and garden. Premium—£2,100—No 929

LANCS TOWN—Mixed panel and private PRACTICE, in present hands 30 years. Cash receipts approximately £1,500 p.a. Panel 1,500. Great scope. Good house, 2 reception, 4 bedrooms garage and small garden. Rent £50 p.a. Premium best offer—No 945

NEAR NOTTINGHAM—PARTNERSHIP in practically unopposed mixed class Country Practice. Average cash receipts £3,500 p.a. Panel over 1,600. Appointments £120 p.a. Attractive house 2 reception, 5 bedrooms, garage and pleasant garden. Premium—1/3rd share—2 years purchase—No 953

LANCS TOWN—PARTNERSHIP in Panel and Private Practice, about 7 miles from Manchester. Average cash receipts £4,325 p.a. Panel 3,610. Scope. Detached house 2 reception, 5 bedrooms garage and half acre garden. Premium—2 1/4th share (about £1,730 p.a.)—2 years purchase—No 962

MANCHESTER—PRACTICE in industrial district. Cash receipts £883. Panel 904. House to rent. Premium—any reasonable offer—No 855

NORTH WEST COAST—Old-established middle-class PRACTICE in Seaside and Residential town. Cash receipts last year £1,100. Panel 350. Nice detached house 2 reception, 5 bedrooms, garage and large garden 1/2 for sale or may be rented. Premium—1½ years purchase—No 961

ASSISTANTS WANTED—LANCS YORKS AND MIDLAND TOWNS. £400-£500 p.a. with house and car allowance. INDOOR—LANCS YORKS MIDLANDS and N.E. COAST. £300-£350 p.a. all found. Many vacancies. Details on request

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